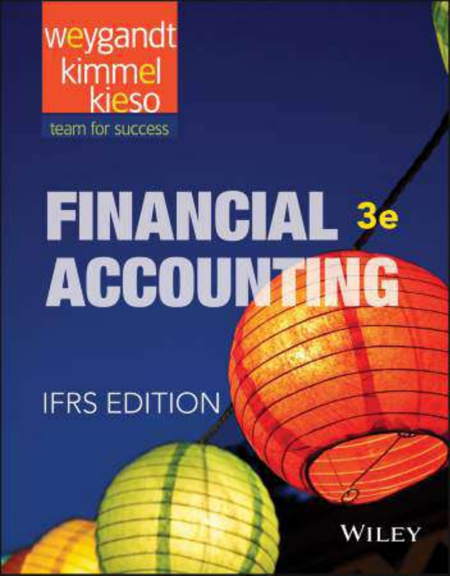
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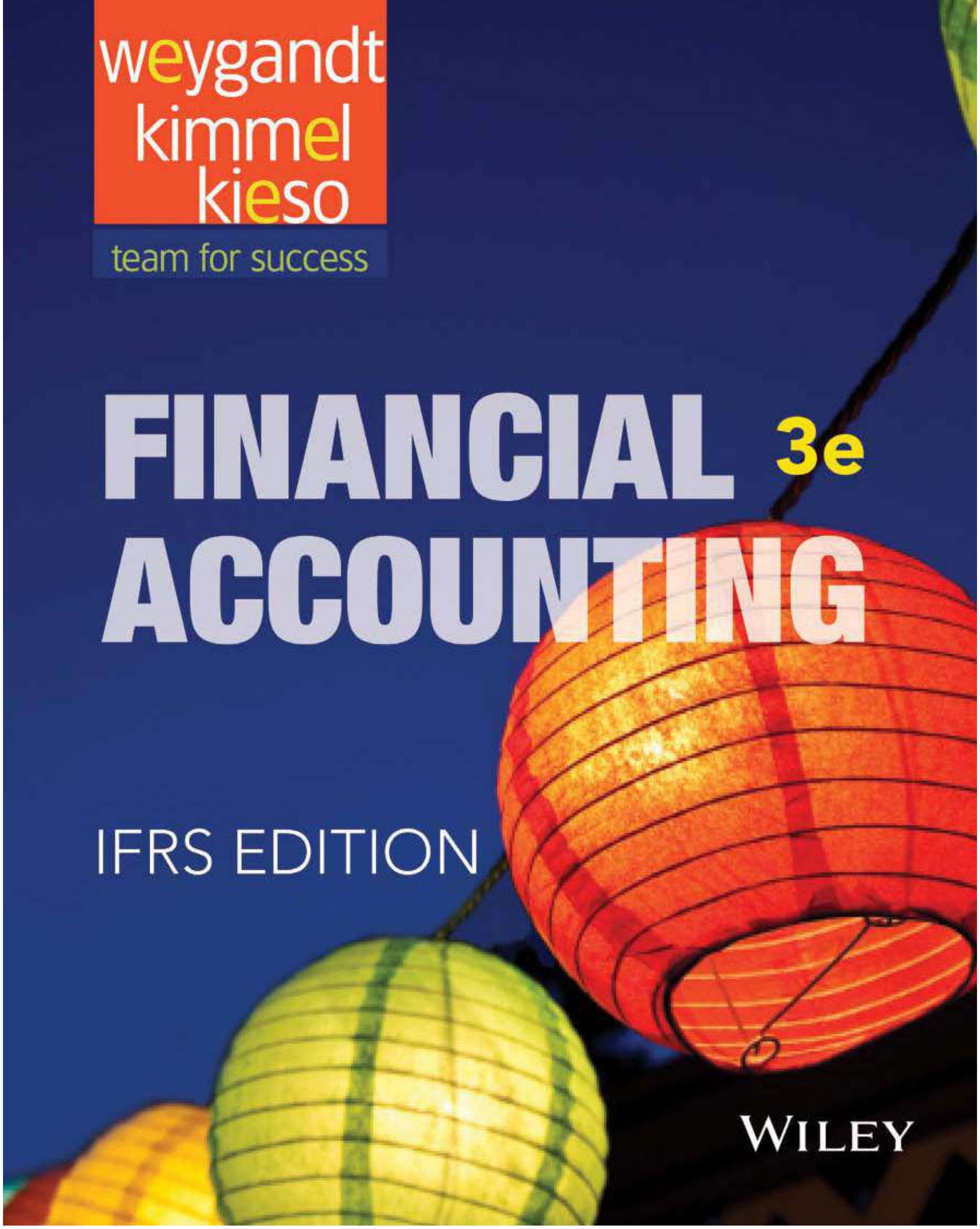

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ACCOUNT CLASSIFICATION AND PRESENTATION

Account Title	Classification	Financial Statement	Normal Balance
A			
Accounts Payable	Current Liability	Statement of Financial Position	Credit
Accounts Receivable	Current Asset	Statement of Financial Position	Debit
Accumulated Depreciation—Buildings	Plant Asset—Contra	Statement of Financial Position	Credit
Accumulated Depreciation—Equipment	Plant Asset—Contra	Statement of Financial Position	Credit
Administrative Expenses	Operating Expense	Income Statement	Debit
Advertising Expense	Operating Expense	Income Statement	Debit
Allowance for Doubtful Accounts	Current Asset—Contra	Statement of Financial Position	Credit
Amortization Expense	Operating Expense	Income Statement	Debit
B			
Bad Debt Expense	Operating Expense	Income Statement	Debit
Bonds Payable	Non-Current Liability	Statement of Financial Position	Credit
Buildings	Plant Asset	Statement of Financial Position	Debit
C			
Cash	Current Asset	Statement of Financial Position	Debit
Copyrights	Intangible Asset	Statement of Financial Position	Debit
Cost of Goods Sold	Cost of Goods Sold	Income Statement	Debit
D			
Debt Investments	Current Asset/Long-Term Investment	Statement of Financial Position	Debit
Depreciation Expense	Operating Expense	Income Statement	Debit
Dividend Revenue	Other Income and Expense	Income Statement	Credit
Dividends	Temporary account closed to Retained Earnings	Retained Earnings Statement	Debit
Dividends Payable	Current Liability	Statement of Financial Position	Credit
E			
Equipment	Plant Asset	Statement of Financial Position	Debit
F			
Freight-Out	Operating Expense	Income Statement	Debit
G			
Gain on Disposal of Plant Assets	Other Income and Expense	Income Statement	Credit
Goodwill	Intangible Asset	Statement of Financial Position	Debit
I			
Income Summary	Temporary account closed to Retained Earnings	Not Applicable	(1)
Income Tax Expense	Income Tax Expense	Income Statement	Debit
Income Taxes Payable	Current Liability	Statement of Financial Position	Credit
Insurance Expense	Operating Expense	Income Statement	Debit
Interest Expense	Other Income and Expense	Income Statement	Debit
Interest Payable	Current Liability	Statement of Financial Position	Credit
Interest Receivable	Current Asset	Statement of Financial Position	Debit
Interest Revenue	Other Income and Expense	Income Statement	Credit
Inventory	Current Asset	Statement of Financial Position (2)	Debit

Account Title	Classification	Financial Statement	Normal Balance
		L	
Land	Plant Asset	Statement of Financial Position	Debit
Loss on Disposal of Plant Assets	Other Income and Expense	Income Statement	Debit
		M	
Maintenance and Repairs Expense	Operating Expense	Income Statement	Debit
Mortgage Payable	Non-Current Liability	Statement of Financial Position	Credit
		N	
Notes Payable	Current Liability/ Non-Current Liability	Statement of Financial Position	Credit
		P	
Patents	Intangible Asset	Statement of Financial Position	Debit
Prepaid Insurance	Current Asset	Statement of Financial Position	Debit
		R	
Rent Expense	Operating Expense	Income Statement	Debit
Research and Development Expense	Operating Expense	Income Statement	Debit
Retained Earnings	Equity	Statement of Financial Position and Retained Earnings Statement	Credit
		S	
Salaries and Wages Expense	Operating Expense	Income Statement	Debit
Salaries and Wages Payable	Current Liability	Statement of Financial Position	Credit
Sales Discounts	Revenue—Contra	Income Statement	Debit
Sales Returns and Allowances	Revenue—Contra	Income Statement	Debit
Sales Revenue	Revenue	Income Statement	Credit
Selling Expenses	Operating Expense	Income Statement	Debit
Service Revenue	Revenue	Income Statement	Credit
Share Capital—Ordinary	Equity	Statement of Financial Position	Credit
Share Capital—Preference	Equity	Statement of Financial Position	Credit
Share Investments	Current Asset/Long-Term Investment	Statement of Financial Position	Debit
Share Premium—Ordinary	Equity	Statement of Financial Position	Credit
Share Premium—Preference	Equity	Statement of Financial Position	Credit
Supplies	Current Asset	Statement of Financial Position	Debit
Supplies Expense	Operating Expense	Income Statement	Debit
		T	
Treasury Shares	Equity—Contra	Statement of Financial Position	Debit
		U	
Unearned Service Revenue	Current Liability	Statement of Financial Position	Credit
Utilities Expense	Operating Expense	Income Statement	Debit

(1) The normal balance for Income Summary will be credit when there is a net income, debit when there is a net loss. The Income Summary account does not appear on any financial statement.

(2) If a periodic system is used, Inventory also appears on the income statement in the calculation of cost of goods sold.

The following is a sample chart of accounts. It does not represent a comprehensive chart of all the accounts used in this textbook but rather those accounts that are commonly used. This sample chart of accounts is for a company that generates both service revenue as well as sales revenue. It uses the perpetual approach to inventory. If a periodic system was used, the following temporary accounts would be needed to record inventory purchases: Purchases, Freight-In, Purchase Returns and Allowances, and Purchase Discounts.

CHART OF ACCOUNTS

Assets	Liabilities	Equity	Revenues	Expenses
Cash	Notes Payable	Share Capital—Preference	Service Revenue	Administrative Expenses
Accounts Receivable	Accounts Payable	Share Capital—Ordinary	Sales Revenue	Amortization Expense
Allowance for Doubtful Accounts	Unearned Service Revenue	Share Premium—Preference	Sales Discounts	Bad Debt Expense
Interest Receivable	Salaries and Wages Payable	Share Premium—Ordinary	Sales Returns and Allowances	Cost of Goods Sold
Inventory	Interest Payable	Retained Earnings	Interest Revenue	Depreciation Expense
Supplies	Dividends Payable	Treasury Shares	Gain on Disposal of Plant Assets	Freight-Out
Prepaid Insurance	Income Taxes Payable	Dividends		Income Tax Expense
Land	Bonds Payable	Income Summary		Insurance Expense
Equipment	Mortgage Payable			Interest Expense
Accumulated Depreciation—Equipment				Loss on Disposal of Plant Assets
Buildings				Maintenance and Repairs Expense
Accumulated Depreciation—Buildings				Rent Expense
Copyrights				Salaries and Wages Expense
Goodwill				Selling Expenses
Patents				Supplies Expense
				Utilities Expense

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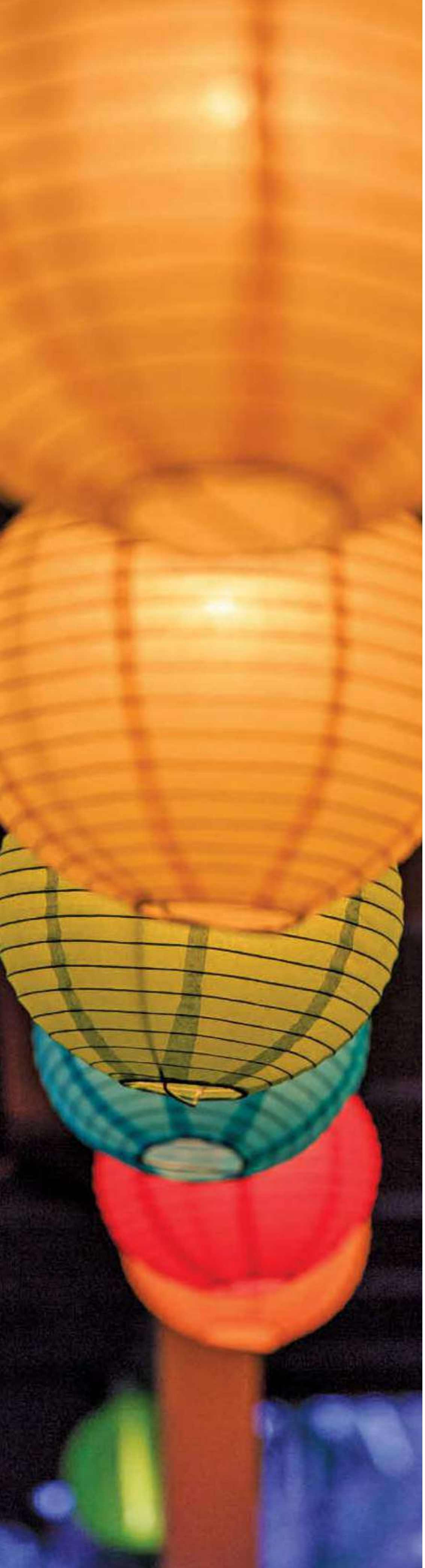


Brief Contents

*Available at the book's companion website, **www.wiley.com/college/weygandt.**

From the Authors

Dear Student,

Why This Course? *Remember your biology course in high school? Did you have one of those "invisible man" models (or maybe something more high-tech than that) that gave you the opportunity to look "inside" the human body? This accounting course offers something similar. To understand a business, you have to understand the financial insides of a business organization. An accounting course will help you understand the essential financial components of businesses. Whether you are looking at a large multinational company like TSMC or Apple or a single-owner software consulting business or coffee shop, knowing the fundamentals of accounting will help you understand what is happening. As an employee, a manager, an investor, a business owner, or a director of your own personal finances—any of which roles you will have at some point in your life—you will make better decisions for having taken this course.*

> "Whether you are looking at a large multinational company like TSMC or Apple or a single-owner software consulting business or coffee shop, knowing the fundamentals of accounting will help you understand what is happening."

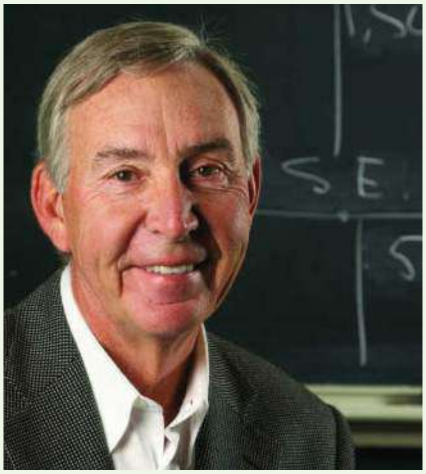
Why This Book? *Thousands of students have used this textbook. Your instructor has chosen it for you because of its trusted reputation. The authors have worked hard to keep the book fresh, timely, and accurate.*

How to Succeed? *We've asked many students and many instructors whether there is a secret for success in this course. The nearly unanimous answer turns out to be not much of a secret: "Do the homework." This is one course where doing is learning. The more time you spend on the homework assignments—using the various tools that this textbook provides—the more likely you are to learn the essential concepts, techniques, and methods of accounting. Besides the textbook itself, WileyPLUS and the book's companion website also offers various support resources.*

Good luck in this course. We hope you enjoy the experience and that you put to good use throughout a lifetime of success the knowledge you obtain in this course. We are sure you will not be disappointed.

Jerry J. Weygandt
Paul D. Kimmel
Donald E. Kieso

Author Commitment



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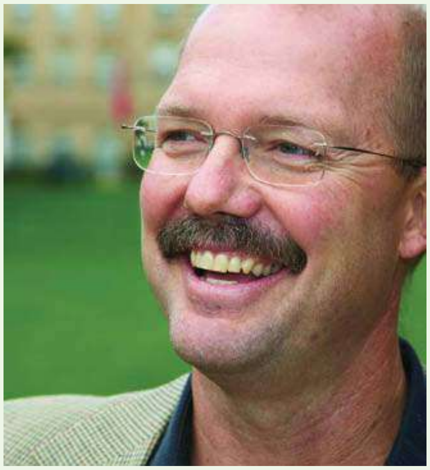

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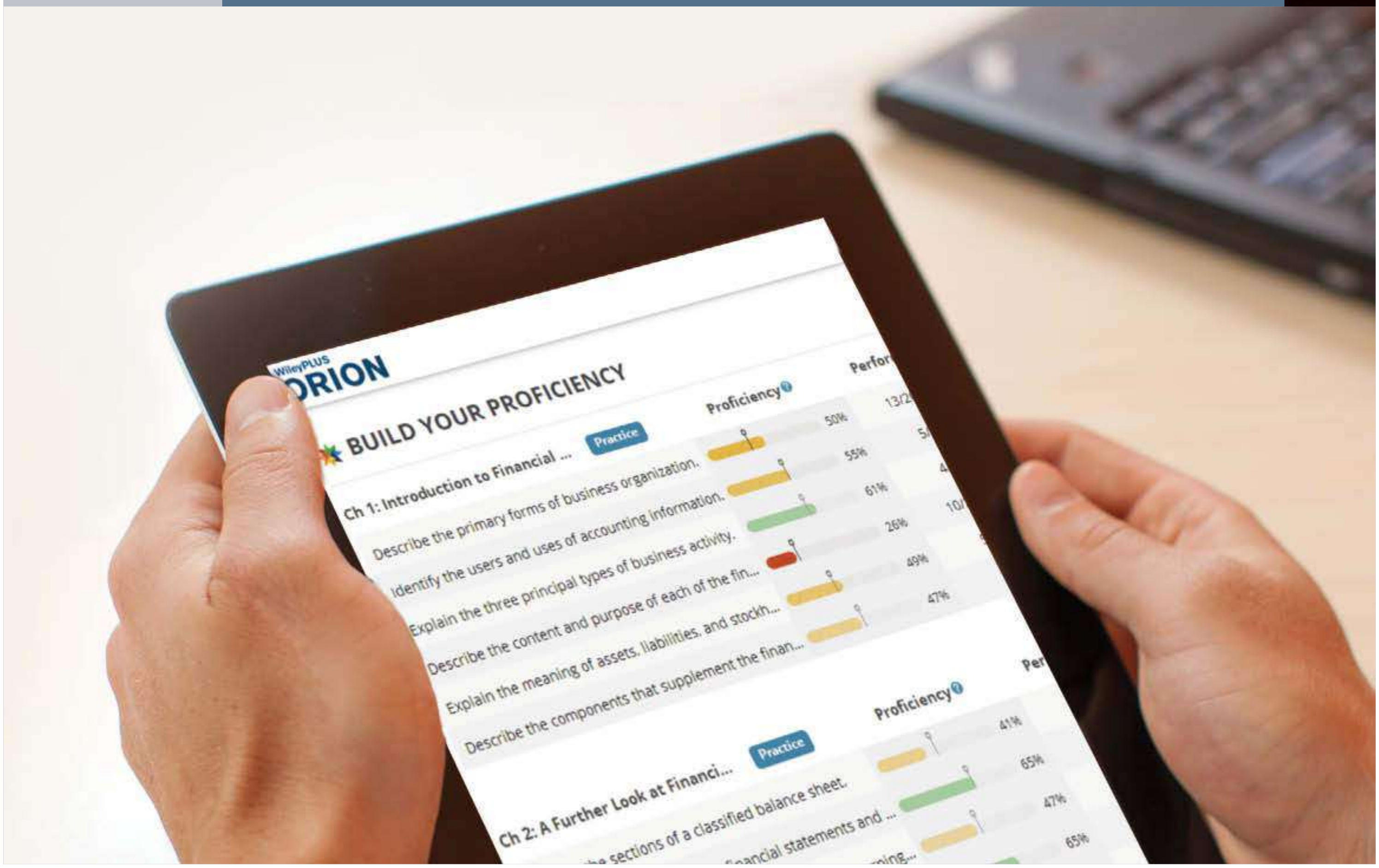
Practice Made Simple

The Team for Success is focused on helping students get the most out of their accounting course by **making practice simple**. Both in the printed text and the online environment of *WileyPLUS*, new opportunities for self-guided practice allow students to check their knowledge of accounting concepts, skills, and problem-solving techniques as they receive individual feedback at the question, learning objective, and course level.

Personalized Practice

Based on cognitive science, **WileyPLUS** with **ORION** is a personalized, adaptive learning experience that gives students the practice they need to build proficiency on topics while using their study time most effectively. The adaptive engine is powered by hundreds of unique questions per chapter, giving students endless opportunities for practice throughout the course.



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Review and Practice

A new section in the text and in **WileyPLUS** offers students more opportunities for self-guided practice.

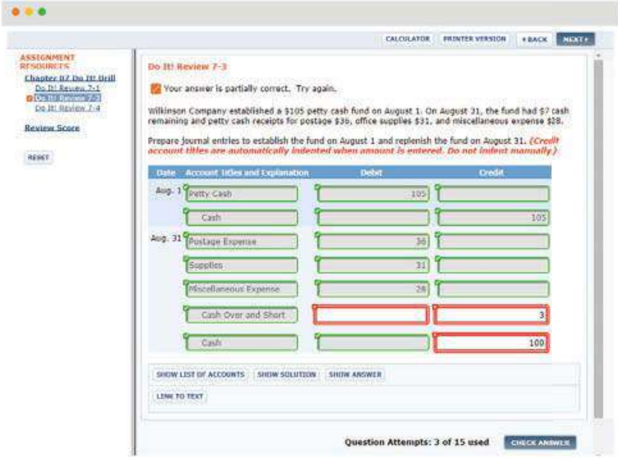
SOLUTIONS TO PRACTICE EXERCISES

1. (a)	Dec. 31	Bad Debt Expense Accounts Receivable—M. Jack	1,500	1,500
(b) (1)	Dec. 31	Bad Debt Expense [($850,000 − $30,000) × 1.5%] Allowance for Doubtful Accounts	12,300	12,300
(2)	Dec. 31	Bad Debt Expense Allowance for Doubtful Accounts [($150,000 × 10%) − $2,400]	12,600	12,600
(c) (1)	Dec. 31	Bad Debt Expense [($850,000 − $30,000) × 0.75%] Allowance for Doubtful Accounts	6,150	6,150
(2)	Dec. 31	Bad Debt Expense Allowance for Doubtful Accounts [($150,000 × 6%) + $200]	9,200	9,200

In the text, the new Review and Practice section includes:

- Learning Objectives Review
- Glossary Review
- Practice Multiple-Choice Questions and Solutions
- Practice Exercises and Solutions
- Practice Problem and Solution

In **WileyPLUS**, the new practice assignments include several Do It! Reviews, Brief Exercises, Exercises, and Problems, giving students the opportunity to check their work or see the answer and solution after their final attempt.



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What's New?

WileyPLUS with ORION

Several thousand new questions are available for practice and review. WileyPLUS with Orion is an adaptive study and practice tool that helps students build proficiency in course topics.

Updated Content and Design

We scrutinized all chapter material to find new ways to engage students and help them learn accounting concepts. Homework problems were updated in all chapters.

The learning objective structure helps students practice their understanding of concepts with DO IT! exercises before they move on to different topics in other learning objectives. Coupled with a new interior design and revised infographics, the outcomes-oriented approach motivates students and helps them make the best use of their time.

Student Practice and Solutions

New practice opportunities with solutions are integrated throughout the textbook and WileyPLUS course. Each textbook chapter now provides students with a **Review and Practice** section that includes learning objective summaries, glossary review, multiple-choice questions with feedback for each answer choice, and both practice exercises and problems with detailed solutions.

In **WileyPLUS**, two brief exercises, two DO IT! exercises, two exercises, and a new problem are available for practice with each chapter. These new practice questions are algorithmic, providing students with multiple opportunities for advanced practice.

Real World Context

We expanded our practice of using numerous examples of real companies throughout the textbook. New financial reporting problems in each chapter require students to analyze the financial statements of TSMC, Nestlé, Petra Foods, and Apple. In WileyPLUS, real-world Insight boxes now have questions that can be assigned as homework.

A Look at U.S. GAAP

This end-of-chapter section offers Key Points, Similarities, and Differences to help students compare IFRS with U.S. GAAP. Assessment material is also provided to test students' understanding.

Excel

New Excel skill videos help students understand Excel features they can apply in their accounting studies.

More information about the Third Edition is available on the book's website at **www.wiley.com/college/weygandt**.

Table of Contents

Acknowledgments

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CHAPTER

1 Accounting in Action

The Feature Story helps you picture how the chapter topic relates to the real world of accounting and business. You will find references to the story throughout the chapter.

FEATURE STORY Knowing the Numbers

Many students who take this course do not plan to be accountants. If you are in that group, you might be thinking, "If I'm not going to be an accountant, why do I need to know accounting?" In response, consider the quote from Harold Geneen, the former chairman of a major international company: "To be good at your business, you have to know the numbers—cold."

Success in any business comes back to the numbers. You will rely on them to make decisions, and managers will use them to evaluate your performance. That is true whether your job involves marketing, production, management, or information systems.

In business, accounting is the means for communicating the numbers. If you don't know how to read financial statements, you cannot really know your business.

Many companies spend significant resources teaching their employees basic accounting so that they can read financial statements and understand how their actions affect the company's financial results. Employers need managers in all areas of the company to be "financially literate."

Taking this course will go a long way to making you financially literate. In this book, you will learn how to read and prepare financial statements, and how to use basic tools to evaluate financial results.

Appendices A, B, and C of this textbook provide real financial statements of three companies from different countries that report using International Financial Reporting Standards (IFRS): Taiwan Semiconductor Manufacturing Company (TSMC) Ltd. (TWN), Nestlé SA (CHE), and Petra Foods Ltd. (SGP). Throughout this textbook, we increase your familiarity with financial reporting by providing numerous references, questions, and exercises that encourage you to explore these financial statements. In addition, we encourage you to visit each company's website where you can view its complete annual report. In examining the financial reports of these three companies, you will see that the accounting practices of companies in specific countries that follow IFRS sometimes differ with regard to particular details. However, more importantly, you will find that the basic accounting principles are the same. As a result, by learning these basic principles as presented in this textbook, you will be well equipped to begin understanding the financial results of companies around the world. ■

✔ The Navigator

- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 28–34
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

The Navigator is a learning system designed to prompt you to use the learning aids in the chapter and set priorities as you study.

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Explain what accounting is.
2. Identify the users and uses of accounting.
3. Understand why ethics is a fundamental business concept.
4. Explain accounting standards and the measurement principles.
5. Explain the monetary unit assumption and the economic entity assumption.
6. State the accounting equation, and define its components.
7. Analyze the effects of business transactions on the accounting equation.
8. Understand the five financial statements and how they are prepared.

✔ The Navigator

Learning Objectives give you a framework for learning the specific concepts covered in the chapter.

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PREVIEW OF CHAPTER 1

The Preview describes and outlines the major topics and subtopics you will see in the chapter.

The Feature Story highlights the importance of having good financial information and knowing how to use it to make effective business decisions. Whatever your pursuits or occupation, the need for financial information is inescapable. You cannot earn a living, spend money, buy on credit, make an investment, or pay taxes without receiving, using, or dispensing financial information. Good decision-making depends on good information.

The purpose of this chapter is to show you that accounting is the system used to provide useful financial information. The content and organization of Chapter 1 are as follows.

ACCOUNTING IN ACTION

What Is Accounting?	The Building Blocks of Accounting	The Basic Accounting Equation	Using the Accounting Equation	Financial Statements
• Three activities • Who uses accounting data?	• Ethics in financial reporting • Accounting standards • Measurement principles • Assumptions	• Assets • Liabilities • Equity	• Transaction analysis • Summary of transactions	• Income statement • Retained earnings statement • Statement of financial position • Statement of cash flows • Comprehensive income statement

✔ The Navigator

What Is Accounting?

Learning Objective 1
Explain what accounting is.

Essential terms are printed in blue when they first appear, and are defined in the end-of-chapter ***Glossary Review***.

What consistently ranks as one of the top career opportunities in business? What frequently rates among the most popular majors on campus? Accounting.[1] Why do people choose accounting? They want to acquire the skills needed to understand what is happening financially inside a company. Accounting is the financial information system that provides these insights. In short, to understand an organization of any type, you have to know the numbers.

Accounting consists of three basic activities—it **identifies**, **records**, and **communicates** the economic events of an organization to interested users. Let's take a closer look at these three activities.

Three Activities

As a starting point to the accounting process, a company identifies the **economic events relevant to its business**. Examples of economic events are the sale of food and snacks by Unilever (GBR and NLD), the providing of telephone services by Chunghwa Telecom (TWN), and the manufacture of motor vehicles by Tata Motors (IND).

Once a company like Unilever identifies economic events, it **records** those events in order to provide a history of its financial activities. Recording consists of keeping a **systematic**, **chronological diary of events**, measured in monetary units. In recording, Unilever also classifies and summarizes economic events.

Finally, Unilever **communicates** the collected information to interested users by means of **accounting reports**. The most common of these reports are called **financial statements**. To make the reported financial information meaningful, Unilever reports the recorded data in a standardized way. It accumulates information resulting from similar transactions. For example, Unilever accumulates all sales transactions over a certain period of time and reports the data as one amount in the company's financial statements. Such data are said to be reported **in the aggregate**. By presenting the recorded data in the aggregate, the accounting process simplifies a multitude of transactions and makes a series of activities understandable and meaningful.

A vital element in communicating economic events is the accountant's ability to **analyze and interpret** the reported information. Analysis involves use of ratios, percentages, graphs, and charts to highlight significant financial trends and relationships. Interpretation involves **explaining the uses**, **meaning**, **and limitations of reported data**. Appendix A of this textbook shows the financial statements of Taiwan Semiconductor Manufacturing Company (TSMC) Ltd. (TWN). Appendix B illustrates the financial statements of Nestlé SA (CHE), and Appendix C includes the financial statements of Petra Foods Ltd. (SGP). We refer to these statements at various places throughout the textbook. (In addition, in the *A Look at U.S. GAAP* section at the end of each chapter, the U.S. company Apple Inc. is analyzed.) At this point, these financial statements probably strike you as complex and confusing. By the end of this course, you'll be surprised at your ability to understand, analyze, and interpret them.

Illustration 1-1 summarizes the activities of the accounting process.

You should understand that the accounting process **includes** the bookkeeping function. **Bookkeeping** usually involves **only** the recording of economic events. It is therefore just one part of the accounting process. In total, accounting

[1]The appendix to this chapter describes job opportunities for accounting majors and explains why accounting is such a popular major.

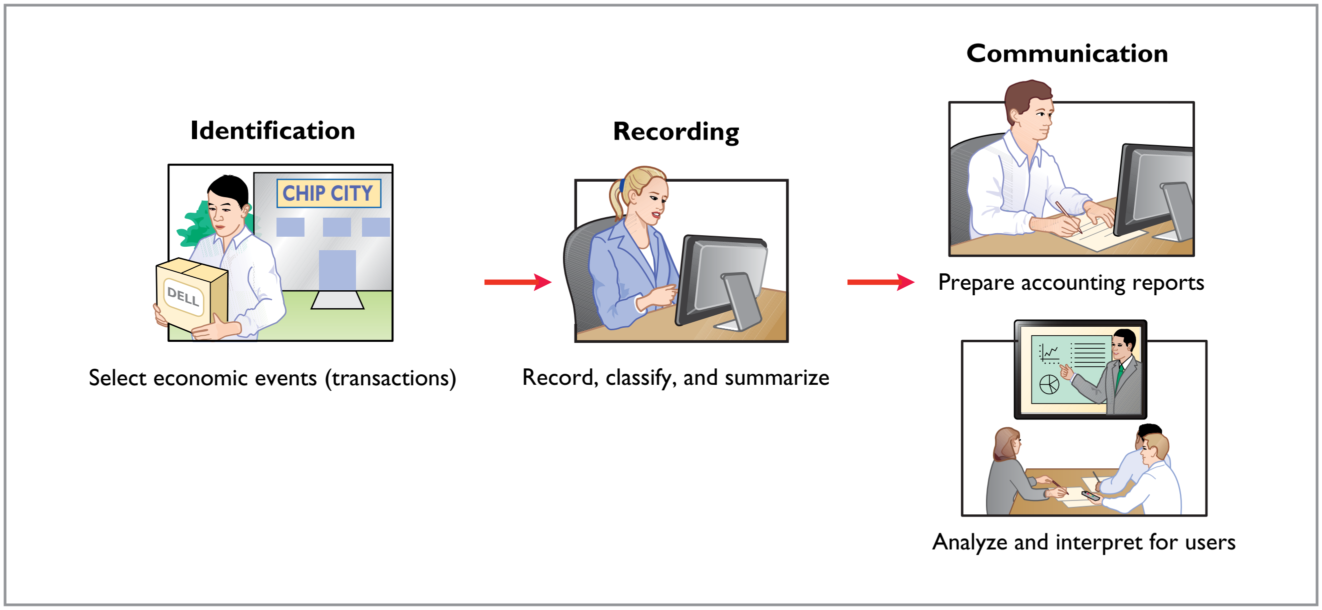


Illustration 1-1
The activities of the accounting process

involves **the entire process of identifying, recording, and communicating economic events.**[2]

Who Uses Accounting Data?

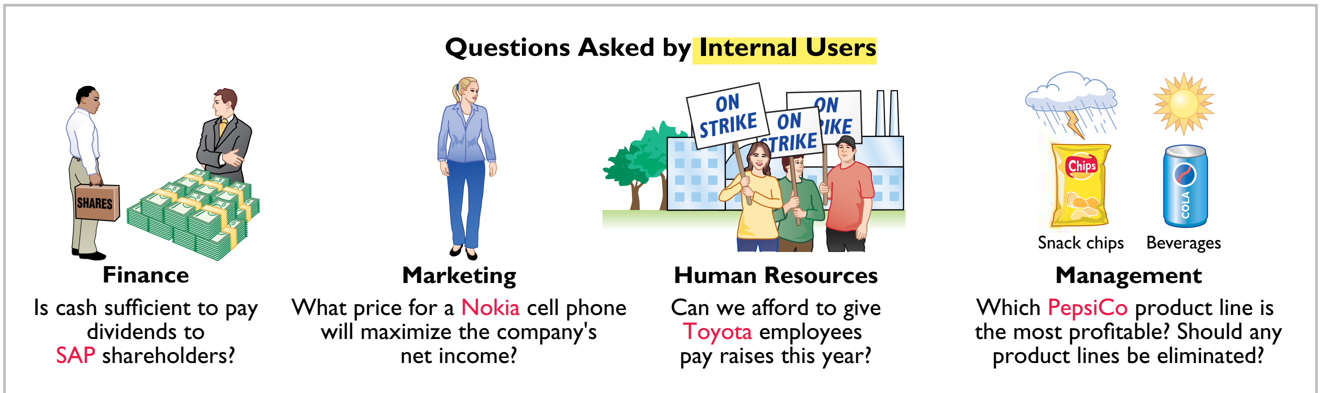
Learning Objective 2
Identify the users and uses of accounting.

The specific financial information that a user needs depends upon the kinds of decisions the user makes. There are two broad groups of users of financial information: internal users and external users.

INTERNAL USERS

Internal users of accounting information are managers who plan, organize, and run the business. These include marketing managers, production supervisors, finance directors, and company officers. In running a business, internal users must answer many important questions, as shown in Illustration 1-2.

Illustration 1-2
Questions that internal users ask



To answer these and other questions, internal users need detailed information on a timely basis. **Managerial accounting** provides internal reports to help users make decisions about their companies. Examples are financial comparisons of

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[2]The origins of accounting are generally attributed to the work of Luca Pacioli, an Italian Renaissance mathematician. Pacioli was a close friend and tutor to Leonardo da Vinci and a contemporary of Christopher Columbus. In his 1494 text *Summa de Arithmetica, Geometria, Proportione et Proportionalite,* Pacioli described a system to ensure that financial information was recorded efficiently and accurately.

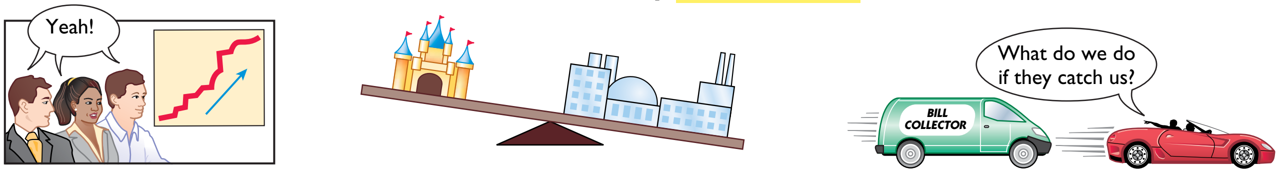
operating alternatives, projections of income from new sales campaigns, and forecasts of cash needs for the next year.

EXTERNAL USERS

External users are individuals and organizations outside a company who want financial information about the company. The two most common types of external users are investors and creditors. **Investors** (owners) use accounting information to make decisions to buy, hold, or sell ownership shares of a company. **Creditors** (such as suppliers and bankers) use accounting information to evaluate the risks of granting credit or lending money. Illustration 1-3 shows some questions that investors and creditors may ask.

Illustration 1-3
Questions that external users ask

Questions Asked by External Users



Investors
Is Royal Dutch Shell earning satisfactory income?

Investors
How does Disney compare in size and profitability with Time Warner?

Creditors
Will Singapore Airlines be able to pay its debts as they come due?

Financial accounting answers these questions. It provides economic and financial information for investors, creditors, and other external users. The information needs of external users vary considerably. **Taxing authorities**, such as the State Administration of Taxation in the People's Republic of China (CHN), want to know whether the company complies with tax laws. **Regulatory agencies**, such as the Autorité des Marchés Financiers (FRA) or the Federal Trade Commission (USA), want to know whether the company is operating within prescribed rules. **Customers** are interested in whether a company like Tesla Motors, Inc. (USA) will continue to honor product warranties and support its product lines. **Labor unions**, such as the German Confederation of Trade Unions (DEU), want to know whether the companies have the ability to pay increased wages and benefits to union members.

> **DO IT!**

Basic Concepts

*The **DO IT!** exercises ask you to put newly acquired knowledge to work. They outline the Action Plan necessary to complete the exercise, and they show a Solution.*

Indicate whether each of the five statements presented below is true or false. If false, indicate how to correct the statement.

1. The three steps in the accounting process are identification, recording, and communication.
2. Bookkeeping encompasses all steps in the accounting process.
3. Accountants prepare, but do not interpret, financial reports.
4. The two most common types of external users are investors and company officers.
5. Managerial accounting activities focus on reports for internal users.

Action Plan

✔ Review the basic concepts discussed.

✔ Develop an understanding of the key terms used.

Solution

1. True. 2. False. Bookkeeping involves only the recording step. 3. False. Accountants analyze and interpret information in reports as part of the communication step. 4. False. The two most common types of external users are investors and creditors. 5. True.

Related exercise material: **E1-1, E1-2, and DO IT! 1-1.**

✔ The Navigator

The Building Blocks of Accounting

A doctor follows certain protocols in treating a patient's illness. An architect follows certain structural guidelines in designing a building. Similarly, an accountant follows certain standards in reporting financial information. These standards are based on specific principles and assumptions. For these standards to work, however, a fundamental business concept must be at work—ethical behavior.

Learning Objective 3
Understand why ethics is a fundamental business concept.

Ethics in Financial Reporting

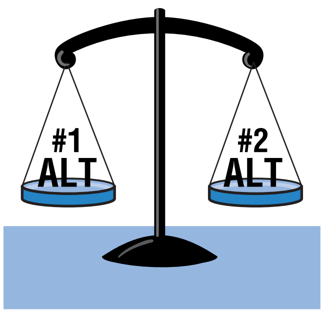
People won't gamble in a casino if they think it is "rigged." Similarly, people won't play the securities market if they think share prices are rigged. In recent years, the financial press has been full of articles about financial scandals at Enron (USA), Parmalat (ITA), Satyam Computer Services (IND), AIG (USA), and others. As the scandals came to light, mistrust of financial reporting in general grew. One article in the financial press noted that "repeated disclosures about questionable accounting practices have bruised investors' faith in the reliability of earnings reports, which in turn has sent share prices tumbling." Imagine trying to carry on a business or invest money if you could not depend on the financial statements to be honestly prepared. Information would have no credibility. There is no doubt that a sound, well-functioning economy depends on accurate and dependable financial reporting.

The standards of conduct by which one's actions are judged as right or wrong, honest or dishonest, fair or not fair, are **ethics**. Effective financial reporting depends on sound ethical behavior. To sensitize you to ethical situations in business and to give you practice at solving ethical dilemmas, we address ethics in a number of ways in this textbook:

1. A number of the *Feature Stories* and other parts of the textbook discuss the central importance of ethical behavior to financial reporting.
2. *Ethics Insight* boxes and marginal *Ethics Notes* highlight ethics situations and issues in actual business settings.
3. Many of the *People, Planet, and Profit Insight* boxes focus on ethical issues that companies face in measuring and reporting social and environmental issues.
4. At the end of each chapter, an *Ethics Case* simulates a business situation and asks you to put yourself in the position of a decision-maker in that case.

When analyzing these various ethics cases, as well as experiences in your own life, it is useful to apply the three steps outlined in Illustration 1-4.

Illustration 1-4
Steps in analyzing ethics cases and situations



1. Recognize an ethical situation and the ethical issues involved.
Use your personal ethics to identify ethical situations and issues. Some businesses and professional organizations provide written codes of ethics for guidance in some business situations.

2. Identify and analyze the principal elements in the situation.
Identify the *stakeholders*—persons or groups who may be harmed or benefited. Ask the question: What are the responsibilities and obligations of the parties involved?

3. Identify the alternatives, and weigh the impact of each alternative on various stakeholders.
Select the most ethical alternative, considering all the consequences. Sometimes there will be one right answer. Other situations involve more than one right solution; these situations require an evaluation of each and a selection of the best alternative.

Ethics Insight I Felt the Pressure—Would You? Dewey & LeBoeuf LLP (USA)

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"I felt the pressure." That's what some of the employees of the now-defunct law firm of Dewey & LeBoeuf LLP (USA) indicated when they helped to overstate revenue and use accounting tricks to hide losses and cover up cash shortages. These employees worked for the former finance director and former chief financial officer (CFO) of the firm. Here are some of their comments:

- "I was instructed by the CFO to create invoices, knowing they would not be sent to clients. When I created these invoices, I knew that it was inappropriate."
- "I intentionally gave the auditors incorrect information in the course of the audit."

What happened here is that a small group of lower-level employees over a period of years carried out the instructions of their bosses. Their bosses, however, seemed to have no concern as evidenced by various e-mails with one another in which they referred to their financial manipulations as accounting tricks, cooking the books, and fake income.

Source: Ashby Jones, "Guilty Pleas of Dewey Staff Detail the Alleged Fraud," *Wall Street Journal* (March 28, 2014).

Q Why did these employees lie, and what do you believe should be their penalty for these lies? (See page 49.)

***Insight** boxes provide examples of business situations from various perspectives—ethics, investor, global, and corporate social responsibility. Guideline answers to the critical thinking questions are available near the end of the chapter.*

Accounting Standards

Learning Objective 4

Explain accounting standards and the measurement principles.

In order to ensure high-quality financial reporting, accountants present financial statements in conformity with accounting standards that are issued by standard-setting bodies. Presently, there are two primary accounting standard-setting bodies—the **International Accounting Standards Board (IASB)** and the **Financial Accounting Standards Board (FASB)**. More than 130 countries follow standards referred to as **International Financial Reporting Standards (IFRS)**. IFRSs are determined by the IASB. The IASB is headquartered in London, with its 15 board members drawn from around the world. Most companies in the United States follow standards issued by the FASB, referred to as **generally accepted accounting principles (GAAP)**.

As markets become more global, it is often desirable to compare the results of companies from different countries that report using different accounting standards. In order to increase comparability, in recent years the two standard-setting bodies made efforts to reduce the differences between IFRS and U.S. GAAP. This process is referred to as **convergence**. Because convergence is such an important issue, we provide at the end of each chapter a section called *A Look at U.S. GAAP*, to provide a comparison with IFRS.

Measurement Principles

• HELPFUL HINT
Relevance and *faithful representation* are two primary qualities that make accounting information useful for decision-making.

***Helpful Hints** further clarify concepts being discussed.*

IFRS generally uses one of two measurement principles, the historical cost principle or the fair value principle. Selection of which principle to follow generally relates to trade-offs between relevance and faithful representation. **Relevance** means that financial information is capable of making a difference in a decision. **Faithful representation** means that the numbers and descriptions match what really existed or happened—they are factual.

HISTORICAL COST PRINCIPLE

The **historical cost principle** (or cost principle) dictates that companies record assets at their cost. This is true not only at the time the asset is purchased, but also over the time the asset is held. For example, if Gazprom (RUS) purchases land for ₽300,000, the company initially reports it in its accounting records at ₽300,000. But what does Gazprom do if, by the end of the next year, the fair value of the land has increased to ₽400,000? Under the historical cost principle, it continues to report the land at ₽300,000.

FAIR VALUE PRINCIPLE

The **fair value principle** states that assets and liabilities should be reported at fair value (the price received to sell an asset or settle a liability). Fair value information may be more useful than historical cost for certain types of assets and liabilities. For example, certain investment securities are reported at fair value because market value information is usually readily available for these types of assets. In determining which measurement principle to use, companies weigh the factual nature of cost figures versus the relevance of fair value. In general, even though IFRS allows companies to revalue property, plant, and equipment and other long-lived assets to fair value, most companies choose to use cost. Only in situations where assets are actively traded, such as investment securities, do companies apply the fair value principle extensively.

Global Insight The Korean Discount

SeongJoon Cho/Bloomberg/Getty Images, Inc.

If you think that accounting standards don't matter, consider recent events in South Korea. International investors expressed concerns that the financial reports of some South Korean companies were inaccurate. Accounting practices sometimes resulted in differences between stated revenues and actual revenues. Because investors did not have complete faith in the accuracy of the numbers, they were unwilling to pay as much for the shares of these companies relative to shares of comparable companies in different countries. This difference in share price was referred to as the "Korean discount."

In response, Korean regulators decided to require companies to comply with international accounting standards. This change was motivated by a desire to "make the country's businesses more transparent" in order to build investor confidence and spur economic growth. Many other Asian countries, including China, India, Japan, and Hong Kong, have also decided either to adopt international standards or to create standards that are based on the international standards.

Source: Evan Ramstad, "End to 'Korea Discount'?" *Wall Street Journal* (March 16, 2007).

Q What is meant by the phrase "make the country's businesses more transparent"? Why would increasing transparency spur economic growth? (See page 49.)

Assumptions

Learning Objective 5

Explain the monetary unit assumption and the economic entity assumption.

Assumptions provide a foundation for the accounting process. Two main assumptions are the **monetary unit assumption** and the **economic entity assumption**.

MONETARY UNIT ASSUMPTION

The **monetary unit assumption** requires that companies include in the accounting records only transaction data that can be expressed in money terms. This assumption enables accounting to quantify (measure) economic events. The monetary unit assumption is vital to applying the historical cost principle.

This assumption prevents the inclusion of some relevant information in the accounting records. For example, the health of a company's owner, the quality of service, and the morale of employees are not included. The reason: Companies cannot quantify this information in money terms. Though this information is important, companies record only events that can be measured in money. Throughout this textbook, we use a variety of currencies in our examples and end-of-chapter materials, such as those shown in Illustration 1-5.

Illustration 1-5
Currencies used in this textbook

Brazil, real	R$	South Africa, rand	R
China, yuan renminbi	¥	South Korea, won	₩
Europe, euro	€	Switzerland, Swiss franc	CHF
Hong Kong, dollar	HK$	Taiwan, new dollar	NT$
India, rupee	Rs	Turkey, lira	₺
Indonesia, rupia	Rp	United Kingdom, pound	£
Japan, yen	¥	United States, dollar	$
Russia, ruble	₽		

***Ethics Notes** help sensitize you to some of the ethical issues in accounting.*

Ethics Note

The importance of the economic entity assumption is illustrated by scandals involving Adelphia (USA). In this case, senior company employees entered into transactions that blurred the line between the employees' financial interests and those of the company. For example, Adelphia guaranteed over $2 billion of loans to the founding family.

ECONOMIC ENTITY ASSUMPTION

An economic entity can be any organization or unit in society. It may be a company (Telefónica (ESP)), a governmental unit (the city-state of Singapore), a municipality (Toronto, Canada), a school district (St. Louis District 48), or a church (Baptist). The **economic entity assumption** requires that the activities of the entity be kept separate and distinct from the activities of its owner and all other economic entities. To illustrate, Sally Rider, owner of Sally's Boutique, must keep her personal living costs separate from the expenses of the boutique. Similarly, Metro (DEU) and Coca-Cola (USA) are segregated into separate economic entities for accounting purposes.

PROPRIETORSHIP A business owned by one person is generally a **proprietorship**. The owner is often the manager/operator of the business. Small service-type businesses (plumbing companies, beauty salons, and auto repair shops), farms, and small retail stores (antique shops, clothing stores, and used-book stores) are often proprietorships. **Usually only a relatively small amount of money (capital) is necessary to start in business as a proprietorship. The owner (proprietor) receives any profits, suffers any losses, and is personally liable for all debts of the business.** There is no legal distinction between the business as an economic unit and the owner, but the accounting records of the business activities are kept separate from the personal records and activities of the owner.

PARTNERSHIP A business owned by two or more persons associated as partners is a **partnership**. In most respects a partnership is like a proprietorship except that more than one owner is involved. Typically a partnership agreement (written or oral) sets forth such terms as initial investment, duties of each partner, division of net income (or net loss), and settlement to be made upon death or withdrawal of a partner. Each partner generally has unlimited personal liability for the debts of the partnership. **Like a proprietorship, for accounting purposes the partnership transactions must be kept separate from the personal activities of the partners.** Partnerships are often used to organize retail and service-type businesses, including professional practices (lawyers, doctors, architects, and chartered public accountants).

CORPORATION A business organized as a separate legal entity under corporation law and having ownership divided into transferable shares is a **corporation**. The holders of the shares (shareholders) **enjoy limited liability**; that is, they are not personally liable for the debts of the corporate entity. Shareholders **may transfer**

all or part of their ownership shares to other investors at any time (i.e., sell their shares). The ease with which ownership can change adds to the attractiveness of investing in a corporation. Because ownership can be transferred without dissolving the corporation, the corporation **enjoys an unlimited life**.

Although the combined number of proprietorships and partnerships in the world significantly exceeds the number of corporations, the revenue produced by corporations is much greater. Most of the largest companies in the world—for example, ING (NLD), Royal Dutch Shell (GBR and NLD), Apple Inc. (USA), Fortis (BEL), and Toyota (JPN)—are corporations.

Accounting Across the Organization **Spinning the Career Wheel**

© Josef Volavka/iStockphoto

One question that students frequently ask is, "How will the study of accounting help me?" A working knowledge of accounting is desirable for virtually *every field* of endeavor. Some examples of how accounting is used in other careers include:

General management: Imagine running Volkswagen (DEU), Saudi Telecom (SAU), a Subway (USA) franchise, or a Fuji (JPN) bike shop. All general managers need to understand where the company's cash comes from and where it goes in order to make wise business decisions.

Marketing: Marketing specialists at a company like Hyundai Motor (KOR) develop strategies to help the sales force be successful. But making a sale is meaningless unless it is profitable. Marketing people must be sensitive to costs and benefits, which accounting helps them quantify and understand.

Finance: Do you want to be a banker for Société Générale (FRA) or a financial analyst for ICBC (CHN)? These fields rely heavily on accounting. In all of them, you will regularly examine and analyze financial statements. In fact, it is difficult to get a good finance job without two or three courses in accounting.

Real estate: Are you interested in being a real estate broker for Sotheby's International Realty (GBR)? Because a third party—the bank—is almost always involved in financing a real estate transaction, brokers must understand the numbers involved: Can the buyer afford to make the payments to the bank? Does the cash flow from an industrial property justify the purchase price? What are the tax benefits of the purchase?

Q How might accounting help you? (See page 49.)

> DO IT!

Building Blocks of Accounting

Indicate whether each of the five statements presented below is true or false. If false, indicate how to correct the statement.

1. Convergence refers to efforts to reduce differences between IFRS and U.S. GAAP.
2. The primary accounting standard-setting body headquartered in London is the International Accounting Standards Board (IASB).
3. The historical cost principle dictates that companies record assets at their cost. In later periods, however, the fair value of the asset must be used if fair value is higher than its cost.
4. Relevance means that financial information matches what really happened; the information is factual.
5. A business owner's personal expenses must be separated from expenses of the business to comply with accounting's economic entity assumption.

Action Plan

✔ Review the discussion of ethics and financial reporting standards.

✔ Develop an understanding of the key terms used.

Solution

1. True. 2. True. 3. False. The historical cost principle dictates that companies record assets at their cost. Under the historical cost principle, the company must also use cost in later periods. 4. False. Faithful representation means that financial information matches what really happened; the information is factual. 5. True.

Related exercise material: E1-3, E1-4, and DO IT! 1-2.

✔ The Navigator

The Basic Accounting Equation

Learning Objective 6

State the accounting equation, and define its components.

The two basic elements of a business are what it owns and what it owes. **Assets** are the resources a business owns. For example, adidas (DEU) has total assets of approximately €11.6 billion. Liabilities and equity are the rights or claims against these resources. Thus, adidas has €11.6 billion of claims against its €11.6 billion of assets. Claims of those to whom the company owes money (creditors) are called **liabilities**. Claims of owners are called **equity**. adidas has liabilities of €6.1 billion and equity of €5.5 billion.

We can express the relationship of assets, liabilities, and equity as an equation, as shown in Illustration 1-6.

Illustration 1-6
The basic accounting equation

Assets = Liabilities + Equity

This relationship is the **basic accounting equation**. Assets must equal the sum of liabilities and equity.

The accounting equation applies to all **economic entities** regardless of size, nature of business, or form of business organization. It applies to a small proprietorship such as a corner grocery store as well as to a giant corporation such as adidas. The equation provides the **underlying framework** for recording and summarizing economic events.

Let's look in more detail at the categories in the basic accounting equation.

Assets

As noted above, **assets** are resources a business owns. The business uses its assets in carrying out such activities as production and sales. The common characteristic possessed by all assets is **the capacity to provide future services or benefits**. In a business, that service potential or future economic benefit eventually results in cash inflows (receipts). For example, consider Taipai Pizza, a local restaurant. It owns a delivery truck that provides economic benefits from delivering pizzas. Other assets of Taipai Pizza are tables, chairs, cash register, oven, tableware, and, of course, cash.

Liabilities

Liabilities are claims against assets—that is, existing debts and obligations. Businesses of all sizes usually borrow money and purchase merchandise on credit. These economic activities result in payables of various sorts:

- Taipai Pizza, for instance, purchases cheese, sausage, flour, and beverages on credit from suppliers. These obligations are called **accounts payable**.

- Taipai Pizza also has a **note payable** to First National Bank for the money borrowed to purchase the delivery truck.
- Taipai Pizza may also have **salaries and wages payable** to employees and **sales and real estate taxes payable** to the local government.

All of these persons or entities to whom Taipai Pizza owes money are its **creditors**.

Creditors may legally force the liquidation of a business that does not pay its debts. In that case, the law requires that creditor claims be paid **before** ownership claims.

Equity

The ownership claim on a company's total assets is **equity**. It is equal to total assets minus total liabilities. Here is why: The assets of a business are claimed by either creditors or shareholders. To find out what belongs to shareholders, we subtract creditors' claims (the liabilities) from the assets. The remainder is the shareholders' claim on the assets—equity. It is often referred to as **residual equity**—that is, the equity "left over" after creditors' claims are satisfied.

Equity generally consists of (1) share capital—ordinary and (2) retained earnings.

SHARE CAPITAL—ORDINARY

A corporation may obtain funds by selling ordinary shares to investors. **Share capital—ordinary** is the term used to describe the amounts paid in by shareholders for the ordinary shares they purchase.

RETAINED EARNINGS

Retained earnings is determined by three items: revenues, expenses, and dividends.

REVENUES **Revenues are the gross increases in equity resulting from business activities entered into for the purpose of earning income.** Generally, revenues result from selling merchandise, performing services, renting property, and lending money.

Revenues usually result in an increase in an asset. They may arise from different sources and are called various names depending on the nature of the business. Taipai Pizza, for instance, has two categories of sales revenues—pizza sales and beverage sales. Other titles for and sources of revenue common to many businesses are sales, fees, services, commissions, interest, dividends, royalties, and rent.

• HELPFUL HINT
The effect of revenues is positive—an increase in equity coupled with an increase in assets or a decrease in liabilities.

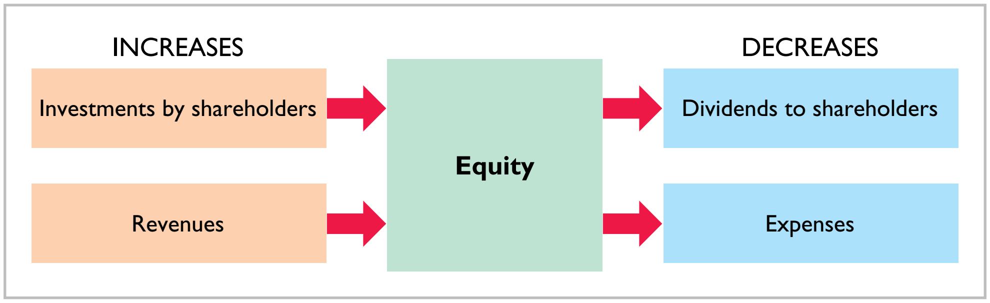
EXPENSES **Expenses** are the cost of assets consumed or services used in the process of earning revenue. **They are decreases in equity that result from operating the business.** Like revenues, expenses take many forms and are called various names depending on the type of asset consumed or service used. For example, Taipai Pizza recognizes the following types of expenses: cost of ingredients (flour, cheese, tomato paste, meat, mushrooms, etc.), cost of beverages, wages expense, utilities expense (electric, gas, and water expense), telephone expense, delivery expense (gasoline, repairs, licenses, etc.), supplies expense (napkins, detergents, aprons, etc.), rent expense, interest expense, and property tax expense.

• HELPFUL HINT
The effect of expenses is negative—a decrease in equity coupled with a decrease in assets or an increase in liabilities.

DIVIDENDS Net income represents an increase in net assets which is then available to distribute to shareholders. The distribution of cash or other assets to shareholders is called a **dividend**. Dividends reduce retained earnings. However, dividends are **not expenses**. A corporation first determines its revenues and expenses and then computes net income or net loss. If it has net income, and decides it has no better use for that income, a corporation may decide to distribute a dividend to its owners (the shareholders).

In summary, the principal sources (increases) of equity are investments by shareholders and revenues from business operations. In contrast, reductions (decreases) in equity result from expenses and dividends. These relationships are shown in Illustration 1-7.

Illustration 1-7
Increases and decreases in equity



> DO IT!

Equity Effects

Action Plan

✔ Understand the sources of revenue.

✔ Understand what causes expenses.

✔ Review the rules for changes in equity: Investments and revenues increase equity. Expenses and dividends decrease equity.

✔ Recognize that dividends are distributions of cash or other assets to shareholders.

Classify the following items as issuance of shares (I), dividends (D), revenues (R), or expenses (E). Then indicate whether each item increases or decreases equity.

(1) Rent Expense (3) Dividends
(2) Service Revenue (4) Salaries and Wages Expense

Solution

1. Rent Expense is an expense (E); it decreases equity. 2. Service Revenue is a revenue (R); it increases equity. 3. Dividends is a distribution to shareholders (D); it decreases equity. 4. Salaries and Wages Expense is an expense (E); it decreases equity.

Related exercise material: **BE1-1, BE1-2, BE1-3, BE1-4, BE1-5, BE1-8, BE1-9, E1-5, and DO IT! 1-3.**

✔ The Navigator

Using the Accounting Equation

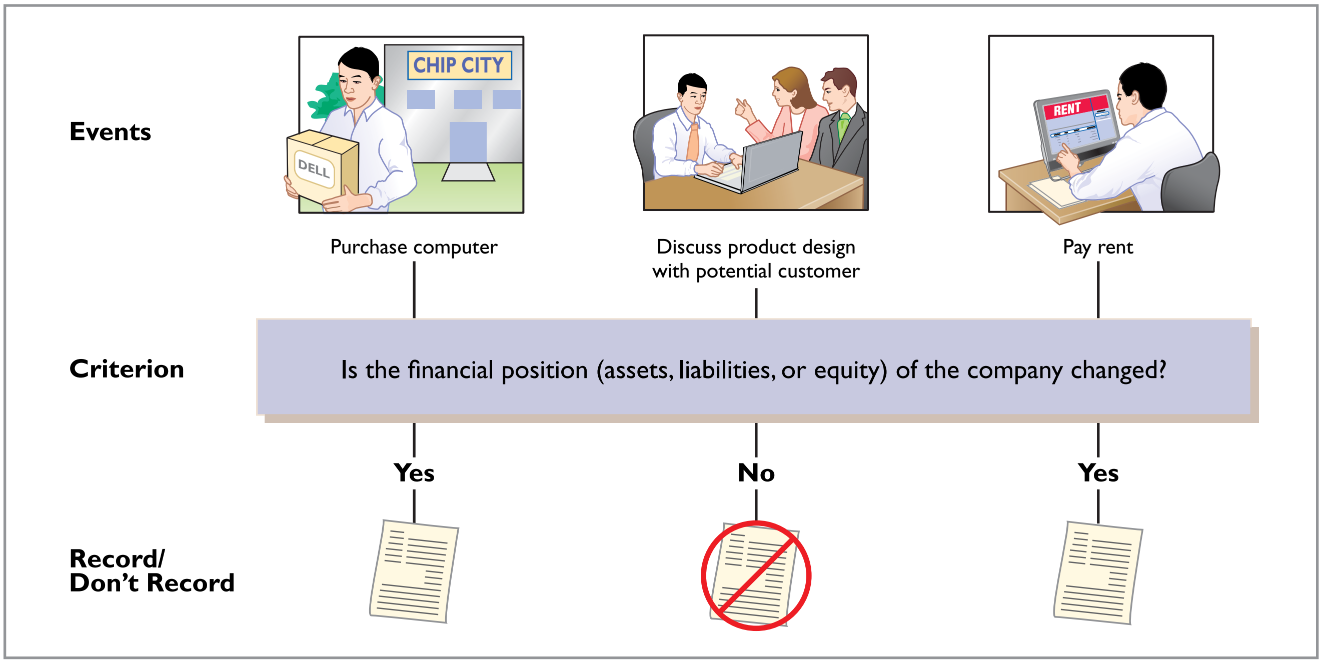
Learning Objective 7

Analyze the effects of business transactions on the accounting equation.

Transactions (**business transactions**) are a business's economic events recorded by accountants. Transactions may be external or internal. **External transactions** involve economic events between the company and some outside enterprise. For example, Taipai Pizza's purchase of cooking equipment from a supplier, payment of monthly rent to the landlord, and sale of pizzas to customers are external transactions. **Internal transactions** are economic events that occur entirely within one company. The use of cooking and cleaning supplies are internal transactions for Taipai Pizza.

Companies carry on many activities that do not represent business transactions. Examples are hiring employees, answering the telephone, talking with customers, and placing merchandise orders. Some of these activities may lead to business transactions: Employees will earn wages, and suppliers will deliver ordered merchandise. The company must analyze each event to find out if it affects the components of the accounting equation. If it does, the company will record the transaction. Illustration 1-8 demonstrates the transaction-identification process.

Illustration 1-8
Transaction-identification process



Each transaction must have a dual effect on the accounting equation. For example, if an asset is increased, there must be a corresponding (1) decrease in another asset, (2) increase in a specific liability, or (3) increase in equity.

Two or more items could be affected. For example, as one asset is increased NT$10,000, another asset could decrease NT$6,000 and a liability could increase NT$4,000. Any change in a liability or ownership claim is subject to similar analysis.

Transaction Analysis

To demonstrate how to analyze transactions in terms of the accounting equation, we will review the business activities of Softbyte SA. As part of this analysis, we will expand the basic accounting equation. This will allow us to better illustrate the impact of transactions on equity. Recall that equity is comprised of two parts: share capital—ordinary and retained earnings. Share capital—ordinary is affected when the company issues new ordinary shares in exchange for cash. Retained earnings is affected when the company earns revenue, incurs expenses, or pays dividends. Illustration 1-9 (page 16) shows the **expanded accounting equation**.

If you are tempted to skip ahead after you've read a few of the following transaction analyses, don't do it. Each has something unique to teach, something you'll need later. (We assure you that we've kept them to the minimum needed!)

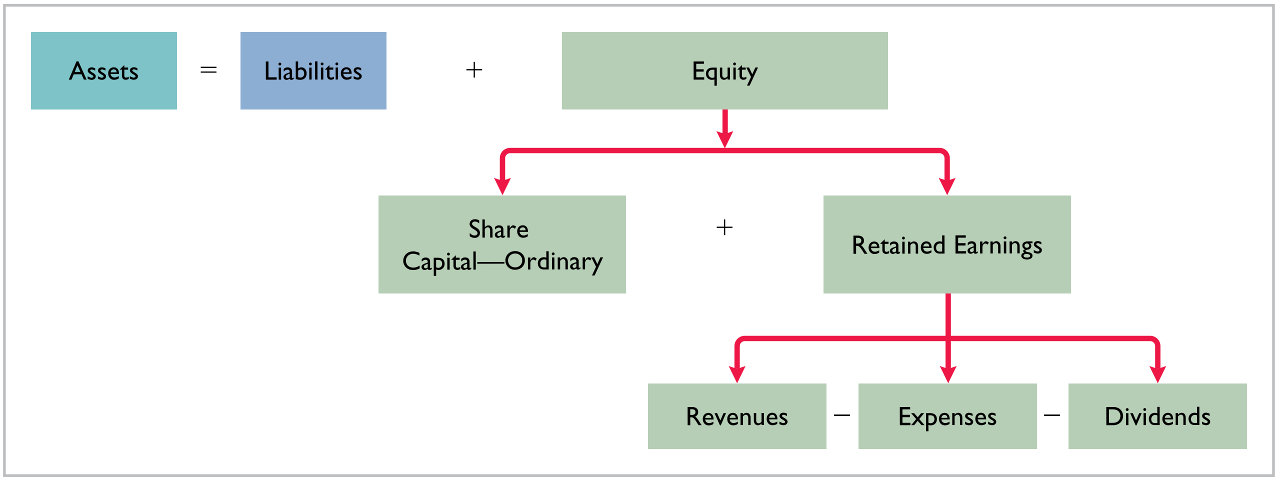


Illustration 1-9
Expanded accounting equation

• HELPFUL HINT
You will want to study these transactions until you are sure you understand them. They are not difficult, but understanding them is important to your success in this course. The ability to analyze transactions in terms of the basic accounting equation is essential in accounting.

TRANSACTION 1. INVESTMENT BY SHAREHOLDERS Ray and Barbara Neal decide to start a smartphone app development company that they incorporate as Softbyte SA. On September 1, 2017, they invest €15,000 cash in the business in exchange for €15,000 of ordinary shares. The ordinary shares indicates the ownership interest that the Neals have in Softbyte SA. This transaction results in an equal increase in both assets and equity.[3]

Basic Analysis	The asset Cash increases €15,000, and equity identified as Share Capital—Ordinary increases €15,000.

Equation Analysis

	Assets	=	Liabilities	+	Equity	
	Cash	=			Share Capital	
(1)	+€15,000	=			+€15,000	Issued Shares

Observe that the equality of the basic equation has been maintained. Note also that the source of the increase in equity (in this case, issued shares) is indicated. Why does this matter? Because investments by shareholders do not represent revenues, and they are excluded in determining net income. Therefore, it is necessary to make clear that the increase is an investment rather than revenue from operations. Additional investments (i.e., investments made by shareholders after the corporation has been initially formed) have the same effect on equity as the initial investment.

TRANSACTION 2. PURCHASE OF EQUIPMENT FOR CASH Softbyte SA purchases computer equipment for €7,000 cash. This transaction results in an equal increase and decrease in total assets, though the composition of assets changes.

[3]For the illustrative equations that follow, we use the general account title “Share Capital” instead of “Share Capital—Ordinary” for space considerations.

Basic Analysis	The asset Cash decreases €7,000, and the asset Equipment increases €7,000.

Equation Analysis

	Assets			=	**Liabilities**	+	**Equity**
	Cash	+	Equipment	=			Share Capital
	€15,000						€15,000
(2)	**−7,000**		**+€7,000**				
	€ 8,000	+	€7,000	=			€15,000
	€15,000						

Observe that total assets are still €15,000. Share Capital—Ordinary also remains at €15,000, the amount of the original investment.

TRANSACTION 3. PURCHASE OF SUPPLIES ON CREDIT Softbyte SA purchases for €1,600 from Mobile Solutions Company headsets and other computer accessories expected to last several months. Mobile Solutions agrees to allow Softbyte to pay this bill in October. This transaction is a purchase on account (a credit purchase). Assets increase because of the expected future benefits of using the headsets and computer accessories, and liabilities increase by the amount due Mobile Solutions.

Basic Analysis	The asset Supplies increases €1,600, and the liability Accounts Payable increases €1,600.

Equation Analysis

	Assets					=	**Liabilities**	+	**Equity**
	Cash	+	Supplies	+	Equipment	=	Accounts Payable	+	Share Capital
	€8,000				€7,000				€15,000
(3)			**+€1,600**				**+€1,600**		
	€8,000	+	€1,600	+	€7,000	=	€1,600	+	€15,000
	€16,600						€16,600		

Total assets are now €16,600. This total is matched by a €1,600 creditor's claim and a €15,000 ownership claim.

TRANSACTION 4. SERVICES PERFORMED FOR CASH Softbyte SA receives €1,200 cash from customers for app development services it has performed. This transaction represents Softbyte's principal revenue-producing activity. Recall that **revenue increases equity**.

Basic Analysis	The asset Cash increases €1,200, and equity increases €1,200 due to Service Revenue.

Equation Analysis

	Assets					=	**Liabilities**	+	**Equity**						
											Retained Earnings				
	Cash	+	Supplies	+	Equipment	=	Accounts Payable	+	Share Capital	+	Rev.	−	Exp.	−	Div.
	€8,000		€1,600		€7,000		€1,600		€15,000						
(4)	**+1,200**										**+€1,200**				**Service Revenue**
	€9,200	+	€1,600	+	€7,000	=	€1,600	+	€15,000	+	€1,200				
	€17,800						€17,800								

The two sides of the equation balance at €17,800. Service Revenue is included in determining Softbyte's net income.

Note that we do not have room to give details for each individual revenue and expense account in this illustration. Thus, revenues (and expenses when we get to them) are summarized under one column heading for Revenues and one for Expenses. However, it is important to keep track of the category (account) titles affected (e.g., Service Revenue) as they will be needed when we prepare financial statements later in the chapter.

TRANSACTION 5. PURCHASE OF ADVERTISING ON CREDIT Softbyte SA receives a bill for €250 from *Programming News* for advertising on its website but postpones payment until a later date. This transaction results in an increase in liabilities and a decrease in equity.

Basic Analysis: The liability Accounts Payable increases €250, and equity decreases €250 due to Advertising Expense.

Equation Analysis

	Assets			=	**Liabilities**	+	**Equity**				
	Cash	+ Supplies	+ Equipment	=	Accounts Payable	+	Share Capital	+ Retained Earnings: Rev.	− Exp.	− Div.	
	€9,200	€1,600	€7,000		€1,600		€15,000	€1,200			
(5)					**+250**				**−€250**		**Advertising Expense**
	€9,200	+ €1,600	+ €7,000	=	€1,850	+	€15,000	+ €1,200	− €250		
	€17,800				€17,800						

The two sides of the equation still balance at €17,800. Retained Earnings decreases when Softbyte incurs the expense. Expenses do not have to be paid in cash at the time they are incurred. When Softbyte pays at a later date, the liability Accounts Payable will decrease and the asset Cash will decrease (see Transaction 8). The cost of advertising is an expense (rather than an asset) because Softbyte has used the benefits. Advertising Expense is included in determining net income.

TRANSACTION 6. SERVICES PERFORMED FOR CASH AND CREDIT Softbyte SA performs €3,500 of app development services for customers. The company receives cash of €1,500 from customers, and it bills the balance of €2,000 on account. This transaction results in an equal increase in assets and equity.

Basic Analysis: Three specific items are affected: The asset Cash increases €1,500, the asset Accounts Receivable increases €2,000, and equity increases €3,500 due to Service Revenue.

Equation Analysis

	Assets				=	**Liabilities**	+	**Equity**				
	Cash	+ Accounts Receivable	+ Supplies	+ Equipment	=	Accounts Payable	+	Share Capital	+ Retained Earnings: Rev.	− Exp.	− Div.	
	€ 9,200		€1,600	€7,000		€1,850		€15,000	€1,200	€250		
(6)	**+1,500**	**+€2,000**							**+3,500**			**Service Revenue**
	€10,700	+ € 2,000	+ €1,600	+ €7,000	=	€1,850	+	€15,000	+ €4,700	− €250		
	€21,300					€21,300						

Softbyte recognizes €3,500 in revenue when it performs the services. In exchange for these services, it received €1,500 in Cash and Accounts Receivable of €2,000. This Accounts Receivable represents customers' promise to pay €2,000 to Softbyte in the future. When it later receives collections on account, Softbyte will increase Cash and will decrease Accounts Receivable (see Transaction 9).

TRANSACTION 7. PAYMENT OF EXPENSES Softbyte SA pays the following expenses in cash for September: office rent €600, salaries and wages of employees €900, and utilities €200. These payments result in an equal decrease in assets and equity.

Basic Analysis	The asset Cash decreases €1,700, and equity decreases €1,700 due to the following specific expenses: Rent Expense, Salaries and Wages Expense, and Utilities Expense.

Equation Analysis

	Assets				= Liabilities +	Equity				
	Cash +	Accounts Receivable +	Supplies +	Equipment =	Accounts Payable +	Share Capital +	Retained Earnings Rev. −	Exp. −	Div.	
	€10,700	€2,000	€1,600	€7,000	€1,850	€15,000	€4,700	€ 250		
(7)	−1,700							−600		Rent Exp.
								−900		Sal./Wages Exp.
								−200		Utilities Exp.
	€ 9,000 +	€2,000 +	€1,600 +	€7,000 =	€1,850 +	€15,000 +	€4,700 −	€1,950		
	€19,600				€19,600					

The two sides of the equation now balance at €19,600. Three lines are required in the analysis to indicate the different types of expenses that have been incurred.

TRANSACTION 8. PAYMENT OF ACCOUNTS PAYABLE Softbyte SA pays its €250 *Programming News* bill in cash. The company previously (in Transaction 5) recorded the bill as an increase in Accounts Payable and a decrease in equity.

Basic Analysis	This cash payment "on account" decreases the asset Cash by €250 and also decreases the liability Accounts Payable by €250.

Equation Analysis

	Assets				= Liabilities +	Equity			
	Cash +	Accounts Receivable +	Supplies +	Equipment =	Accounts Payable +	Share Capital +	Retained Earnings Rev. −	Exp. −	Div.
	€9,000	€2,000	€1,600	€7,000	€1,850	€15,000	€4,700	€1,950	
(8)	−250				−250				
	€8,750 +	€2,000 +	€1,600 +	€7,000 =	€1,600 +	€15,000 +	€4,700 −	€1,950	
	€19,350				€19,350				

Observe that the payment of a liability related to an expense that has previously been recorded does not affect equity. Softbyte recorded the expense (in Transaction 5) and should not record it again.

TRANSACTION 9. RECEIPT OF CASH ON ACCOUNT Softbyte SA receives €600 in cash from customers who had been billed for services (in Transaction 6). Transaction 9 does not change total assets, but it changes the composition of those assets.

Basic Analysis	The asset Cash increases €600, and the asset Accounts Receivable decreases €600.

Equation Analysis

	Assets							= Liabilities +		Equity						
	Cash	+	Accounts Receivable	+	Supplies	+	Equipment	= Accounts Payable	+	Share Capital	+	Retained Earnings Rev.	−	Exp.	−	Div.
	€8,750		€2,000		€1,600		€7,000	€1,600		€15,000		€4,700		€1,950		
(9)	+600		−600													
	€9,350	+	€1,400	+	€1,600	+	€7,000	= €1,600	+	€15,000	+	€4,700	−	€1,950		
	€19,350							€19,350								

Note that the collection of an account receivable for services previously billed and recorded does not affect equity. Softbyte already recorded this revenue (in Transaction 6) and should not record it again.

TRANSACTION 10. DIVIDENDS The corporation pays a dividend of €1,300 in cash to Ray and Barbara Neal, the shareholders of Softbyte SA. This transaction results in an equal decrease in assets and equity.

Basic Analysis	The asset Cash decreases €1,300, and equity decreases €1,300 due to dividends.

Equation Analysis

	Assets							= Liabilities +		Equity							
	Cash	+	Accounts Receivable	+	Supplies	+	Equipment	= Accounts Payable	+	Share Capital	+	Retained Earnings Rev.	−	Exp.	−	Div.	
	€ 9,350		€1,400		€1,600		€7,000	€1,600		€15,000		€4,700		€1,950			
(10)	−1,300															−€1,300	Dividends
	€ 8,050	+	€1,400	+	€1,600	+	€7,000	= €1,600	+	€15,000	+	€4,700	−	€1,950	−	€ 1,300	
	€18,050							€18,050									

Note that the dividend reduces retained earnings, which is part of equity. **Dividends are not expenses**. Like shareholders' investments, dividends are excluded in determining net income.

Summary of Transactions

Illustration 1-10 summarizes the September transactions of Softbyte SA to show their cumulative effect on the basic accounting equation. It also indicates the transaction number and the specific effects of each transaction. Finally, Illustration 1-10 demonstrates a number of significant facts:

1. Each transaction must be analyzed in terms of its effect on:
   (a) The three components of the basic accounting equation.
   (b) Specific types (kinds) of items within each component.
2. The two sides of the equation must always be equal.
3. The Share Capital—Ordinary and Retained Earnings columns indicate the causes of each change in the shareholders' claim on assets.

Transaction	Assets				= Liabilities +	Equity				
	Cash	+ Accounts Receivable	+ Supplies	+ Equipment	= Accounts Payable	+ Share Capital	+ Retained Earnings: Rev.	− Exp.	− Div.	
(1)	+€15,000					+ €15,000				**Issued Shares**
(2)	−7,000			+€7,000						
(3)			+€1,600		+€1,600					
(4)	+1,200						+€1,200			**Service Revenue**
(5)					+250			−€250		**Adver. Expense**
(6)	+1,500	+€2,000					+3,500			**Service Revenue**
(7)	−1,700							−600		**Rent Expense**
								−900		**Sal./Wages Exp.**
								−200		**Utilities Expense**
(8)	−250				−250					
(9)	+600	−600								
(10)	−1,300								−€1,300	**Dividends**
	€ 8,050 +	€1,400 +	€1,600 +	€7,000 =	€1,600 +	€15,000 +	€4,700 −	€1,950 −	€1,300	
	€18,050				**€18,050**					

Illustration 1-10
Tabular summary of Softbyte SA transactions

There! You made it through transaction analysis. If you feel a bit shaky on any of the transactions, it might be a good idea at this point to get up, take a short break, and come back again for a brief (10- to 15-minute) review of the transactions, to make sure you understand them before you go on to the next section.

> DO IT!

Tabular Analysis

Action Plan

✔ Analyze the effects of each transaction on the accounting equation.

✔ Use appropriate category names (not descriptions).

✔ Keep the accounting equation in balance.

Transactions made by Virmari & Co. SA, a public accounting firm in France, for the month of August are shown below. Prepare a tabular analysis which shows the effects of these transactions on the expanded accounting equation, similar to that shown in Illustration 1-10.

1. The company issued ordinary shares for €25,000 cash.
2. The company purchased €7,000 of office equipment on credit.
3. The company received €8,000 cash in exchange for services performed.
4. The company paid €850 for this month's rent.
5. The company paid a dividend of €1,000 in cash to shareholders.

Solution

Transaction	Assets		= Liabilities +	Equity				
	Cash	+ Equipment	= Accounts Payable	+ Share Capital	+ Retained Earnings: Rev.	− Exp.	− Div.	
(1)	+€25,000			+€25,000				
(2)		+€7,000	+€7,000					
(3)	+8,000				+€8,000			**Service Revenue**
(4)	−850					−€850		**Rent Expense**
(5)	−1,000						− €1,000	**Dividends**
	€31,150 +	€7,000 =	€7,000 +	€25,000 +	€8,000 −	€850 −	€1,000	
	€38,150		€38,150					

Related exercise material: **BE1-6, BE1-7, E1-6, E1-7, E1-8, and DO IT! 1-4.**

✔ The Navigator

Financial Statements

Learning Objective 8

Understand the five financial statements and how they are prepared.

Companies prepare five financial statements from the summarized accounting data:

1. An **income statement** presents the revenues and expenses and resulting net income or net loss for a specific period of time.
2. A **retained earnings statement** summarizes the changes in retained earnings for a specific period of time.
3. A **statement of financial position** (sometimes referred to as a *balance sheet*) reports the assets, liabilities, and equity of a company at a specific date.
4. A **statement of cash flows** summarizes information about the cash inflows (receipts) and outflows (payments) for a specific period of time.
5. A **comprehensive income statement** presents other comprehensive income items that are not included in the determination of net income.

These statements provide relevant financial data for internal and external users. Illustration 1-11 shows the first four financial statements from the above list of Softbyte SA. (Illustration 1-11 assumes Softbyte has no other comprehensive income items.) A comprehensive income statement is presented on page 25 for Softbyte.

Note that the statements shown in Illustration 1-11 are interrelated:

1. Net income of €2,750 on the **income statement** is added to the beginning balance of retained earnings in the **retained earnings statement**.
2. Retained earnings of €1,450 at the end of the reporting period shown in the **retained earnings statement** is reported on the **statement of financial position**.
3. Cash of €8,050 on the **statement of financial position** is reported on the **statement of cash flows**.

• HELPFUL HINT
The income statement, retained earnings statement, statement of cash flows, and comprehensive income statement are all for a *period* of time, whereas the statement of financial position is for a *point* in time.

Also, explanatory notes and supporting schedules are an integral part of every set of financial statements. We illustrate these notes and schedules in later chapters of this textbook.

Be sure to carefully examine the format and content of each statement in Illustration 1-11. We describe the essential features of each in the following sections.

Income Statement

The income statement reports the success or profitability of the company's operations over a specific period of time. For example, Softbyte SA's income statement is dated "For the Month Ended September 30, 2017." It is prepared from the data appearing in the revenue and expense columns of Illustration 1-10 (page 21). The heading of the statement identifies the company, the type of statement, and the time period covered by the statement.

The income statement lists revenues first, followed by expenses. Then, the statement shows net income (or net loss). When revenues exceed expenses, **net income** results. When expenses exceed revenues, a **net loss** results.

Although practice varies, we have chosen to list expenses in order of magnitude in our illustrations. (We will consider alternative formats for the income statement in later chapters.)

Note that the income statement does not include investment and dividend transactions between the shareholders and the business in measuring net income. For example, as explained earlier, the cash dividend from Softbyte SA was not regarded as a business expense. This type of transaction is considered a reduction of retained earnings, which causes a decrease in equity.

Illustration 1-11
Financial statements and their interrelationships

SOFTBYTE SA
Income Statement
For the Month Ended September 30, 2017

Revenues		
Service revenue		€4,700
Expenses		
Salaries and wages expense	€900	
Rent expense	600	
Advertising expense	250	
Utilities expense	200	
Total expenses		1,950
Net income		**€2,750**

SOFTBYTE SA
Retained Earnings Statement
For the Month Ended September 30, 2017

Retained earnings, September 1	€ 0
Add: Net income	**2,750**
	2,750
Less: Dividends	1,300
Retained earnings, September 30	**€1,450**

SOFTBYTE SA
Statement of Financial Position
September 30, 2017

Assets		
Equipment		€ 7,000
Supplies		1,600
Accounts receivable		1,400
Cash		**8,050**
Total assets		€18,050
Equity and Liabilities		
Equity		
Share capital—ordinary	**€15,000**	
Retained earnings	**1,450**	**€16,450**
Liabilities		
Accounts payable		1,600
Total equity and liabilities		€18,050

SOFTBYTE SA
Statement of Cash Flows
For the Month Ended September 30, 2017

Cash flows from operating activities		
Cash receipts from revenues		€ 3,300
Cash payments for expenses		(1,950)
Net cash provided by operating activities		1,350
Cash flows from investing activities		
Purchase of equipment		(7,000)
Cash flows from financing activities		
Sale of ordinary shares	€15,000	
Payment of cash dividends	(1,300)	13,700
Net increase in cash		8,050
Cash at the beginning of the period		0
Cash at the end of the period		**€ 8,050**

• **HELPFUL HINT**
The heading of each statement identifies the company, the type of statement, and the specific date or time period covered by the statement.

• **HELPFUL HINT**
The arrows in this illustration show the interrelationships of the four financial statements.
1. Net income is computed first and is needed to determine the ending balance in retained earnings.
2. The ending balance in retained earnings is needed in preparing the statement of financial position.
3. The cash shown on the statement of financial position is needed in preparing the statement of cash flows.

• **HELPFUL HINT**
Note that final sums are double-underlined, and negative amounts (in the statement of cash flows) are presented in parentheses.

Retained Earnings Statement

Softbyte SA's retained earnings statement reports the changes in retained earnings for a specific period of time. The time period is the same as that covered by the income statement ("For the Month Ended September 30, 2017"). Data for the preparation of the retained earnings statement come from the retained earnings columns of the tabular summary (Illustration 1-10) and from the income statement (Illustration 1-11).

The first line of the statement shows the beginning retained earnings amount. Then come net income and dividends. The retained earnings ending balance is the final amount on the statement. The information provided by this statement indicates the reasons why retained earnings increased or decreased during the period. If there is a net loss, it is deducted with dividends in the retained earnings statement.

Statement of Financial Position

Softbyte SA's statement of financial position reports the assets, liabilities, and equity at a specific date (September 30, 2017). The company prepares the statement of financial position from the column headings and the month-end data shown in the last line of the tabular summary (Illustration 1-10).

Observe that the statement of financial position lists assets at the top, followed by equity and then liabilities. Total assets must equal total equity and liabilities. Softbyte SA reports only one liability, Accounts Payable, on its statement of financial position. In most cases, there will be more than one liability. When two or more liabilities are involved, a customary way of listing is as shown in Illustration 1-12.

Illustration 1-12
Presentation of liabilities

Liabilities	
Notes payable	€ 10,000
Accounts payable	63,000
Salaries and wages payable	18,000
Total liabilities	**€91,000**

The statement of financial position is like a snapshot of the company's financial condition at a specific moment in time (usually the month-end or year-end).

Accounting Across the Organization **A Wise End** **Vodafone (GBR)**

Chris Ison/©AP/Wide World Photos

Not every company uses December 31 as the accounting year-end. Some companies whose year-ends differ from December 31 are Vodafone Group (GBR), March 31; Walt Disney Productions (USA), September 30; and JJB Sports (GBR), the Sunday that falls before, but closest to, January 31. Why do companies choose the particular year-ends that they do? Many opt to end the accounting year when inventory or operations are at a low. Compiling accounting information requires much time and effort by managers, so companies would rather do it when they aren't as busy operating the business. Also, inventory is easier and less costly to count when it is low.

Q What year-end would you likely use if you owned a ski resort and ski rental business? What if you owned a college bookstore? Why choose those year-ends? (See page 49.)

Statement of Cash Flows

The statement of cash flows provides information on the cash receipts and payments for a specific period of time. The statement of cash flows reports (1) the cash effects of a company's operations during a period, (2) its investing activities, (3) its financing activities, (4) the net increase or decrease in cash during the period, and (5) the cash amount at the end of the period.

• HELPFUL HINT
Investing activities pertain to investments made by the company, not investments made by the owners.

Reporting the sources, uses, and change in cash is useful because investors, creditors, and others want to know what is happening to a company's most liquid resource. The statement of cash flows provides answers to the following simple but important questions.

1. Where did cash come from during the period?
2. What was cash used for during the period?
3. What was the change in the cash balance during the period?

As shown in Softbyte SA's statement of cash flows in Illustration 1-11, cash increased €8,050 during the period. Net cash provided by operating activities increased cash €1,350. Cash flow from investing activities decreased cash €7,000. And cash flow from financing activities increased cash €13,700. At this time, you need not be concerned with how these amounts are determined. Chapter 13 will examine in detail how the statement is prepared.

Comprehensive Income Statement

In some cases, Softbyte SA must prepare a comprehensive income statement in addition to its income statement. Softbyte prepares this second statement if it has other comprehensive income items. Other comprehensive income items are not part of net income but are considered important enough to be reported separately. Softbyte adds other comprehensive income to net income to arrive at comprehensive income. Illustration 1-13 shows a comprehensive income statement, assuming that Softbyte SA has other comprehensive income of €600.

Illustration 1-13
Comprehensive income statement

SOFTBYTE SA Comprehensive Income Statement For the Month Ended September 30, 2017	
Net income	€2,750
Other comprehensive income	600
Comprehensive income	€3,350

In this two statement format, the comprehensive income statement is reported directly after the traditional income statement. Examples of this two statement format can be seen in the financial statements of Nestlé and Petra Foods in Appendices B and C, respectively. IFRS does allow an alternative statement format in which the information contained in the income statement and the comprehensive income statement are combined in a single statement, referred to as a **statement of comprehensive income**. An example of this approach can be seen in the financial statements of TSMC in Appendix A. In this textbook, we use the two statement approach. We provide a more detailed discussion about the components of other comprehensive income in later chapters.

People, Planet, and Profit Insight **Beyond Financial Statements**

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Should we expand our financial statements beyond the income statement, retained earnings statement, statement of financial position, and statement of cash flows? Some believe we should take into account ecological and social performance, in addition to financial results, in evaluating a company. The argument is that a company's responsibility lies with anyone who is influenced by its actions. In other words, a company should be interested in benefiting many different parties, instead of only maximizing shareholders' interests.

A socially responsible business does not exploit or endanger any group of individuals. It follows fair trade practices, provides safe environments for workers, and bears responsibility for environmental damage. Granted, measurement of these factors is difficult. How to report this information is also controversial. But, many interesting and useful efforts are underway. Throughout this textbook, we provide additional insights into how companies are attempting to meet the challenge of measuring and reporting their contributions to society, as well as their financial results, to shareholders.

Q Why might a company's shareholders be interested in its environmental and social performance? (See page 49.)

> **DO IT!**

Financial Statement Items

Presented below is selected information related to Flanagan Group plc at December 31, 2017. Flanagan reports financial information monthly.

Equipment	£10,000	Utilities Expense	£ 4,000
Cash	8,000	Accounts Receivable	9,000
Service Revenue	36,000	Salaries and Wages Expense	7,000
Rent Expense	11,000	Notes Payable	16,500
Accounts Payable	2,000	Dividends	5,000

(a) Determine the total assets of Flanagan at December 31, 2017.
(b) Determine the net income that Flanagan reported for December 2017.
(c) Determine the equity of Flanagan at December 31, 2017.

Action Plan

✔ Remember the basic accounting equation: assets must equal liabilities plus equity.

✔ Review previous financial statements to determine how total assets, net income, and equity are computed.

Solution

(a) The total assets are £27,000, comprised of Equipment £10,000, Accounts Receivable £9,000, and Cash £8,000.

(b) Net income is £14,000, computed as follows.

Revenues		
Service revenue		£36,000
Expenses		
Rent expense	£11,000	
Salaries and wages expense	7,000	
Utilities expense	4,000	
Total expenses		22,000
Net income		£14,000

(c) The ending equity of Flanagan is £8,500. By rewriting the accounting equation, we can compute equity as assets minus liabilities, as follows.

Total assets [as computed in (a)]		£27,000
Less: Liabilities		
Notes payable	£16,500	
Accounts payable	2,000	18,500
Equity		£ 8,500

Note that it is not possible to determine the company's equity in any other way, because the beginning total for equity is not provided.

Related exercise material: **BE1-10, BE1-11, E1-9, E1-10, E1-11, E1-12, E1-13, E1-14, E1-15, E1-16, and DO IT! 1-5.**

✔ The Navigator

APPENDIX 1A Accounting Career Opportunities

Learning Objective *9

Explain the career opportunities in accounting.

Why is accounting such a popular major and career choice? First, there are a lot of jobs. In many cities in recent years, the demand for accountants exceeded the supply. Not only are there a lot of jobs, but there are a wide array of opportunities. As one accounting organization observed, "accounting is one degree with 360 degrees of opportunity."

Accounting is also hot because it is obvious that accounting matters. Interest in accounting has increased, ironically, because of the attention caused by the turmoil over toxic (misstated) assets at many financial institutions. These widely publicized scandals revealed the important role that accounting plays in society. Most people want to make a difference, and an accounting career provides many opportunities to contribute to society. Finally, recent internal control requirements dramatically increased demand for professionals with accounting training.

Accountants are in such demand that it is not uncommon for accounting students to have accepted a job offer a year before graduation. As the following discussion reveals, the job options of people with accounting degrees are virtually unlimited.

Public Accounting

Individuals in **public accounting** offer expert service to the general public, in much the same way that doctors serve patients and lawyers serve clients. A major portion of public accounting involves **auditing**. In auditing, an independent accountant, such as a chartered accountant (CA) or a certified public accountant (CPA), examines company financial statements and provides an opinion as to how accurately the financial statements present the company's results and financial position. Analysts, investors, and creditors rely heavily on these "audit opinions," which CAs and CPAs have the exclusive authority to issue.

Taxation is another major area of public accounting. The work that tax specialists perform includes tax advice and planning, preparing tax returns, and representing clients before governmental agencies.

A third area in public accounting is **management consulting**. It ranges from installing basic accounting software or highly complex enterprise resource planning systems, to providing support services for major marketing projects and merger and acquisition activities.

Many accountants are entrepreneurs. They form small- or medium-sized practices that frequently specialize in tax or consulting services.

Private Accounting

Instead of working in public accounting, you might choose to be an employee of a for-profit company such as Sinopec Corp. (CHN), Nokia (FIN), or Samsung (KOR). In **private (or managerial) accounting**, you would be involved in activities such as cost accounting (finding the cost of producing specific products), budgeting, accounting information system design and support, and tax planning and preparation. You might also be a member of your company's internal audit team. In response to corporate failures, the internal auditors' job of reviewing the company's operations to ensure compliance with company policies and to increase efficiency has taken on increased importance.

Alternatively, many accountants work for not-for-profit organizations, such as the International Red Cross (CHE) or the Bill and Melinda Gates Foundation (USA), or for museums, libraries, or performing arts organizations.

Governmental Accounting

Another option is to pursue one of the many accounting opportunities in governmental agencies. For example, tax authorities, law enforcement agencies, and corporate regulators all employ accountants. There is also a very high demand for accounting educators at colleges and universities and in governments.

Forensic Accounting

Forensic accounting uses accounting, auditing, and investigative skills to conduct investigations into theft and fraud. It is listed among the top 20 career paths of the future. The job of forensic accountants is to catch the perpetrators of theft and fraud occurring at companies. This includes tracing money-laundering and identity-theft activities as well as tax evasion. Insurance companies hire forensic accountants to detect insurance frauds such as arson, and law offices employ forensic accountants to identify marital assets in divorces.

REVIEW AND PRACTICE

*The **Review and Practice** section provides opportunities for students to review key concepts and terms as well as complete multiple-choice questions, exercises, and a comprehensive problem. Detailed solutions are also included.*

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Explain what accounting is.** Accounting is an information system that identifies, records, and communicates the economic events of an organization to interested users.

2 **Identify the users and uses of accounting.** The major users and uses of accounting are as follows. (a) Management uses accounting information to plan, organize, and run the business. (b) Investors (owners) decide whether to buy, hold, or sell their financial interests on the basis of accounting data. (c) Creditors (suppliers and bankers) evaluate the risks of granting credit or lending money on the basis of accounting information. Other groups that use accounting information are taxing authorities, regulatory agencies, customers, labor unions, and economic planners.

3 **Understand why ethics is a fundamental business concept.** Ethics are the standards of conduct by which actions are judged as right or wrong. Effective financial reporting depends on sound ethical behavior.

4 **Explain accounting standards and the measurement principles.** Accounting is based on standards, such as International Financial Reporting Standards (IFRS). IFRS generally uses one of two measurement principles, the historical cost principle or the fair value principle. Selection of which principle to follow generally relates to trade-offs between relevance and faithful representation.

5 **Explain the monetary unit assumption and the economic entity assumption.** The monetary unit assumption requires that companies include in the accounting records only transaction data that can be expressed in terms of money. The economic entity assumption requires that the activities of each economic entity be kept separate from the activities of its owner(s) and other economic entities.

6 **State the accounting equation, and define its components.** The basic accounting equation is:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

Assets are resources a business owns. Liabilities are creditor' claims on total assets. Equity is the ownership claim on total assets.

The expanded accounting equation is:

Assets = Liabilities + Share Capital—Ordinary + Revenues − Expenses − Dividends

Share capital—ordinary is affected when the company issues new ordinary shares in exchange for cash. Revenues are increases in assets resulting from income-earning activities. Expenses are the costs of assets consumed or services used in the process of earning revenue. Dividends are payments the company makes to its shareholders.

7 **Analyze the effects of business transactions on the accounting equation.** Each business transaction must have a dual effect on the accounting equation. For example, if an individual asset increases, there must be a corresponding (1) decrease in another asset, or (2) increase in a specific liability, or (3) increase in equity.

8 **Understand the five financial statements and how they are prepared.** An income statement presents the revenues and expenses, and resulting net income or net loss, for a specific period of time. A retained earnings statement summarizes the changes in retained earnings for a specific period of time. A statement of financial position reports the assets, liabilities, and equity at a specific date. A statement of cash flows summarizes information about the cash inflows (receipts) and outflows (payments) for a specific period of time. A comprehensive income statement adds or subtracts any items of other comprehensive income to net income to arrive at comprehensive income.

*9 **Explain the career opportunities in accounting.** Accounting offers many different jobs in fields such as public and private accounting, government, and forensic accounting. Accounting is a popular major because there are many different types of jobs, with unlimited potential for career advancement.

GLOSSARY REVIEW

Accounting The information system that identifies, records, and communicates the economic events of an organization to interested users. (p. 4).

Assets Resources a business owns. (p. 12).

***Auditing** The examination of financial statements by an independent accountant in order to express an opinion as to the fairness of presentation. (p. 27).

Basic accounting equation Assets = Liabilities + Equity. (p. 12).

Bookkeeping A part of accounting that involves only the recording of economic events. (p. 4).

Comprehensive income statement A financial statement that presents items that are not included in the determination of net income, referred to as other comprehensive income. (p. 22).

Convergence Effort to reduce differences between U.S. GAAP and IFRS to enhance comparability. (p. 8).

Corporation A business organized as a separate legal entity under corporation law, having ownership divided into transferable shares. (p. 10).

Dividend A distribution of cash or other assets by a corporation to its shareholders. (pp. 13–14).

Economic entity assumption An assumption that requires that the activities of the entity be kept separate and distinct from the activities of its owner and all other economic entities. (p. 10).

Equity The ownership claim on a company's total assets. (p. 13).

Ethics The standards of conduct by which one's actions are judged as right or wrong, honest or dishonest, fair or not fair. (p. 7).

Expanded accounting equation Assets = Liabilities + Share Capital—Ordinary + Revenues − Expenses − Dividends. (p. 15).

Expenses The cost of assets consumed or services used in the process of earning revenue. (p. 13).

Fair value principle An accounting principle stating that assets and liabilities should be reported at fair value (the price received to sell an asset or settle a liability). (p. 9).

Faithful representation Numbers and descriptions match what really existed or happened—they are factual. (p. 8).

Financial accounting The field of accounting that provides economic and financial information for investors, creditors, and other external users. (p. 6).

Financial Accounting Standards Board (FASB) An organization that establishes generally accepted accounting principles in the United States (GAAP). (p. 8).

***Forensic accounting** An area of accounting that uses accounting, auditing, and investigative skills to conduct investigations into theft and fraud. (p. 28).

Generally accepted accounting principles (GAAP) Accounting standards issued in the United States by the Financial Accounting Standards Board. (p. 8).

Historical cost principle (cost principle) An accounting principle that states that companies should record assets at their cost. (p. 8).

Income statement A financial statement that presents the revenues and expenses and resulting net income or net loss of a company for a specific period of time. (p. 22).

International Accounting Standards Board (IASB) An accounting standard-setting body that issues standards adopted by many countries outside of the United States. (p. 8).

International Financial Reporting Standards (IFRS) International accounting standards set by the International Accounting Standards Board (IASB). (p. 8).

Liabilities Creditor claims on total assets. (p. 12).

***Management consulting** An area of public accounting ranging from development of accounting and computer systems to support services for marketing projects and merger and acquisition activities. (p. 27).

Managerial accounting The field of accounting that provides internal reports to help users make decisions about their companies. (p. 5).

Monetary unit assumption An assumption stating that companies include in the accounting records only transaction data that can be expressed in terms of money. (p. 9).

Net income The amount by which revenues exceed expenses. (p. 22).

Net loss The amount by which expenses exceed revenues. (p. 22).

Partnership A business owned by two or more persons associated as partners. (p. 10).

***Private (or managerial) accounting** An area of accounting within a company that involves such activities as cost accounting, budgeting, design and support of accounting information systems, and tax planning and preparation. (p. 28).

Proprietorship A business owned by one person. (p. 10).

***Public accounting** An area of accounting in which the accountant offers expert service to the general public. (p. 27).

Relevance Financial information that is capable of making a difference in a decision. (p. 8).

Retained earnings statement A financial statement that summarizes the changes in retained earnings for a specific period of time. (p. 22).

Revenues The gross increase in equity resulting from business activities entered into for the purpose of earning income. (p. 13).

Share capital—ordinary Amounts paid in by shareholders for the ordinary shares they purchase. (p. 13).

Statement of cash flows A financial statement that summarizes information about the cash inflows (receipts) and cash outflows (payments) for a specific period of time. (p. 22).

Statement of financial position (balance sheet) A financial statement that reports the assets, liabilities, and equity of a company at a specific date. (p. 22).

***Taxation** An area of public accounting involving tax advice, tax planning, preparing tax returns, and representing clients before governmental agencies. (p. 27).

Transactions The economic events of a business that are recorded by accountants. (p. 14).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Which of the following is **not** a step in the accounting process?
(a) Identification. (c) Recording.
(b) Economic entity. (d) Communication.

(LO 2) **2.** Which of the following statements about users of accounting information is **incorrect**?
(a) Management is an internal user.
(b) Taxing authorities are external users.
(c) Present creditors are external users.
(d) Regulatory authorities are internal users.

(LO 4) **3.** The historical cost principle states that:
(a) assets should be initially recorded at cost and adjusted when the fair value changes.
(b) activities of an entity are to be kept separate and distinct from its owner.
(c) assets should be recorded at their cost.
(d) only transaction data capable of being expressed in terms of money be included in the accounting records.

(LO 5) **4.** Which of the following statements about basic assumptions is **correct**?
(a) Basic assumptions are the same as accounting principles.
(b) The economic entity assumption states that there should be a particular unit of accountability.
(c) The monetary unit assumption enables accounting to measure employee morale.
(d) Partnerships are not economic entities.

5. The three types of business entities are: (LO 5)
(a) proprietorships, small businesses, and partnerships.
(b) proprietorships, partnerships, and corporations.
(c) proprietorships, partnerships, and large businesses.
(d) financial, manufacturing, and service companies.

6. Net income will result during a time period when: (LO 6)
(a) assets exceed liabilities.
(b) assets exceed revenues.
(c) expenses exceed revenues.
(d) revenues exceed expenses.

7. As of December 31, 2017, Stoneland AG has assets of €3,500 and equity of €2,000. What are the liabilities for Stoneland AG as of December 31, 2017? (LO 7)
(a) €1,500. (b) €1,000. (c) €2,500. (d) €2,000.

8. Performing services on account will have the following effects on the components of the basic accounting equation: (LO 7)
(a) increase assets and decrease equity.
(b) increase assets and increase equity.
(c) increase assets and increase liabilities.
(d) increase liabilities and increase equity.

9. Which of the following events is **not** recorded in the accounting records? (LO 7)
(a) Equipment is purchased on account.
(b) An employee is terminated.
(c) A cash investment is made into the business.
(d) The company pays a cash dividend.

(LO 7) **10.** During 2017, Gibson Company's assets decreased $50,000 and its liabilities decreased $90,000. Its equity therefore:

(a) increased $40,000. (c) decreased $40,000.
(b) decreased $140,000. (d) increased $140,000.

(LO 7) **11.** Payment of an account payable affects the components of the accounting equation in the following way:

(a) decreases equity and decreases liabilities.
(b) increases assets and decreases liabilities.
(c) decreases assets and increases equity.
(d) decreases assets and decreases liabilities.

(LO 8) **12.** Which of the following statements is **false**?

(a) A statement of cash flows summarizes information about the cash inflows (receipts) and outflows (payments) for a specific period of time.
(b) A statement of financial position reports the assets, liabilities, and equity at a specific date.
(c) An income statement presents the revenues, expenses, assets, and liabilities for a specific period of time.
(d) A retained earnings statement summarizes the changes in retained earnings for a specific period of time.

13. On the last day of the period, Jim Otto Company buys a $900 machine on credit. This transaction will affect the: (LO 8)

(a) income statement only.
(b) statement of financial position only.
(c) income statement and retained earnings statement only.
(d) income statement, retained earnings statement, and statement of financial position.

14. The financial statement that reports assets, liabilities, and equity is the: (LO 8)

(a) income statement.
(b) retained earnings statement.
(c) statement of financial position.
(d) statement of cash flows.

***15.** Services performed by a public accountant include: (LO 9)

(a) auditing, taxation, and management consulting.
(b) auditing, budgeting, and management consulting.
(c) auditing, budgeting, and cost accounting.
(d) internal auditing, budgeting, and management consulting.

Solutions

1. (b) Economic entity is not one of the steps in the accounting process. The other choices are true because (a) identification is the first step in the accounting process, (c) recording is the second step in the accounting process, and (d) communication is the third and final step in the accounting process.

2. (d) Regulatory authorities are external, not internal, users of accounting information. The other choices are true statements.

3. (c) The historical cost principle states that assets should be recorded at their cost. The other choices are incorrect because (a) the historical cost principle does not say that assets should be adjusted for changes in fair value, (b) describes the economic entity assumption, and (d) describes the monetary unit assumption.

4. (b) The economic entity assumption states that there should be a particular unit of accountability. The other choices are incorrect because (a) basic assumptions are not the same as accounting principles, (c) the monetary unit assumption allows accounting to measure economic events, and (d) partnerships are economic entities.

5. (b) Proprietorships, partnerships, and corporations are the three types of business entities. Choices (a) and (c) are incorrect because small and large businesses only denote the sizes of businesses. Choice (d) is incorrect because financial, manufacturing, and service companies are types of businesses, not business entities.

6. (d) Net income results when revenues exceed expenses. The other choices are incorrect because (a) assets and liabilities are not used in the computation of net income; (b) revenues, not assets, are included in the computation of net income; and (c) when expenses exceed revenues, a net loss results.

7. (a) Using a variation of the basic accounting equation, Assets − Equity = Liabilities, €3,500 − €2,000 = €1,500. Therefore, choices (b) €1,000, (c) €2,500, and (d) €2,000 are incorrect.

8. (b) When services are performed on account, assets are increased and equity is increased. The other choices are incorrect because when services are performed on account (a) equity is increased, not decreased; (c) liabilities are not affected; and (d) equity is increased and liabilities are not affected.

9. (b) If an employee is terminated, this represents an activity of a company, not a business transaction. Assets, liabilities, and equity are not affected. Thus, there is no effect on the accounting equation. The other choices are incorrect because they are all recorded: (a) when equipment is purchased on account, both assets and liabilities increase; (c) when a cash investment is made into a business, both assets and equity increase; and (d) when a dividend is paid, both assets and equity decrease.

10. (a) Using the basic accounting equation, Assets = Liabilities + Equity, −$50,000 = −$90,000 + Equity, so equity increased $40,000, not (b) decreased $140,000, (c) decreased $40,000, or (d) increased $140,000.

11. (d) Payment of an account payable results in an equal decrease of assets (cash) and liabilities (accounts payable). The other choices are incorrect because payment of an account payable (a) does not affect equity, (b) does not increase assets, and (c) does not affect equity.

12. (c) An income statement presents the revenues and expenses for a specific period of time but not assets and liabilities. The other choices are true statements.

13. (b) This transaction will cause assets to increase by $900 and liabilities to increase by $900. The other choices are incorrect because this transaction (a) will have no effect on the income statement, (c) will have no effect on the income statement or the retained earnings statement, and (d) will affect the statement of financial position but not the income statement or the retained earnings statement.

14. (c) The statement of financial position is the statement that reports assets, liabilities, and equity. The other choices are incorrect because (a) the income statement reports revenues and expenses, (b) the retained earnings statement reports details about equity, and (d) the statement of cash flows reports inflows and outflows of cash.

***15. (a)** Auditing, taxation, and management consulting are all services performed by public accountants. The other choices are incorrect because public accountants do not perform budgeting or cost accounting.

PRACTICE EXERCISES

Analyze the effect of transactions.

(LO 6, 7)

1. Selected transactions for Greene Garden Centre are listed below.

1. Sold ordinary shares for cash to start business.
2. Paid monthly utilities.
3. Purchased land on account.
4. Billed customers for services performed.
5. Paid dividends.
6. Received cash from customers billed in (4).
7. Incurred utilities expense on account.
8. Purchased equipment for cash.
9. Received cash from customers when service was performed.

Instructions

List the numbers of the above transactions and describe the effect of each transaction on assets, liabilities, and equity. For example, the first answer is (1) Increase in assets and increase in equity.

Solution

1.
1. Increase in assets and increase in equity.
2. Decrease in assets and decrease in equity.
3. Increase in assets and increase in liabilities.
4. Increase in assets and increase in equity.
5. Decrease in assets and decrease in equity.
6. Increase in assets and decrease in assets.
7. Increase in liabilities and decrease in equity.
8. Increase in assets and decrease in assets.
9. Increase in assets and increase in equity.

Analyze the effect of transactions on assets, liabilities, and equity.

(LO 6, 7)

2. Hayes Computer Timeshare Company entered into the following transactions during May 2017.

1. Purchased office equipment for $10,000 from Office Outfitters on account.
2. Paid $3,000 cash for May rent on storage space.
3. Received $12,000 cash from customers for contracts billed in April.
4. Performed services for Bayliss Construction Company for $4,000 cash.
5. Paid Southern Power Co. $10,000 cash for energy usage in May.
6. Shareholders invested an additional $30,000 in the business.
7. Paid Office Outfitters for the equipment purchased in (1) above.
8. Incurred advertising expense for May of $1,500 on account.

Instructions

Indicate with the appropriate letter whether each of the transactions above results in:

(a) An increase in assets and a decrease in assets.

(b) An increase in assets and an increase in equity.

(c) An increase in assets and an increase in liabilities.

(d) A decrease in assets and a decrease in equity.

(e) A decrease in assets and a decrease in liabilities.

(f) An increase in liabilities and a decrease in equity.

(g) An increase in equity and a decrease in liabilities.

Solution

2. 1. (c)	3. (a)	5. (d)	7. (e)
2. (d)	4. (b)	6. (b)	8. (f)

PRACTICE PROBLEM

Prepare a tabular summary and financial statements.

(LO 7, 8)

Legal Services Company Ltd. was formed on July 1, 2017. During the first month of operations, the following transactions occurred.

1. Shareholders invested NT$10,000,000 in cash in exchange for ordinary shares of Legal Services Company Ltd.
2. Paid NT$800,000 for July rent on office space.
3. Purchased office equipment on account NT$3,000,000.
4. Performed legal services for clients for cash NT$1,500,000.
5. Borrowed NT$700,000 cash from a bank on a note payable.
6. Performed legal services for client on account NT$2,000,000.
7. Paid monthly expenses: salaries NT$500,000, utilities NT$300,000, and advertising NT$100,000.

Instructions

(a) Prepare a tabular summary of the transactions. (Prepare using NT$ in thousands.)

(b) Prepare the income statement, retained earnings statement, and statement of financial position at July 31 for Legal Services Company Ltd. (Prepare using NT$ in thousands.)

Solution

(a)

	Assets			Liabilities		Equity				
							Retained Earnings			
Transaction	Cash	Accounts Receivable	Equipment	Notes Payable	Accounts Payable	Share Capital	Rev.	Exp.	Div.	
(1)	+NT$10,000*					+NT$10,000				**Issued Shares**
(2)	−800							−NT$800		**Rent Expense**
(3)			+NT$3,000		+NT$3,000					
(4)	+1,500						+NT$1,500			**Service Revenue**
(5)	+700			+NT$700						
(6)		+NT$2,000					+2,000			**Service Revenue**
(7)	−900							−500		**Sal./Wages Exp.**
								−300		**Utilities Expense**
								−100		**Advertising Expense**
	NT$10,500	NT$2,000	NT$3,000	NT$700	NT$3,000	NT$10,000	NT$3,500	NT$1,700		
	NT$15,500			NT$15,500						

*Amounts shown in thousands of NT$.

(b)

LEGAL SERVICES COMPANY LTD.
Income Statement
For the Month Ended July 31, 2017
(NT$ in thousands)

Revenues		
Service revenue		NT$3,500
Expenses		
Rent expense	NT$800	
Salaries and wages expense	500	
Utilities expense	300	
Advertising expense	100	
Total expenses		1,700
Net income		NT$1,800

LEGAL SERVICES COMPANY LTD.
Retained Earnings Statement
For the Month Ended July 31, 2017
(NT$ in thousands)

Retained earnings, July 1	NT$ –0–
Add: Net income	1,800
Retained earnings, July 31	NT$1,800

LEGAL SERVICES COMPANY LTD.
Statement of Financial Position
July 31, 2017
(NT$ in thousands)

Assets

Equipment		NT$ 3,000
Accounts receivable		2,000
Cash		10,500
Total assets		NT$15,500

Equity and Liabilities

Equity		
Share capital—ordinary	NT$10,000	
Retained earnings	1,800	NT$11,800
Liabilities		
Notes payable	700	
Accounts payable	3,000	3,700
Total equity and liabilities		NT$15,500

WileyPLUS Brief Exercises, DO IT! Review, Exercises, and Problems, and many additional resources are available for practice in WileyPLUS.

NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendix to the chapter.

QUESTIONS

1. "Accounting is ingrained in our society and it is vital to our economic system." Do you agree? Explain.
2. Identify and describe the steps in the accounting process.
3. (a) Who are internal users of accounting data? (b) How does accounting provide relevant data to these users?

4. What uses of financial accounting information are made by (a) investors and (b) creditors?
5. "Bookkeeping and accounting are the same." Do you agree? Explain.
6. Jackie Remmers Travel Agency purchased land for £85,000 cash on December 10, 2017. At December 31, 2017, the land's value has increased to £93,000. What amount should be reported for land on Jackie Remmers' statement of financial position at December 31, 2017? Explain.
7. What is the monetary unit assumption?
8. What is the economic entity assumption?
9. What are the three basic forms of profit-oriented business organizations?
10. Teresa Alvarez is the owner of a successful printing shop. Recently, her business has been increasing, and Teresa has been thinking about changing the organization of her business from a proprietorship to a corporation. Discuss some of the advantages Teresa would enjoy if she were to incorporate her business.
11. What is the basic accounting equation?
12. (a) Define the terms assets, liabilities, and equity.
    (b) What items affect equity?
13. Which of the following items are liabilities of Designer Jewelry Stores?
    (a) Cash.
    (b) Accounts payable.
    (c) Dividends.
    (d) Accounts receivable.
    (e) Supplies.
    (f) Equipment.
    (g) Salaries and wages payable.
    (h) Service revenue.
    (i) Rent expense.
14. Can a business enter into a transaction in which only the left side of the basic accounting equation is affected? If so, give an example.
15. Are the following events recorded in the accounting records? Explain your answer in each case.
    (a) The president of the company dies.
    (b) Supplies are purchased on account.
    (c) An employee is fired.
16. Indicate how the following business transactions affect the basic accounting equation.
    (a) Paid cash for janitorial services.
    (b) Purchased equipment for cash.
    (c) Received cash in exchange for ordinary shares.
    (d) Paid accounts payable in full.
17. Listed below are some items found in the financial statements of Alex Greenway Co. Indicate in which financial statement(s) the following items would appear.
    (a) Service revenue.
    (b) Equipment.
    (c) Advertising expense.
    (d) Accounts receivable.
    (e) Retained earnings.
    (f) Salaries and wages payable.
18. In February 2017, Paula Klink invested an additional £10,000 in Midtown plc. Midtown's accountant, Jon Shin, recorded this receipt as an increase in cash and revenues. Is this treatment appropriate? Why or why not?
19. "A company's net income appears directly on the income statement and the retained earnings statement, and it is included indirectly in the company's statement of financial position." Do you agree? Explain.
20. Jardine plc had an equity balance of £158,000 at the beginning of the period. At the end of the accounting period, the equity balance was £198,000.
    (a) Assuming no additional investment or distributions during the period, what is the net income for the period?
    (b) Assuming an additional investment of £13,000 but no distributions during the period, what is the net income for the period?
21. Summarized operations for H. J. Oslo Co. plc for the month of July are as follows.
    Revenues recognized: for cash £30,000; on account £70,000.
    Expenses incurred: for cash £26,000; on account £40,000.
    Indicate for H. J. Oslo Co. plc (a) the total revenues, (b) the total expenses, and (c) net income for the month of July.
22. The basic accounting equation is Assets = Liabilities + Equity. Replacing the words in that equation with numeric amounts, what is TSMC's accounting equation at December 31, 2013?

BRIEF EXERCISES

Use basic accounting equation. (LO 6)

BE1-1 Presented below is the basic accounting equation (in thousands). Determine the missing amounts.

	Assets	=	Liabilities	+	Equity
(a)	¥88,000		¥50,000		?
(b)	?		¥45,000		¥70,000
(c)	¥94,000		?		¥60,000

Use basic accounting equation. (LO 6)

BE1-2 Given the accounting equation, answer each of the following questions.
(a) The liabilities of Shumway Company Ltd. are £120,000 and the equity is £232,000. What is the amount of Shumway Company Ltd.'s total assets?
(b) The total assets of Shumway Company Ltd. are £190,000 and its equity is £80,000. What is the amount of its total liabilities?

(c) The total assets of Shumway Company Ltd. are £600,000 and its liabilities are equal to one half of its total assets. What is the amount of Shumway Company Ltd.'s equity?

Use basic accounting equation.
(LO 6)

BE1-3 At the beginning of the year, Gonzales Company SLU had total assets of €870,000 and total liabilities of €500,000. Answer the following questions.

(a) If total assets increased €150,000 during the year and total liabilities decreased €80,000, what is the amount of equity at the end of the year?
(b) During the year, total liabilities increased €100,000 and equity decreased €55,000. What is the amount of total assets at the end of the year?
(c) If total assets decreased €80,000 and equity increased €120,000 during the year, what is the amount of total liabilities at the end of the year?

Solve accounting equation.
(LO 6)

BE1-4 Use the accounting equation to answer each of the following questions.

(a) The liabilities of Alli Company Ltd. are £90,000. Share capital—ordinary is £150,000; dividends are £40,000; revenues, £450,000; and expenses, £320,000. What is the amount of Alli Company Ltd.'s total assets?
(b) The total assets of Planke Company Ltd. are £57,000. Share capital—ordinary is £23,000; dividends are £7,000; revenues, £50,000; and expenses, £35,000. What is the amount of the company's total liabilities?
(c) The total assets of Thao Co. Ltd. are £600,000 and its liabilities are equal to two-thirds of its total assets. What is the amount of Thao Co. Ltd.'s equity?

Identify assets, liabilities, and equity.
(LO 6)

BE1-5 Indicate whether each of the following items is an asset (A), liability (L), or part of equity (E).

_______ (a) Accounts receivable.
_______ (b) Salaries and wages payable.
_______ (c) Equipment.
_______ (d) Supplies.
_______ (e) Share capital—ordinary.
_______ (f) Notes payable.

Determine effect of transactions on basic accounting equation.
(LO 7)

BE1-6 Presented below are three business transactions. On a sheet of paper, list the letters (a), (b), and (c) with columns for assets, liabilities, and equity. For each column, indicate whether the transactions increased (+), decreased (−), or had no effect (NE) on assets, liabilities, and equity.

(a) Purchased supplies on account.
(b) Received cash for performing a service.
(c) Paid expenses in cash.

Determine effect of transactions on accounting equation.
(LO 7)

BE1-7 Follow the same format as BE1-6 above. Determine the effect on assets, liabilities, and equity of the following three transactions.

(a) Shareholders invested cash in the business for ordinary shares.
(b) Paid a cash dividend.
(c) Received cash from a customer who had previously been billed for services performed.

Classify items affecting equity.
(LO 6)

BE1-8 Classify each of the following items as dividends (D), revenue (R), or expense (E).

_______ (a) Advertising expense.
_______ (b) Service revenue.
_______ (c) Insurance expense.
_______ (d) Salaries and wages expense.
_______ (e) Dividends.
_______ (f) Rent revenue.
_______ (g) Utilities expense.

Determine effect of transactions on equity.
(LO 6)

BE1-9 Presented below are three transactions. Mark each transaction as affecting share capital—ordinary (SC), dividends (D), revenue (R), expense (E), or not affecting equity (NE).

_______ (a) Received cash for services performed.
_______ (b) Paid cash to purchase equipment.
_______ (c) Paid employee salaries.

Prepare a statement of financial position.
(LO 8)

BE1-10 In alphabetical order below are statement of financial position items for Grande Company Ltd. at December 31, 2017. Kit Grande is the owner of Grande Company Ltd. Prepare a statement of financial position, following the format of Illustration 1-11.

Accounts payable	£85,000
Accounts receivable	£72,500
Cash	£44,000
Share capital—ordinary	£31,500

BE1-11 Indicate whether the following items would appear on the income statement (IS), statement of financial position (FP), retained earnings statement (RE), or comprehensive income statement (CI).

Determine where items appear on financial statements. (LO 8)

_______ (a) Other comprehensive income.
_______ (b) Advertising expense.
_______ (c) Share capital—ordinary.
_______ (d) Cash.
_______ (e) Service revenue.
_______ (f) Dividends.

> DO IT! REVIEW

DO IT! 1-1 Indicate whether each of the five statements presented below is true or false. If false, indicate how to correct the statement.

Review basic concepts. (LO 1, 2)

1. The three steps in the accounting process are identification, recording, and examination.
2. The accounting process includes the bookkeeping function.
3. Managerial accounting provides reports to help investors and creditors evaluate a company.
4. The two most common types of external users are investors and creditors.
5. Internal users include human resources managers.

DO IT! 1-2 Indicate whether each of the five statements presented below is true or false. If false, indicate how to correct the statement.

Review basic concepts. (LO 3, 4, 5)

1. IFRSs are issued by the IASB.
2. The standards of conduct by which actions are judged as loyal or disloyal are ethics.
3. The primary accounting standard-setting body in the United States is the Securities and Exchange Commission (SEC).
4. The historical cost principle dictates that companies record assets at their cost and continue to report them at their cost over the time the asset is held.
5. The monetary unit assumption requires that companies record only transactions that can be measured in money terms.

DO IT! 1-3 Classify the following items as issuance of shares (I), dividends (D), revenues (R), or expenses (E). Then indicate whether each item increases or decreases equity.

Evaluate effects of transactions on equity. (LO 6)

1. Dividends.
2. Rent revenue.
3. Advertising expense.
4. Shareholders invest cash in the business.

DO IT! 1-4 Transactions made by Callahan and Co. Ltd., a law firm, for the month of March are shown below. Prepare a tabular analysis which shows the effects of these transactions on the accounting equation, similar to that shown in Illustration 1-10.

Prepare tabular analysis. (LO 7)

1. The company performed R23,000 of services for customers, on credit.
2. The company received R23,000 in cash from customers who had been billed for services (in transaction 1).
3. The company received a bill for R1,600 of advertising but will not pay it until a later date.
4. The company paid a dividend of R5,000 in cash to shareholders.

DO IT! 1-5 Presented below is selected information related to Rivera Company SA at December 31, 2017. Rivera reports financial information monthly.

Calculate effects of transactions on financial statement items. (LO 8)

Accounts Payable	R$ 3,000	Salaries and Wages Expense	R$ 16,500
Cash	9,000	Notes Payable	25,000
Advertising Expense	6,000	Rent Expense	9,800
Service Revenue	54,000	Accounts Receivable	13,500
Equipment	29,000	Dividends	7,500

(a) Determine the total assets of Rivera Company SA at December 31, 2017.
(b) Determine the net income that Rivera Company SA reported for December 2017.
(c) Determine the equity of Rivera Company SA at December 31, 2017.

EXERCISES

Classify the three activities of accounting.
(LO 1)

E1-1 Sondgeroth NV performs the following accounting tasks during the year.

______ Analyzing and interpreting information.
______ Classifying economic events.
______ Explaining uses, meaning, and limitations of data.
______ Keeping a systematic chronological diary of events.
______ Measuring events in monetary units.
______ Preparing accounting reports.
______ Reporting information in a standard format.
______ Selecting economic activities relevant to the company.
______ Summarizing economic events.

Accounting is "an information system that **identifies**, **records**, and **communicates** the economic events of an organization to interested users."

Instructions
Categorize the accounting tasks performed by Sondgeroth NV as relating to either the identification (I), recording (R), or communication (C) aspects of accounting.

Identify users of accounting information.
(LO 2)

E1-2 (a) The following are users of financial statements.

______ Customers
______ Labor unions
______ Marketing manager
______ Production supervisor
______ Securities regulator
______ Store manager
______ Suppliers
______ Taxing agency
______ Vice president of finance

Instructions
Identify the users as being either **external users** (E) or **internal users** (I).

(b) The following questions could be asked by an internal user or an external user.

______ Can we afford to give our employees a pay raise?
______ Did the company earn a satisfactory income?
______ Do we need to borrow in the near future?
______ How does the company's profitability compare to other companies?
______ What does it cost us to manufacture each unit produced?
______ Which product should we emphasize?
______ Will the company be able to pay its short-term debts?

Instructions
Identify each of the questions as being more likely asked by an **internal user** (I) or an **external user** (E).

Discuss ethics and the historical cost principle.
(LO 3)

E1-3 Leon Manternach, president of Manternach SE, has instructed Carla Ruden, the head of the accounting department for Manternach SE, to report the company's recently acquired land in the company's accounting reports at its fair value of €170,000 instead of its cost of €100,000. Manternach says, "I think we got a real deal on the purchase. It is probably worth €170,000. Showing the land at €170,000 will make our company look like a better investment when we try to attract new investors next month."

Instructions
Explain the ethical situation involved for Carla Ruden, identifying the stakeholders and the alternatives.

Use accounting concepts.
(LO 4, 5)

E1-4 The following situations involve accounting principles and assumptions.

1. Julia Company A/S owns buildings that are worth substantially more than they originally cost. In an effort to provide more relevant information, Julia reports the buildings at fair value in its accounting reports.

2. Dekalb Company AG includes in its accounting records only transaction data that can be expressed in terms of money.
3. Omar Shariff, president of Omar's Oasis SJSC, records his personal living costs as expenses of the Oasis.

Instructions

For each of the three situations, state if the accounting method used is correct or incorrect. If correct, identify which standard or assumption supports the method used. If incorrect, identify which standard or assumption has been violated.

Classify accounts as assets, liabilities, and equity.

(LO 6)

E1-5 Robinson Cleaners AG has the following statement of financial position items.

Accounts payable	Accounts receivable
Cash	Notes payable
Equipment	Salaries and wages payable
Supplies	Share capital—ordinary

Instructions

Classify each item as an asset, liability, or equity.

Analyze the effect of transactions.

(LO 7)

E1-6 Selected transactions for Spring Cruises ASA are listed below.

1. Sold ordinary shares for cash to start business.
2. Paid monthly rent.
3. Purchased equipment on account.
4. Billed customers for services performed.
5. Paid dividends.
6. Received cash from customers billed in (4).
7. Incurred advertising expense on account.
8. Purchased additional equipment for cash.
9. Received cash from customers when service was performed.

Instructions

List the numbers of the above transactions and describe the effect of each transaction on assets, liabilities, and equity. For example, the first answer is (1) Increase in assets and increase in equity.

Analyze the effect of transactions on assets, liabilities, and equity.

(LO 7)

E1-7 Collins Computer Timeshare Company SA entered into the following transactions during May 2017.

1. Purchased computer terminals for R$20,000 from Digital Equipment on account.
2. Paid R$3,000 cash for May rent on storage space.
3. Received R$14,000 cash from customers for contracts billed in April.
4. Performed computer services for Schmidt Construction Company for R$2,400 cash.
5. Paid Central States Power Co. R$11,000 cash for energy usage in May.
6. Shareholders invested an additional R$32,000 in the business.
7. Paid Digital Equipment for the terminals purchased in (1) above.
8. Incurred advertising expense for May of R$1,100 on account.

Instructions

Indicate with the appropriate letter whether each of the transactions above results in:

(a) An increase in assets and a decrease in assets.
(b) An increase in assets and an increase in equity.
(c) An increase in assets and an increase in liabilities.
(d) A decrease in assets and a decrease in equity.
(e) A decrease in assets and a decrease in liabilities.
(f) An increase in liabilities and a decrease in equity.
(g) An increase in equity and a decrease in liabilities.

Analyze transactions and compute net income

(LO 7, 8)

E1-8 An analysis of the transactions made by J. L. Kang & Co. Ltd., a public accounting firm, for the month of August is shown on the next page. Each increase and decrease in equity is explained.

	Assets				= Liabilities +	Equity				
	Cash +	Accounts Receivable +	Supplies +	Equipment =	Accounts Payable +	Share Capital +	Retained Earnings			
							Rev. −	Exp. −	Div.	
1.	+£15,000					+£15,000				Issued Shares
2.	−2,000			+£5,000	+£3,000					
3.	−750		+£750							
4.	+4,600	+£4,500					+£9,100			Service Revenue
5.	−1,500				−1,500					
6.	−2,000								−£2,000	
7.	−650							−£650		Rent Expense
8.	+450	−450								
9.	−3,900							−3,900		Sal./Wages Expense
10.					+500			−500		Utilities Expense

Instructions

(a) Describe each transaction that occurred for the month.
(b) Determine how much equity increased for the month.
(c) Compute the amount of net income for the month.

Prepare financial statements.
(LO 8)

E1-9 An analysis of transactions for J. L. Kang & Co. Ltd. was presented in E1–8. Assume that August is the company's first month of business.

Instructions

Prepare an income statement and a retained earnings statement for August and a statement of financial position at August 31, 2017.

Determine net income (or loss).
(LO 8)

E1-10 Kimmy A.Ş. had the following assets and liabilities on the dates indicated.

December 31	Total Assets	Total Liabilities
2016	₺400,000	₺260,000
2017	₺480,000	₺300,000
2018	₺590,000	₺400,000

Kimmy began business on January 1, 2016, with an investment of ₺100,000 from shareholders.

Instructions

From an analysis of the change in equity during the year, compute the net income (or loss) for:

(a) 2016, assuming Kimmy paid ₺15,000 in dividends for the year.
(b) 2017, assuming shareholders made an additional investment of ₺50,000 and Kimmy paid no dividends in 2017.
(c) 2018, assuming shareholders made an additional investment of ₺15,000 and Kimmy paid dividends of ₺30,000 in 2018.

Analyze financial statements items.
(LO 8)

E1-11 Two items are omitted from each of the following summaries of statement of financial position and income statement data for two companies for the year 2017, Steven Craig Ltd. and Georgia Enterprises Ltd.

	Steven Craig	Georgia Enterprises
Beginning of year:		
Total assets	£ 97,000	£129,000
Total liabilities	63,000	(c)
Total equity	(a)	75,000
End of year:		
Total assets	160,000	180,000
Total liabilities	100,000	50,000
Total equity	60,000	130,000
Changes during year in equity:		
Additional investment	(b)	25,000
Dividends	44,000	(d)
Total revenues	215,000	100,000
Total expenses	155,000	55,000

Instructions
Determine the missing amounts.

E1-12 The following information relates to Karen Weigel Co. Ltd. for the year 2017.

Prepare income statement, comprehensive income statement, and retained earnings statement.

(LO 8)

Retained earnings, January 1, 2017	£48,000	Advertising expense	£ 1,800
Dividends during 2017	5,000	Rent expense	10,400
Service revenue	62,500	Utilities expense	3,100
Salaries and wages expense	28,000	Other comprehensive income	400

Instructions
After analyzing the data, prepare (a) an income statement, (b) a comprehensive income statement, and (c) a retained earnings statement for the year ending December 31, 2017.

E1-13 Lynn Dreise is the bookkeeper for Sanculi Company SpA. Lynn has been trying to get the statement of financial position of Sanculi Company SpA to balance correctly. Sanculi's statement of financial position is shown as follows.

Correct an incorrectly prepared statement of financial position.

(LO 8)

SANCULI COMPANY SpA
Statement of Financial Position
December 31, 2017

Assets		Liabilities	
Equipment	€48,000	Share capital—ordinary	€50,000
Supplies	8,000	Retained earnings	17,500
Cash	14,000	Accounts payable	16,000
Dividends	5,000	Accounts receivable	(8,500)
Total assets	€75,000	Total equity and liabilities	€75,000

Instructions
Prepare a correct statement of financial position.

E1-14 Bear Park Ltd., a camping ground in the Lake District, has compiled the following financial information as of December 31, 2017.

Compute net income and prepare a statement of financial position.

(LO 8)

Revenues during 2017—camping fees	£140,000	Notes payable	£ 60,000
Revenues during 2017—general store	47,000	Expenses during 2017	150,000
Accounts payable	11,000	Supplies on hand	2,500
Cash on hand	20,000	Share capital—ordinary	20,000
Original cost of equipment	105,500	Retained earnings	?
Fair value of equipment	140,000		

Instructions
(a) Determine Bear Park's net income for 2017.
(b) Prepare a statement of financial position for Bear Park Ltd. as of December 31, 2017.

E1-15 Presented below is financial information related to the 2017 operations of Delgado Cruise Company SA.

Prepare an income statement and comprehensive income statement.

(LO 8)

Maintenance and repairs expense	R$ 97,000
Utilities expense	10,000
Salaries and wages expense	144,000
Advertising expense	3,500
Ticket revenue	342,000
Other comprehensive income	4,200

Instructions
Prepare the 2017 income statement and comprehensive income statement for Delgado Cruise Company SA.

Prepare a retained earnings statement.
(LO 8)

E1-16 Presented below is information related to Williams and Douglas, Attorneys at Law Ltd.

Retained earnings, January 1, 2017	£ 23,000
Legal service revenue—2017	340,000
Total expenses—2017	211,000
Assets, January 1, 2017	85,000
Liabilities, January 1, 2017	62,000
Assets, December 31, 2017	168,000
Liabilities, December 31, 2017	80,000
Dividends—2017	64,000

Instructions
Prepare the 2017 retained earnings statement for Williams and Douglas, Attorneys at Law Ltd.

Prepare a cash flow statement.
(LO 8)

E1-17 This information is for Java Company Ltd. for the year ended December 31, 2017 (amounts in thousands).

Cash received from revenues from customers	Rp600,000
Cash received for issuance of ordinary shares	280,000
Cash paid for new equipment	95,000
Cash dividends paid	20,000
Cash paid for expenses	430,000
Cash balance 1/1/17	28,000

Instructions
Prepare the 2017 statement of cash flows for Java Company Ltd.

PROBLEMS: SET A

Analyze transactions and compute net income.
(LO 6, 7)

P1-1A Kinney's Repair Ltd. was started on May 1. A summary of May transactions is presented below.

1. Shareholders invested £10,000 cash in the business in exchange for ordinary shares.
2. Purchased equipment for £5,000 cash.
3. Paid £400 cash for May office rent.
4. Paid £700 cash for supplies.
5. Incurred £250 of advertising costs in the *Beacon News* on account.
6. Received £4,700 in cash from customers for repair service.
7. Declared and paid a £1,000 cash dividend.
8. Paid part-time employee salaries £1,000.
9. Paid utility bills £160.
10. Performed repair service worth £980 on account.
11. Collected cash of £120 for services billed in transaction (10).

__Check figures__ next to some Problems give you a key number, to let you know if you are on the right track with your solution.

Instructions
(a) Prepare a tabular analysis of the transactions, using the following column headings: Cash, Accounts Receivable, Supplies, Equipment, Accounts Payable, Share Capital, and Retained Earnings (with separate columns for Revenues, Expenses, and Dividends). Include margin explanations for any changes in Retained Earnings. Revenue is called Service Revenue.
(b) From an analysis of the Retained Earnings columns, compute the net income or net loss for May.

(a) Total assets £13,120

(b) Net income £3,870

Analyze transactions and prepare income statement, retained earnings statement, and statement of financial position.
(LO 6, 7, 8)

P1-2A On August 31, 2017, the statement of financial position of Donahue Veterinary Clinic Ltd. showed Cash £9,000, Accounts Receivable £1,700, Supplies £600, Equipment £6,000, Accounts Payable £3,600, Share Capital—Ordinary £13,000, and Retained Earnings £700. During September, the following transactions occurred.

1. Paid £2,900 cash for accounts payable due.
2. Collected £1,300 of accounts receivable.
3. Purchased additional equipment for £2,100, paying £800 in cash and the balance on account.
4. Recognized revenue of £7,300, of which £2,500 is collected in cash and the balance is due in October.
5. Declared and paid a £400 cash dividend.
6. Paid salaries £1,700, rent for September £900, and advertising expense £200.
7. Incurred utilities expense for month on account £170.
8. Received £10,000 from Capital Bank on a 6-month note payable.

Instructions

(a) Prepare a tabular analysis of the September transactions beginning with August 31 balances. The column headings should be as follows: Cash + Accounts Receivable + Supplies + Equipment = Notes Payable + Accounts Payable + Share Capital + Retained Earnings + Revenues − Expenses − Dividends.

(a) Ending cash £15,900

(b) Prepare an income statement for September, a retained earnings statement for September, and a statement of financial position at September 30, 2017.

(b) Net income £4,330
Total assets £29,800

P1-3A On May 1, 2017, Park Flying School Ltd., a company that provides flying lessons, was started with an investment of ₩45,000 cash in the business. Following are the assets and liabilities of the company on May 31, 2017, and the revenues and expenses for the month of May (all amounts in thousands).

Prepare income statement, retained earnings statement, and statement of financial position.

(LO 8)

Cash	₩ 4,500	Notes Payable	₩28,000
Accounts Receivable	7,420	Rent Expense	1,000
Equipment	64,000	Maintenance and Repairs Expense	400
Service Revenue	6,800	Gasoline Expense	2,500
Advertising Expense	500	Utilities Expense	400
Accounts Payable	1,400		

No additional investments were made in May, but the company paid dividends of ₩ 480,000 during the month.

Instructions

(a) Prepare an income statement and a retained earnings statement for the month of May and a statement of financial position at May 31. (Show numbers in thousands.)

(a) Net income ₩2,000
Total assets ₩75,920

(b) Prepare an income statement and a retained earnings statement for May assuming the following data are not included above: (1) ₩ 900,000 worth of services were performed and billed but not collected at May 31, and (2) ₩1,500,000 of gasoline expense was incurred but not paid.

(b) Net income ₩1,400

P1-4A Matt Stiner started a delivery service, Stiner Deliveries Ltd., on June 1, 2017. The following transactions occurred during the month of June.

Analyze transactions and prepare financial statements.

(LO 6, 7, 8)

June	1	Shareholders invested £10,000 cash in the business in exchange for ordinary shares.
	2	Purchased a used van for deliveries for £14,000. Matt paid £2,000 cash and signed a note payable for the remaining balance.
	3	Paid £500 for office rent for the month.
	5	Performed services worth £4,800 on account.
	9	Declared and paid £300 in cash dividends.
	12	Purchased supplies for £150 on account.
	15	Received a cash payment of £1,250 for services performed on June 5.
	17	Purchased gasoline for £100 on account.
	20	Received a cash payment of £1,500 for services performed.
	23	Made a cash payment of £500 on the note payable.
	26	Paid £250 for utilities.
	29	Paid for the gasoline purchased on account on June 17.
	30	Paid £1,000 for employee salaries.

Instructions

(a) Total assets £25,800

(a) Show the effects of the previous transactions on the accounting equation using the following format.

	Assets					=	Liabilities		+	Equity			
											Retained Earnings		
Date	Cash	+ Accounts Receivable	+ Supplies	+ Equipment		=	Notes Payable	+ Accounts Payable	+	Share Capital	+ Rev.	− Exp.	− Div.

Include margin explanations for any changes in the Retained Earnings account in your analysis.

(b) Net income £4,450
(c) Cash £8,100

(b) Prepare an income statement for the month of June.
(c) Prepare a statement of financial position at June 30, 2017.

Determine financial statement amounts and prepare retained earnings statement.

(LO 7, 8)

P1-5A Financial statement information about four different companies is as follows.

	Crosby Company	Stills Company	Nash Company	Young Company
January 1, 2017				
Assets	HK$ 900,000	HK$1,100,000	(g)	HK$1,500,000
Liabilities	650,000	(d)	HK$ 750,000	(j)
Equity	(a)	500,000	450,000	1,000,000
December 31, 2017				
Assets	(b)	1,370,000	2,000,000	(k)
Liabilities	550,000	750,000	(h)	800,000
Equity	400,000	(e)	1,300,000	1,400,000
Equity changes in year				
Additional investment	(c)	150,000	100,000	150,000
Dividends	100,000	(f)	140,000	100,000
Total revenues	3,500,000	4,200,000	(i)	5,000,000
Total expenses	3,300,000	3,850,000	3,420,000	(l)

Instructions

(a) Determine the missing amounts. (*Hint:* For example, to solve for (a), Assets − Liabilities = Equity = HK$250,000.)
(b) Prepare the retained earnings statement for Stills Company. Assume beginning retained earnings was HK$200,000.
(c) Write a memorandum explaining the sequence for preparing financial statements and the interrelationship of the retained earnings statement to the income statement and statement of financial position.

PROBLEMS: SET B

Analyze transactions and compute net income.

(LO 6, 7)

P1-1B On April 1, Holly Dahl established Holiday Travel Agency Ltd. The following transactions were completed during the month.

1. Shareholders invested €12,000 cash in the business in exchange for ordinary shares.
2. Paid €400 cash for April office rent.
3. Purchased office equipment for €5,500 cash.
4. Incurred €300 of advertising costs in a local newspaper, on account.
5. Paid €600 cash for office supplies.
6. Performed services worth €8,500: €2,000 cash is received from customers, and the balance of €6,500 is billed to customers on account.
7. Declared and paid a €200 cash dividend.
8. Paid the local newspaper amount due in transaction (4).
9. Paid employees' salaries €2,200.
10. Received €5,700 in cash from customers billed previously in transaction (6).

Instructions

(a) Prepare a tabular analysis of the transactions using the following column headings: Cash, Accounts Receivable, Supplies, Equipment, Accounts Payable, Share Capital, and Retained Earnings (with separate columns for Revenues, Expenses, and Dividends). Include margin explanation for any changes in Retained Earnings.

(a) Ending cash €10,500

(b) From an analysis of the Retained Earnings columns, compute the net income or net loss for April.

(b) Net income €5,600

Analyze transactions and prepare income statement, retained earnings statement, and statement of financial position.

(LO 6, 7, 8)

P1-2B Mandy Arnold opened a law office, Mandy Arnold, Attorney at Law Ltd., on July 1, 2017. On July 31, the statement of financial position showed Cash £4,000, Accounts Receivable £1,500, Supplies £500, Equipment £5,000, Accounts Payable £4,200, Share Capital—Ordinary £6,000, and Retained Earnings £800. During August, the following transactions occurred.

1. Collected £1,400 of accounts receivable due from clients.
2. Paid £2,700 cash for accounts payable due.
3. Recognized revenue of £7,900 of which £3,000 is collected in cash and the balance is due in September.
4. Purchased additional office equipment for £1,000, paying £400 in cash and the balance on account.
5. Paid salaries £3,000, rent for August £900, and advertising expenses £350.
6. Declared and paid a £450 cash dividend.
7. Received £2,000 from Standard Federal Bank; the money was borrowed on a 4-month note payable.
8. Incurred utility expenses for month on account £210.

Instructions

(a) Prepare a tabular analysis of the August transactions beginning with July 31 balances. The column headings should be as follows: Cash + Accounts Receivable + Supplies + Equipment = Notes Payable + Accounts Payable + Share Capital + Retained Earnings + Revenues − Expenses − Dividends.

(a) Ending expenses £4,460

(b) Prepare an income statement for August, a retained earnings statement for August, and a statement of financial position at August 31, 2017.

(b) Net income £3,440
Total assets £14,100

Prepare income statement, retained earnings statement, and statement of financial position.

(LO 8)

P1-3B Angelic Cosmetics Co. Ltd., a company that provides individual skin care treatment, was started on June 1, 2017, with an investment of ¥25,000,000 cash. Following are the assets and liabilities of the company at June 30 and the revenues and expenses for the month of June (in thousands).

Cash	¥10,000	Notes Payable	¥13,000
Accounts Receivable	4,000	Accounts Payable	1,700
Service Revenue	5,500	Rent Expense	1,800
Supplies	2,000	Gasoline Expense	600
Advertising Expense	500	Utilities Expense	400
Equipment	25,000		

Shareholders made no additional investments in June. The company paid a cash dividend of ¥900,000 during the month.

Instructions

(a) Prepare an income statement and a retained earnings statement for the month of June and a statement of financial position at June 30, 2017. (Show numbers in thousands.)

(a) Net income ¥2,200
Total assets ¥41,000

(b) Prepare an income statement and a retained earnings statement for June assuming the following data are not included above: (1) ¥800,000 worth of services were performed and billed but not collected at June 30, and (2) ¥100,000 of gasoline expense was incurred but not paid.

(b) Net income ¥2,900

Analyze transactions and prepare financial statements.

(LO 6, 7, 8)

P1-4B Jessi Paulis started a consulting firm, Paulis Consulting Ltd., on May 1, 2017. The following transactions occurred during the month of May.

May	1	Paulis invested £8,000 cash in the business in exchange for shares.
	2	Paid £800 for office rent for the month.
	3	Purchased £500 of supplies on account.
	5	Paid £50 to advertise in the *County News*.
	9	Received £3,000 cash for services performed.
	12	Declared and paid a £700 cash dividend.

May 15	Performed services worth £3,300 on account.
17	Paid £2,100 for employee salaries.
20	Paid for the supplies purchased on account on May 3.
23	Received a cash payment of £2,000 for services performed on account on May 15.
26	Borrowed £5,000 from the bank on a note payable.
29	Purchased office equipment for £2,300 on account.
30	Paid £150 for utilities.

Instructions

(a) Total assets £17,800

(a) Show the effects of the previous transactions on the accounting equation using the following format.

	Assets							=	Liabilities			+	Equity						
Date	Cash	+	Accounts Receivable	+	Supplies	+	Equipment	=	Notes Payable	+	Accounts Payable	+	Share Capital	+	Retained Earnings Rev.	−	Exp.	−	Div.

Include margin explanations for any changes in the Retained Earnings account in your analysis.

(b) Net income £3,200

(c) Cash £13,700

(b) Prepare an income statement for the month of May.

(c) Prepare a statement of financial position at May 31, 2017.

Determine financial statement amounts and prepare retained earnings statement.

(LO 7, 8)

P1-5B Financial statement information about four different companies is shown below.

	John Ltd.	Paul Ltd.	George Ltd.	Ringo Ltd.
January 1, 2017				
Assets	£ 78,000	£ 90,000	(g)	£140,000
Liabilities	50,000	(d)	£ 75,000	(j)
Equity	(a)	50,000	54,000	100,000
December 31, 2017				
Assets	(b)	117,000	180,000	(k)
Liabilities	55,000	79,000	(h)	80,000
Equity	40,000	(e)	100,000	145,000
Equity changes in year				
Additional investment	(c)	8,000	10,000	15,000
Dividends	7,000	(f)	12,000	10,000
Total revenues	350,000	390,000	(i)	500,000
Total expenses	335,000	400,000	360,000	(l)

Instructions

(a) Determine the missing amounts. (*Hint:* For example, to solve for (a), Assets − Liabilities = Equity = £28,000.)

(b) Prepare the retained earnings statement for John Ltd. Assume beginning retained earnings was £0.

(c) Write a memorandum explaining the sequence for preparing financial statements and the interrelationship of the retained earnings statement to the income statement and statement of financial position.

MATCHA CREATIONS

*The **Matcha Creations** problem starts in this chapter and continues in every chapter. You also can find this problem at the book's companion website.*

MC1 Mei-ling Lee spent much of her childhood learning the art of cookie-making from her grandmother. They passed many happy hours mastering every type of cookie imaginable and later creating new recipes that were both healthy and delicious. Now at the start of her second year in college, Mei-ling is investigating various possibilities for starting her own business as part of the requirements of the entrepreneurship program in which she is enrolled.

A long-time friend insists that Mei-ling has to somehow include cookies in her business plan, especially her famous green tea creations. After a series of brainstorming sessions, Mei-ling settles on the idea of operating a cookie-making school. She will start on a part-time basis and offer her services in people's homes. Now that she has started thinking about it, the possibilities seem endless. During the fall, she will concentrate on holiday cookies. She will offer individual lessons and group sessions (which will probably be more entertainment than education for the participants). Mei-ling also decides to include children in her target market.

The first difficult decision is coming up with the perfect name for her business. In the end, she settles on "Matcha Creations" and then moves on to more important issues.

Instructions

(a) What form of business organization—proprietorship, partnership, or corporation—do you recommend that Mei-ling use for her business? Discuss the benefits and weaknesses of each form and give the reasons for your choice.
(b) Will Mei-ling need accounting information? If yes, what information will she need and why? How often will she need this information?
(c) Identify specific asset, liability, and equity accounts that Matcha Creations will likely use to record its business transactions.
(d) Should Mei-ling open a separate bank account for the business? Why or why not?

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP1-1 The financial statements of TSMC are presented in Appendix A (at the back of the textbook). The company's complete annual report, including the notes to the financial statements, is available in the Investors section of the company's website, *www.tsmc.com*.

Instructions

Refer to TSMC's financial statements and answer the following questions. (Use amounts as reported in New Taiwan dollars.)

(a) What were TSMC's total assets at December 31, 2013? At December 31, 2012?
(b) How much cash (and cash equivalents) did TSMC have on December 31, 2013?
(c) What amount of accounts payable did TSMC report on December 31, 2013? On December 31, 2012?
(d) What was TSMC's revenue in 2012? In 2013?
(e) What is the amount of the change in TSMC's net income from 2012 to 2013?

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP1-2 Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C.

Instructions

Refer to the financial statements and answer the following questions.

(a) Based on the information contained in these financial statements, determine the following for each company.
    (1) Total assets at December 31, 2013.
    (2) Accounts (trade) receivable, net at December 31, 2013.
    (3) Net sales for year ended December 31, 2013.
    (4) Net income (profit) for year ended December 31, 2013.
(b) What percentage do receivables represent of total assets for the two companies? What percentage does net income represent of sales (revenue) for the two companies?

Real-World Focus

BYP1-3 This exercise will familiarize you with skill requirements, job descriptions, and salaries for accounting careers.

Address: **www.careers-in-accounting.com**, or go to **www.wiley.com/college/weygandt**

Instructions

Go to the site shown above. Answer the following questions.

(a) What are the three broad areas of accounting (from "Skills and Talents Required")?
(b) List eight skills required in accounting.
(c) How do the three accounting areas differ in terms of these eight required skills?
(d) Explain one of the key job alternatives in accounting.
(e) What is the salary range for a junior staff accountant to a Big 4 firm?

Critical Thinking

Decision-Making Across the Organization

BYP1-4 Lucy and Nick Lars, local golf stars, opened the Chip-Shot Driving Range Company Ltd. on March 1, 2017. They invested £20,000 cash and received ordinary shares in exchange for their investment. A caddy shack was constructed for cash at a cost of £6,000, and £800 was spent on golf balls and golf clubs. The Lars leased five acres of land at a cost of £1,000 per month and paid the first month's rent. During the first month, advertising costs totaled £750, of which £150 was unpaid at March 31, and £400 was paid to members of the high school golf team for retrieving golf balls. All revenues from customers were deposited in the company's bank account. On March 15, Lucy and Nick received a dividend of £800. A £100 utility bill was received on March 31 but was not paid. On March 31, the balance in the company's bank account was £15,100.

Lucy and Nick thought they had a pretty good first month of operations. But, their estimates of profitability ranged from a loss of £4,900 to net income of £1,650.

Instructions

With the class divided into groups, answer the following.

(a) How could the Lars have concluded that the business operated at a loss of £4,900? Was this a valid basis on which to determine net income?
(b) How could the Lars have concluded that the business operated at a net income of £1,650? (*Hint:* Prepare a statement of financial position at March 31.) Was this a valid basis on which to determine net income?
(c) Without preparing an income statement, determine the actual net income for March.
(d) What was the revenue earned in March?

Communication Activity

BYP1-5 Erin Danielle, the bookkeeper for Liverpool Company Ltd., has been trying to get the statement of financial position to balance correctly. The company's statement of financial position is shown below.

LIVERPOOL COMPANY LTD.
Statement of Financial Position
For the Month Ended December 31, 2017

Assets		Liabilities	
Equipment	£22,500	Share capital—ordinary	£23,000
Cash	9,000	Accounts receivable	(6,000)
Supplies	2,000	Retained earnings	(2,000)
Accounts payable	(8,000)	Notes payable	10,500
	£25,500		£25,500

Instructions

Explain to Erin Danielle in a memo why the original statement of financial position is incorrect, and what should be done to correct it.

Ethics Case

BYP1-6 After numerous campus interviews, Jeff Hunter, a senior at Great Northern College, received two office interview invitations from the Baltimore offices of two large firms. Both firms offered to cover his out-of-pocket expenses (travel, hotel, and meals). He scheduled the interviews for both firms on the same day, one in the morning and one in the afternoon. At the conclusion of each interview, he submitted to both firms his total out-of-pocket expenses for the trip to Baltimore: mileage $112 (280 miles at $0.40), hotel $130, meals $36, parking and tolls $18, for a total of $296. He believes this approach is appropriate. If he had made two trips, his cost would have been two times $296. He is also certain that neither firm knew he had visited the other on that same trip. Within 10 days, Jeff received two checks in the mail, each in the amount of $296.

Instructions

(a) Who are the stakeholders (affected parties) in this situation?
(b) What are the ethical issues in this case?
(c) What would you do in this situation?

Answers to Insight and Accounting Across the Organization Questions

p. 8 I Felt the Pressure—Would You? Q: Why did these employees lie, and what do you believe should be their penalty for these lies? **A:** These employees lied because they were following the instructions of their bosses. They were probably concerned that they would lose their jobs or not advance in the organization. Their penalty should reflect the seriousness of their actions.

p. 9 The Korean Discount Q: What is meant by the phrase "make the country's businesses more transparent"? Why would increasing transparency spur economic growth? **A:** Transparency refers to the extent to which outsiders have knowledge regarding a company's financial performance and financial position. If a company lacks transparency, its financial reports do not adequately inform investors of critical information that is needed to make investment decisions. If corporate transparency is increased, investors will be more willing to supply the financial capital that businesses need in order to grow, which would spur the country's economic growth.

p. 11 Spinning the Career Wheel Q: How might accounting help you? **A:** You will need to understand financial reports in any enterprise with which you are associated. Whether you become a manager, a doctor, a lawyer, a social worker, a teacher, an engineer, an architect, or an entrepreneur, a working knowledge of accounting is relevant.

p. 24 A Wise End Q: What year-end would you likely use if you owned a ski resort and ski rental business? What if you owned a college bookstore? Why choose those year-ends? **A:** Probable choices for a ski resort would be between May 31 and August 31. For a college bookstore, a likely year-end would be June 30. The optimum accounting year-end, especially for seasonal businesses, is a point when inventory and activities are lowest.

p. 26 Beyond Financial Statements Q: Why might a company's shareholders be interested in its environmental and social performance? **A:** Many companies now recognize that being a socially responsible organization is not only the right thing to do, but it also is good for business. Many investment professionals understand, for example, that environmental, social, and proper corporate governance of companies affects the performance of their investment portfolios. For example, British Petroleum's (GBR) oil leak disaster is a classic example of the problems that can occur for a company and its shareholders. BP's share price was slashed, its dividend reduced, its executives replaced, and its reputation badly damaged. It is interesting that socially responsible investment funds are now gaining momentum in the marketplace such that companies now recognize this segment as an important investment group.

A Look at U.S. GAAP

Learning Objective 10

Describe the impact of IFRS on U.S. financial reporting.

As indicated in the chapter, IFRSs, which are issued by the IASB, are used by most countries in the world. However, another major standard-setter resides in the United States: the Financial Accounting Standards Board (FASB). Prior to the creation of IFRS, the U.S. accounting standards, referred to as generally accepted accounting principles (GAAP), were used by companies in many countries. Today, the IASB and the FASB are working jointly to achieve a single set of standards, although it may be five to ten years before a conversion to a single set of standards takes place. Until this happens, it is important for investors, accountants, and students to understand the key differences that exist between the standards.

Key Points

- Most agree that there is a need for one set of international accounting standards. Here is why:

  Multinational corporations. Today's companies view the entire world as their market. For example, large companies often generate more than 50% of their sales outside their own boundaries.

  Mergers and acquisitions. The mergers between Fiat/Chrysler and Vodafone/Mannesmann suggest that we will see even more such business combinations in the future.

  Information technology. As communication barriers continue to topple through advances in technology, companies and individuals in different countries and markets are becoming more comfortable buying and selling goods and services from one another.

  Financial markets. Financial markets are of international significance today. Whether it is currency, equity securities (shares), bonds, or derivatives, there are active markets throughout the world trading these types of instruments.

Similarities

- GAAP is based on a conceptual framework that is similar to that used to develop IFRS.
- The three common forms of business organization that are presented in the chapter, proprietorships, partnerships, and corporations, are also found in the United States. Because the choice of business organization is influenced by factors such as legal environment, tax rates and regulations, and degree of entrepreneurism, the relative use of each form will vary across countries.
- Transaction analysis is basically the same under IFRS and GAAP but, as you will see in later chapters, the different standards may impact how transactions are recorded.
- Financial frauds have occurred at companies such as Satyam Computer Services (IND), Parmalat (ITA), and Royal Ahold (NLD). They have also occurred at large U.S. companies such as Enron, WorldCom, and AIG.

Differences

- The Sarbanes-Oxley Act (SOX) mandates certain internal controls for large public companies listed on U.S. exchanges. There is a continuing debate as to whether non-U.S. companies should have to comply with this extra layer of regulation. Debate about international companies (non-U.S.) adopting SOX-type standards centers on whether the benefits exceed the costs. The concern is that the higher costs of SOX compliance are making the U.S. securities markets less competitive.
- U.S. regulators have recently eliminated the need for foreign companies that trade shares in U.S. markets to reconcile their accounting with GAAP.
- IFRS tends to be less detailed in its accounting and disclosure requirements than GAAP. This difference in approach has resulted in a debate about the merits of "principles-based" (IFRS) versus "rules-based" (GAAP) standards.

Looking to the Future

Both the IASB and the FASB are hard at work developing standards that will lead to the elimination of major differences in the way certain transactions are accounted for and reported. Consider, for example, that as a result of a joint project on the conceptual framework, the definitions of the most fundamental elements (assets, liabilities, equity, revenues, and expenses) may actually change. However, whether the IASB adopts internal control provisions similar to those in SOX remains to be seen.

GAAP Practice

GAAP Self-Test Questions

1. Which of the following is **not** a reason why a single set of high-quality international accounting standards would be beneficial?
   (a) Mergers and acquisition activity.
   (b) Financial markets.
   (c) Multinational corporations.
   (d) GAAP is widely considered to be a superior reporting system.

2. The Sarbanes-Oxley Act determines:
   (a) international tax regulations.
   (b) internal control standards as enforced by the IASB.
   (c) internal control standards of U.S. publicly traded companies.
   (d) U.S. tax regulations.
3. IFRS is considered to be more:
   (a) principles-based and less rules-based than GAAP.
   (b) rules-based and less principles-based than GAAP.
   (c) detailed than GAAP.
   (d) None of the above.
4. Which of the following statements is **false**?
   (a) GAAP is based on a conceptual framework that is similar to that used to develop IFRS.
   (b) FASB and the IASB are working on a joint project related to the conceptual framework.
   (c) Non-U.S. companies that trade shares in U.S. markets must reconcile their accounting with GAAP.
   (d) Proprietorships, partnerships, and corporations are also found in countries that use IFRS.
5. Which of the following is **true**?
   (a) Financial frauds have not occurred in U.S. companies because GAAP has detailed accounting and disclosure requirements.
   (b) Transaction analysis is basically the same under GAAP and IFRS.
   (c) IFRS companies have agreed to adopt the Sarbanes-Oxley Act related to internal control in 2017.
   (d) Foreign companies that trade shares in U.S. markets must reconcile their accounting with the FASB.

GAAP Exercises

GAAP1-1 Who are the two key international players in the development of international accounting standards? Explain their role.

GAAP1-2 What might explain the fact that different accounting standard-setters have developed accounting standards that are sometimes quite different in nature?

GAAP1-3 What is the benefit of a single set of high-quality accounting standards?

GAAP1-4 Discuss the potential advantages and disadvantages that countries outside the United States should consider before adopting regulations, such as those in the Sarbanes-Oxley Act, that increase corporate internal control requirements.

GAAP Financial Reporting Problem: Apple Inc. (USA)

GAAP1-5 The financial statements of Apple Inc. are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions

Refer to Apple's financial statements to answer the following questions.

(a) What were Apple's total assets at September 28, 2013? At September 29, 2012?
(b) How much cash did Apple have on September 28, 2013?
(c) What amount of accounts payable did Apple report on September 28, 2013? On September 29, 2012?
(d) What were Apple's total revenues in 2013? In 2012? In 2011?
(e) What is the amount of the change in Apple's net income from 2012 to 2013?

Answers to GAAP Self-Test Questions

1. d **2.** c **3.** a **4.** c **5.** b

✔ The Navigator

✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER 2

The Recording Process

FEATURE STORY Accidents Happen

How organized are you financially? Take a short quiz. Answer *yes* or *no* to each question:

- Does your wallet contain so many debit card receipts that you've been declared a walking fire hazard?
- Was Yao Ming playing high school basketball the last time you balanced your bank account?
- Do you wait until your debit card is denied before checking the status of your funds?

If you think it is hard to keep track of the many transactions that make up *your* life, imagine what it is like for a major corporation like Bank of Taiwan (BOT) (TWN). If you had your life savings invested at BOT, you might be just slightly displeased if, when you checked your balance online, a message appeared on the screen indicating that your account information was lost.

To ensure the accuracy of your balance and the security of your funds, BOT, like all other companies large and small, relies on a sophisticated accounting information system. That's not to say that BOT or any other company is error-free. In fact, if you've ever overdrawn your bank account because you failed to track your debit card purchases properly, you may take some comfort from one accountant's mistake at Fidelity Investments (USA), one of the largest mutual fund investment firms in the world. The accountant failed to include a minus sign while doing a calculation, making what was actually a $1.3 billion loss look like a $1.3 billion—yes, *billion*—gain! Fortunately, like most accounting errors, it was detected before any real harm was done.

No one expects that kind of mistake at a company like Fidelity, which has sophisticated computer systems and top investment managers. In explaining the mistake to shareholders, a spokesperson wrote, "Some people have asked how, in this age of technology, such a mistake could be made. While many of our processes are computerized, accounting systems are complex and dictate that some steps must be handled manually by our managers and accountants, and people can make mistakes." ■

✔ The Navigator

- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 75–81
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Explain what an account is and how it helps in the recording process.
2. Define debits and credits and explain their use in recording business transactions.
3. Identify the basic steps in the recording process.
4. Explain what a journal is and how it helps in the recording process.
5. Explain what a ledger is and how it helps in the recording process.
6. Explain what posting is and how it helps in the recording process.
7. Prepare a trial balance and explain its purposes.

✔ The Navigator

Kimberly White/© Corbis

PREVIEW OF CHAPTER 2

In Chapter 1, we analyzed business transactions in terms of the accounting equation. We then presented the cumulative effects of these transactions in tabular form. Imagine a company like Bank of Taiwan (BOT) (as in the Feature Story) using the same tabular format as Softbyte SA to keep track of its transactions. In a single day, BOT engages in thousands of business transactions. To record each transaction this way would be impractical, expensive, and unnecessary. Instead, companies use a set of procedures and records to keep track of transaction data more easily. This chapter introduces and illustrates these basic procedures and records.

The content and organization of Chapter 2 are as follows.

THE RECORDING PROCESS

The Account	Steps in the Recording Process	The Trial Balance
• Debits and credits • Equity relationships • Summary of debit/credit rules	• Journal • Ledger • Posting • The recording process illustrated • Summary illustration of journalizing and posting	• Limitations of a trial balance • Locating errors • Currency signs and underlining

✔ The Navigator

The Account

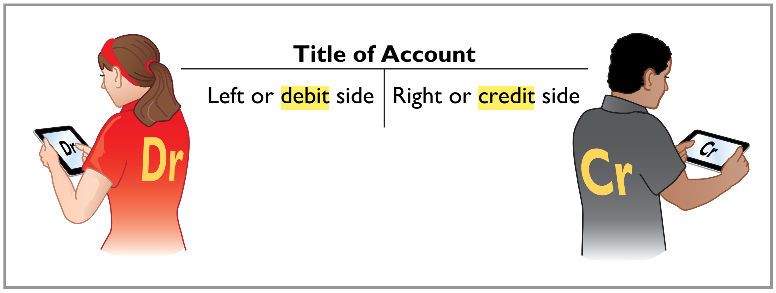
Learning Objective 1

Explain what an account is and how it helps in the recording process.

An **account** is an individual accounting record of increases and decreases in a specific asset, liability, or equity item. For example, Softbyte SA (the company discussed in Chapter 1) would have separate accounts for Cash, Accounts Receivable, Accounts Payable, Service Revenue, Salaries and Wages Expense, and so on. (Note that whenever we are referring to a specific account, we capitalize the name.)

In its simplest form, an account consists of three parts: (1) a title, (2) a left or debit side, and (3) a right or credit side. Because the format of an account resembles the letter T, we refer to it as a **T-account**. Illustration 2-1 shows the basic form of an account.

Illustration 2-1
Basic form of account



We use this form often throughout this textbook to explain basic accounting relationships.

Debits and Credits

Learning Objective 2

Define debits and credits and explain their use in recording business transactions.

The term **debit** indicates the left side of an account, and **credit** indicates the right side. They are commonly abbreviated as **Dr.** for debit and **Cr.** for credit. They **do not** mean increase or decrease, as is commonly thought. We use the terms *debit* and *credit* repeatedly in the recording process to describe **where** entries are made in accounts. For example, the act of entering an amount on the left side of an account is called **debiting** the account. Making an entry on the right side is **crediting** the account.

When comparing the totals of the two sides, an account shows a **debit balance** if the total of the debit amounts exceeds the credits. An account shows a **credit balance** if the credit amounts exceed the debits. Note the position of the debit side and credit side in Illustration 2-1.

The procedure of recording debits and credits in an account is shown in Illustration 2-2 for the transactions affecting the Cash account of Softbyte SA. The data are taken from the Cash column of the tabular summary in Illustration 1-10 (page 21).

Illustration 2-2
Tabular summary and account form for Softbyte's Cash account

Tabular Summary

Cash
€15,000
−7,000
1,200
1,500
−1,700
−250
600
−1,300
€ 8,050

Account Form

Cash			
(Debits)	15,000	**(Credits)**	7,000
	1,200		1,700
	1,500		250
	600		1,300
Balance **(Debit)**	8,050		

Every positive item in the tabular summary represents a receipt of cash; every negative amount represents a payment of cash. **Notice that in the account form**

we record the increases in cash as debits, and the decreases in cash as credits. For example, the €15,000 receipt of cash (in red) is debited to Cash, and the −€7,000 payment of cash (in blue) is credited to Cash.

Having increases on one side and decreases on the other reduces recording errors and helps in determining the totals of each side of the account as well as the account balance. The balance is determined by netting the two sides (subtracting one amount from the other). The account balance, a debit of €8,050, indicates that Softbyte had €8,050 more increases than decreases in cash. That is, since it started with a balance of zero, it has €8,050 in its Cash account.

DEBIT AND CREDIT PROCEDURE

In Chapter 1, you learned the effect of a transaction on the basic accounting equation. Remember that each transaction must affect two or more accounts to keep the basic accounting equation in balance. In other words, for each transaction, debits must equal credits. The equality of debits and credits provides the basis for the **double-entry system** of recording transactions.

Under the double-entry system, the dual (two-sided) effect of each transaction is recorded in appropriate accounts. This system provides a logical method for recording transactions. As discussed in the Feature Story about Bank of Taiwan (TWN), the double-entry system also helps to ensure the accuracy of the recorded amounts as well as the detection of errors. If every transaction is recorded with equal debits and credits, the sum of all the debits to the accounts must equal the sum of all the credits.

The double-entry system for determining the equality of the accounting equation is much more efficient than the plus/minus procedure used in Chapter 1. On the following pages, we will illustrate debit and credit procedures in the double-entry system.

DR./CR. PROCEDURES FOR ASSETS AND LIABILITIES

In Illustration 2-2 for Softbyte SA increases in Cash—an asset—were entered on the left side, and decreases in Cash were entered on the right side. We know that both sides of the basic equation (Assets = Liabilities + Equity) must be equal. It therefore follows that increases and decreases in liabilities will have to be recorded *opposite from* increases and decreases in assets. Thus, increases in liabilities must be entered on the right or credit side, and decreases in liabilities must be entered on the left or debit side. The effects that debits and credits have on assets and liabilities are summarized in Illustration 2-3.

Debits	Credits
Increase assets	Decrease assets
Decrease liabilities	Increase liabilities

Illustration 2-3
Debit and credit effects—assets and liabilities

Asset accounts normally show debit balances. That is, debits to a specific asset account should exceed credits to that account. Likewise, **liability accounts normally show credit balances**. That is, credits to a liability account should exceed debits to that account. The **normal balance** of an account is on the side where an increase in the account is recorded. Illustration 2-4 shows the normal balances for assets and liabilities.

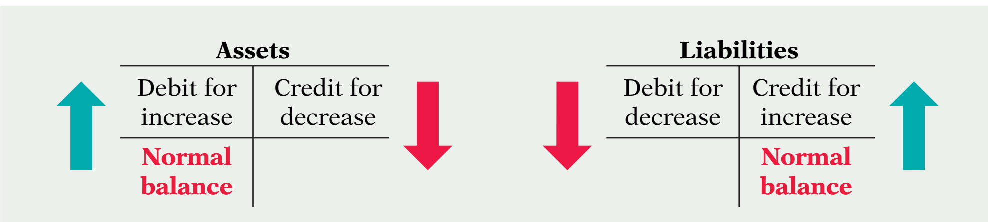


Illustration 2-4
Normal balances—assets and liabilities

Knowing the normal balance in an account may help you trace errors. For example, a credit balance in an asset account such as Land or a debit balance in a liability account such as Salaries and Wages Payable usually indicates an error. Occasionally, though, an abnormal balance may be correct. The Cash account, for example, will have a credit balance when a company has overdrawn its bank balance (i.e., written a check that "bounced").

EQUITY

As Chapter 1 indicated, there are five subdivisions of equity: share capital—ordinary, retained earnings, dividends, revenues, and expenses. In a double-entry system, companies keep accounts for each of these subdivisions, as explained below.

SHARE CAPITAL—ORDINARY Companies issue share capital—ordinary in exchange for the owners' investment paid in to the company. Credits increase the Share Capital—Ordinary account, and debits decrease it. For example, when an owner invests cash in the business in exchange for ordinary shares, the company debits (increases) Cash and credits (increases) Share Capital—Ordinary.

Illustration 2-5 shows the rules of debit and credit for the Share Capital–Ordinary account.

Illustration 2-5
Debit and credit effects—share capital—ordinary

Debits	Credits
Decrease Share Capital—Ordinary	Increase Share Capital—Ordinary

We can diagram the normal balance in Share Capital—Ordinary as follows.

Illustration 2-6
Normal balance—share capital—ordinary

Share Capital—Ordinary	
Debit for decrease	Credit for increase
	Normal balance

• HELPFUL HINT
The rules for debit and credit and the normal balances of share capital—ordinary and retained earnings are the same as for liabilities.

RETAINED EARNINGS **Retained earnings** is net income that is kept (retained) in the business. It represents the portion of equity that the company has accumulated through the profitable operation of the business. Credits (net income) increase the Retained Earnings account, and debits (dividends or net losses) decrease it, as Illustration 2-7 shows.

Illustration 2-7
Debit and credit effects and normal balance—retained earnings

Retained Earnings	
Debit for decrease	Credit for increase
	Normal balance

DIVIDENDS A **dividend** is a company's distribution to its shareholders. The most common form of a distribution is a **cash dividend**. Dividends reduce the shareholders' claims on retained earnings. Debits increase the Dividends account, and credits decrease it. Illustration 2-8 shows that this account normally has a debit balance.

Dividends	
Debit for increase	Credit for decrease
Normal balance	

Illustration 2-8
Debit and credit effect and normal balance—dividends

REVENUES AND EXPENSES

The purpose of earning revenues is to benefit the shareholders of the business. When a company recognizes revenues, equity increases. Revenues are a subdivision of equity that provides information as to **why** equity increased. Credits increase revenue accounts and debits decrease them. Therefore, **the effect of debits and credits on revenue accounts is the same as their effect on equity**.

Expenses have the opposite effect: expenses decrease equity. Since expenses decrease net income, and revenues increase it, it is logical that the increase and decrease sides of expense accounts should be the reverse of revenue accounts. Thus, debits increase expense accounts, and credits decrease them.

Illustration 2-9 shows the effect of debits and credits on revenues and expenses.

• HELPFUL HINT
Because revenues increase equity, a revenue account has the same debit/credit rules as the Retained Earnings account. Expenses have the opposite effect.

Debits	Credits
Decrease revenues	Increase revenues
Increase expenses	Decrease expenses

Illustration 2-9
Debit and credit effects—revenues and expenses

Credits to revenue accounts should exceed debits. Debits to expense accounts should exceed credits. Thus, revenue accounts normally show credit balances, and expense accounts normally show debit balances. We can diagram the normal balance as follows.

Revenues	
Debit for decrease	Credit for increase
	Normal balance

Expenses	
Debit for increase	Credit for decrease
Normal balance	

Illustration 2-10
Normal balances—revenues and expenses

Investor Insight Keeping Score — Brother Elephants (TWN)

Mandy Cheng/AFP/Getty Images

The Brother Elephants (TWN) baseball team probably has these major revenue and expense accounts:

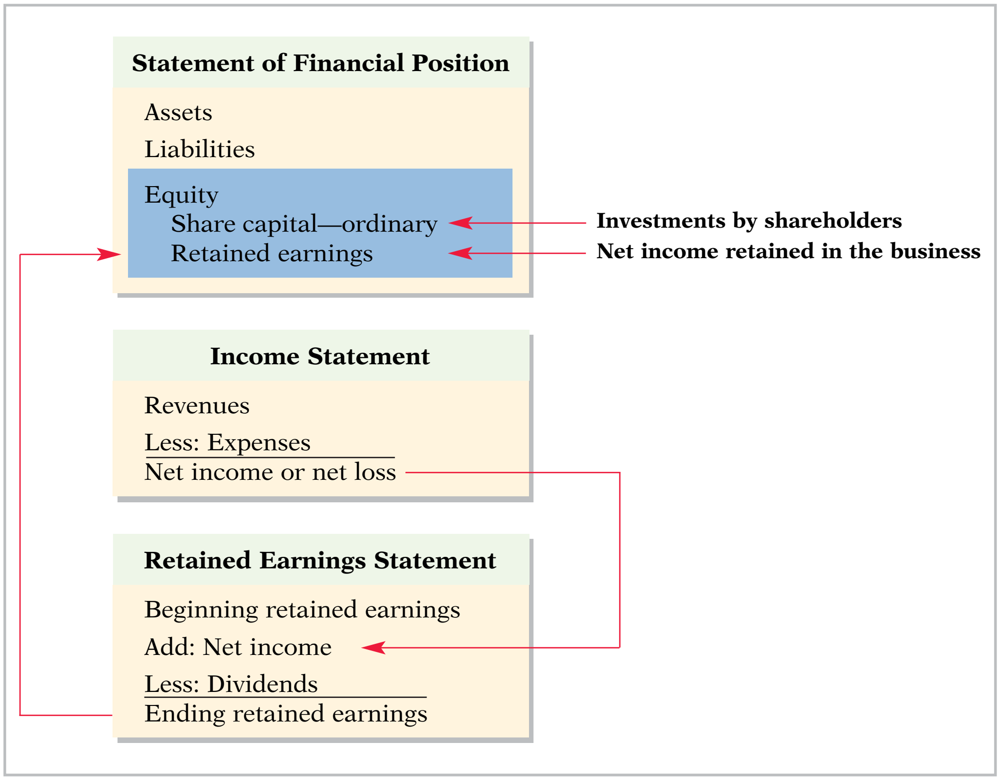
Revenues	Expenses
Admissions (ticket sales)	Players' salaries
Concessions	Administrative salaries
Television and radio	Travel
Advertising	Stadium maintenance

Q Do you think that the Manchester United (GBR) football (soccer) club would be likely to have the same major revenue and expense accounts as Brother Elephants? (See page 97.)

Equity Relationships

As Chapter 1 indicated, companies report share capital—ordinary and retained earnings in the equity section of the statement of financial position. They report dividends on the retained earnings statement. And they report revenues and expenses on the income statement. Dividends, revenues, and expenses are eventually transferred to retained earnings at the end of the period. As a result, a change in any one of these three items affects equity. Illustration 2-11 shows the relationships related to equity.

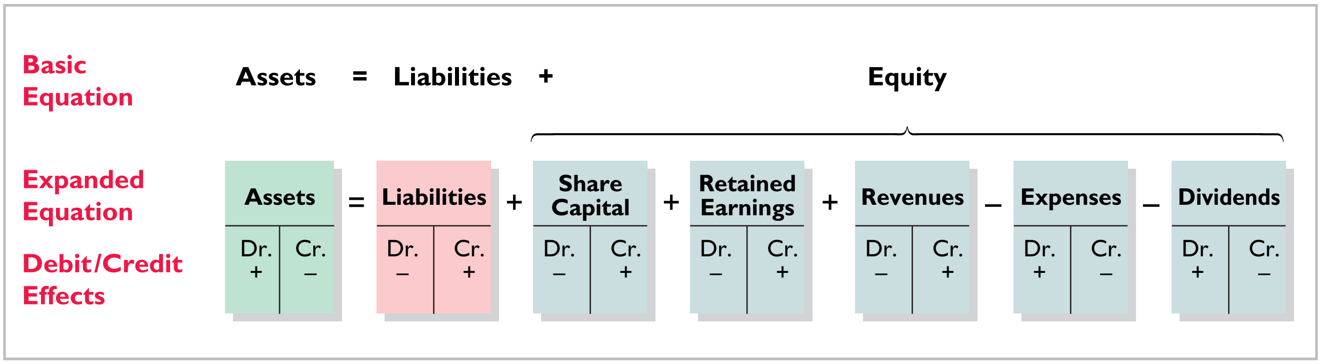
Illustration 2-11
Equity relationships



Summary of Debit/Credit Rules

Illustration 2-12 shows a summary of the debit/credit rules and effects on each type of account. Study this diagram carefully. It will help you understand the fundamentals of the double-entry system.

Illustration 2-12
Summary of debit/credit rules



> **DO IT!**

Normal Account Balances

Action Plan

✔ Determine the types of accounts needed. Kate will need asset accounts for each different type of asset she invests in the business, and liability accounts for any debts she incurs.

✔ Understand the types of equity accounts. When Kate begins the business, she will need only Share Capital—Ordinary. Later, she will need other equity accounts.

Kate Browne, president of Hair It Is Company SA, has just rented space in a shopping mall in which she will open and operate a beauty salon. A friend has advised Kate to set up a double-entry set of accounting records in which to record all of her business transactions.

Identify the statement of financial position accounts that Hair It Is Company will likely use to record the transactions needed to establish and open the business. Also, indicate whether the normal balance of each account is a debit or a credit.

Solution

Hair It Is Company would likely use the following accounts to record the transactions needed to ready the beauty salon for opening day:

Cash (debit balance)	Equipment (debit balance)
Supplies (debit balance)	Accounts Payable (credit balance)
Notes Payable (credit balance), if the business borrows money	Share Capital—Ordinary (credit balance)

Related exercise material: **BE2-1, BE2-2, BE2-5, E2-2, E2-4, and DO IT! 2-1.**

✔ The Navigator

Steps in the Recording Process

Learning Objective 3

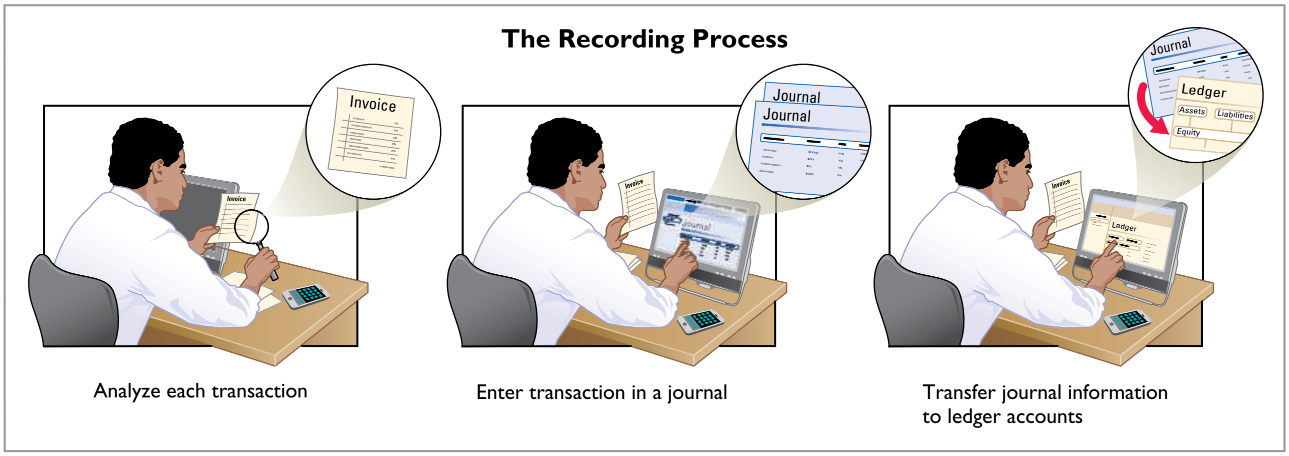
Identify the basic steps in the recording process.

Although it is possible to enter transaction information directly into the accounts without using a journal, few businesses do so. Practically every business uses three basic steps in the recording process:

1. Analyze each transaction for its effects on the accounts.
2. Enter the transaction information in a *journal*.
3. Transfer the journal information to the appropriate accounts in the *ledger*.[1]

The recording process begins with the transaction. **Business documents**, such as a sales receipt, a check, or a bill, provide evidence of the transaction. The company analyzes this evidence to determine the transaction's effects on specific accounts. The company then enters the transaction in the journal. Finally, it transfers the journal entry to the designated accounts in the ledger. Illustration 2-13 shows the recording process.

Illustration 2-13
The recording process



[1]We discuss here the manual recording process as we believe students should understand it first before learning and using a computerized system.

The steps in the recording process occur repeatedly. In Chapter 1, we illustrated the first step, the analysis of transactions, and will give further examples in this and later chapters. The other two steps in the recording process are explained in the next sections.

The Journal

Learning Objective 4

Explain what a journal is and how it helps in the recording process.

Companies initially record transactions in chronological order (the order in which they occur). Thus, the **journal** is referred to as the book of original entry. For each transaction, the journal shows the debit and credit effects on specific accounts.

Companies may use various kinds of journals, but every company has the most basic form of journal, a **general journal**. Typically, a general journal has spaces for dates, account titles and explanations, references, and two amount columns. (See the format of the journal in Illustration 2-14, below.) *Whenever we use the term "journal" in this textbook, we mean the general journal, unless we specify otherwise.*

The journal makes several significant contributions to the recording process:

1. It discloses in one place the **complete effects of a transaction**.
2. It provides a **chronological record** of transactions.
3. It helps **to prevent or locate errors** because the debit and credit amounts for each entry can be easily compared.

JOURNALIZING

Entering transaction data in the journal is known as **journalizing**. Companies make separate journal entries for each transaction. A complete entry consists of: (1) the date of the transaction, (2) the accounts and amounts to be debited and credited, and (3) a brief explanation of the transaction.

Illustration 2-14 shows the technique of journalizing, using the first two transactions of Softbyte SA. On September 1, shareholders invested €15,000 cash in the corporation in exchange for ordinary shares, and Softbyte purchased computer equipment for €7,000 cash. The number J1 indicates that the company records these two entries on the first page of the general journal. (The boxed numbers correspond to explanations in the list below the illustration.)

Illustration 2-14
Technique of journalizing

GENERAL JOURNAL J1

Date		Account Titles and Explanation	Ref.	Debit	Credit
2017			5		
Sept. 1	2	Cash		15,000	
1	3	Share Capital—Ordinary			15,000
	4	(Issued shares for cash)			
1		Equipment		7,000	
		Cash			7,000
		(Purchased equipment for cash)			

1 The date of the transaction is entered in the Date column.

2 The debit account title (that is, the account to be debited) is entered first at the extreme left margin of the column headed "Account Titles and Explanation," and the amount of the debit is recorded in the Debit column.

3 The credit account title (that is, the account to be credited) is indented and entered on the next line in the column headed "Account Titles and Explanation," and the amount of the credit is recorded in the Credit column.

4 A brief explanation of the transaction appears on the line below the credit account title. A space is left between journal entries. The blank space separates individual journal entries and makes the entire journal easier to read.

5 The column titled Ref. (which stands for Reference) is left blank when the journal entry is made. This column is used later when the journal entries are transferred to the ledger accounts.

It is important to use correct and specific account titles in journalizing. Erroneous account titles lead to incorrect financial statements. However, some flexibility exists initially in selecting account titles. The main criterion is that each title must appropriately describe the content of the account. Once a company chooses the specific title to use, it should record under that account title all later transactions involving the account.[2]

SIMPLE AND COMPOUND ENTRIES

Some entries involve only two accounts, one debit and one credit. (See, for example, the entries in Illustration 2-14.) An entry like these is considered a **simple entry**. Some transactions, however, require more than two accounts in journalizing. An entry that requires three or more accounts is a **compound entry**. To illustrate, assume that on July 1, Tsai Company purchases a delivery truck costing NT$420,000. It pays NT$240,000 cash now and agrees to pay the remaining NT$180,000 on account (to be paid later). The compound entry is as follows.

Illustration 2-15
Compound journal entry

GENERAL JOURNAL J1

Date	Account Titles and Explanation	Ref.	Debit	Credit
2017				
July 1	Equipment		420,000	
	Cash			240,000
	Accounts Payable			180,000
	(Purchased truck for cash with balance on account)			

In a compound entry, the standard format requires that all debits be listed before the credits.

DO IT!

Recording Business Activities

As president and sole shareholder, Kate Browne engaged in the following activities in establishing her beauty salon, Hair It Is Company SA.

1. Opened a bank account in the name of Hair It Is Company SA and deposited €20,000 of her own money in this account in exchange for ordinary shares.
2. Purchased equipment on account (to be paid in 30 days) for a total cost of €4,800.
3. Interviewed three applicants for the position of beautician.

In what form (type of record) should Hair It Is Company record these three activities? Prepare the entries to record the transactions.

Action Plan

✔ Understand which activities need to be recorded and which do not. Any that have economic effects should be recorded in a journal.

✔ Analyze the effects of transactions on asset, liability, and equity accounts.

Solution

Each transaction that is recorded is entered in the general journal. The three activities would be recorded as follows.

1. Cash	20,000	
Share Capital—Ordinary		20,000
(Issued shares for cash)		
2. Equipment	4,800	
Accounts Payable		4,800
(Purchase of equipment on account)		

3. No entry because no transaction has occurred.

Related exercise material: **BE2-3, BE2-6, E2-3, E2-5, E2-6, E2-7, and DO IT! 2-2.**

✔ The Navigator

[2]*In homework problems, you should use specific account titles when they are given.* When account titles are not given, you may select account titles that identify the nature and content of each account. The account titles used in journalizing should not contain explanations such as Cash Paid or Cash Received.

The Ledger

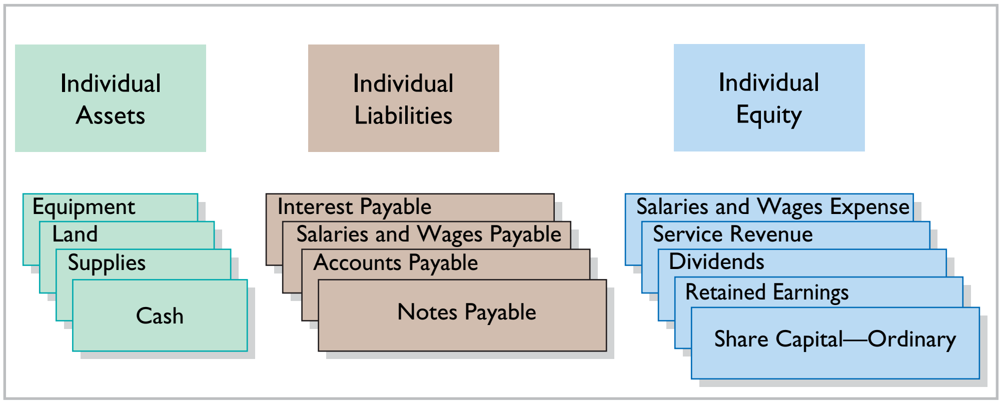
Learning Objective 5

Explain what a ledger is and how it helps in the recording process.

The entire group of accounts maintained by a company is the **ledger**. The ledger keeps in one place all the information about changes in specific account balances.

Companies may use various kinds of ledgers, but every company has a general ledger. A **general ledger** contains all the asset, liability, and equity accounts, as shown in Illustration 2-16. *Whenever we use the term "ledger" in this textbook, we mean the general ledger, unless we specify otherwise.*

Illustration 2-16
The general ledger



The ledger provides the balance in each of the accounts and keeps track of changes in these balances. For example, the Cash account shows the amount of cash available to meet current obligations. The Accounts Receivable account shows amounts due from customers. The Accounts Payable account shows amounts owed to creditors. Each account is numbered for easier identification.

Accounting Across the Organization — **What Would Sam Do?**

Wal-Mart Stores, Inc. (USA)

© pcruciatti/Shutterstock

In his autobiography, Sam Walton described the double-entry accounting system he used when Wal-Mart Stores, Inc. (USA) was just getting started: "We kept a little pigeonhole on the wall for the cash receipts and paperwork of each [Wal-Mart] store. I had a blue binder ledger book for each store. When we added a store, we added a pigeonhole. We did this at least up to twenty stores. Then once a month, the bookkeeper and I would enter the merchandise, enter the sales, enter the cash, and balance it." Today, the company operates more than 7,000 stores worldwide under various names. That's a lot of "pigeonholes."

Source: Sam Walton, *Made in America* (New York: Doubleday, 1992), p. 53.

Q Why did Sam Walton keep separate pigeonholes and blue binders? Why bother to keep separate records for each store? (See page 97.)

STANDARD FORM OF ACCOUNT

The simple T-account form used in accounting textbooks is often very useful for illustration purposes. However, in practice, the account forms used in ledgers are much more structured. Illustration 2-17 shows a typical form, using assumed data from a cash account.

This is called the **three-column form of account**. It has three money columns—debit, credit, and balance. The balance in the account is determined after each transaction. Companies use the explanation space and reference columns to provide special information about the transaction.

Illustration 2-17
Three-column form of account

CASH					NO. 101
Date	**Explanation**	**Ref.**	**Debit**	**Credit**	**Balance**
2017					
June 1			25,000		25,000
2				8,000	17,000
3			4,200		21,200
9			7,500		28,700
17				11,700	17,000
20				250	16,750
30				7,300	9,450

Posting

Learning Objective 6
Explain what posting is and how it helps in the recording process.

Transferring journal entries to the ledger accounts is called **posting**. This phase of the recording process accumulates the effects of journalized transactions into the individual accounts. Posting involves the following steps.

1. In the **ledger**, enter, in the appropriate columns of the account(s) debited, the date, journal page, and debit amount shown in the journal.
2. In the reference column of the **journal**, write the account number to which the debit amount was posted.
3. In the **ledger**, enter, in the appropriate columns of the account(s) credited, the date, journal page, and credit amount shown in the journal.
4. In the reference column of the **journal**, write the account number to which the credit amount was posted.

Illustration 2-18 shows these four steps using Softbyte SA's first journal entry, the issuance of ordinary shares for €15,000 cash. The boxed numbers indicate the sequence of the steps.

Illustration 2-18
Posting a journal entry

GENERAL JOURNAL				J1
Date	**Account Titles and Explanation**	**Ref.**	**Debit**	**Credit**
2017				
Sept. 1	Cash	101	15,000	
	Share Capital—Ordinary	311		15,000
	(Issued shares for cash)			

GENERAL LEDGER

CASH					NO. 101
Date	**Explanation**	**Ref.**	**Debit**	**Credit**	**Balance**
2017					
Sept. 1		J1	15,000		15,000

SHARE CAPITAL—ORDINARY					NO. 311
Date	**Explanation**	**Ref.**	**Debit**	**Credit**	**Balance**
2017					
Sept. 1		J1		15,000	15,000

Key:
1 Post to debit account–date, journal page number, and amount.
2 Enter debit account number in journal reference column.
3 Post to credit account–date, journal page number, and amount.
4 Enter credit account number in journal reference column.

Posting should be performed in chronological order. That is, the company should post all the debits and credits of one journal entry before proceeding to the next journal entry. Postings should be made on a timely basis to ensure that the ledger is up to date.[3]

The reference column **of a ledger** account indicates the journal page from which the transaction was posted.[4] The explanation space of the ledger account is used infrequently because an explanation already appears in the journal.

CHART OF ACCOUNTS

The number and type of accounts differ for each company. The number of accounts depends on the amount of detail management desires. For example, the management of one company may want a single account for all types of utility expense. Another may keep separate expense accounts for each type of utility, such as gas, electricity, and water. Similarly, a small company like Softbyte SA will have fewer accounts than a corporate giant like Anheuser-Busch InBev (BEL). Softbyte may be able to manage and report its activities in 20 to 30 accounts, while Anheuser-Busch InBev may require thousands of accounts to keep track of its worldwide activities.

• HELPFUL HINT
On the textbook's endpapers, you will also find an expanded chart of accounts.

Most companies have a **chart of accounts**. This chart lists the accounts and the account numbers that identify their location in the ledger. The numbering system that identifies the accounts usually starts with the statement of financial position accounts and follows with the income statement accounts.

In this and the next two chapters, we will be explaining the accounting for Yazici Advertising A.Ş. (a service company). The ranges of the account numbers are as follows.

- Accounts 101–199 indicate asset accounts
- 200–299 indicate liabilities
- 300–399 indicate equity accounts
- 400–499, revenues
- 500–799, expenses
- 800–899, other revenues
- 900–999, other expenses

Illustration 2-19 shows the chart of accounts for Yazici Advertising A.Ş. Accounts shown in red are used in this chapter. Accounts shown in black are explained in later chapters.

Illustration 2-19
Chart of accounts for Yazici Advertising A.Ş.

YAZICI ADVERTISING A.Ş.
Chart of Accounts

Assets	Equity
101 Cash	**311 Share Capital—Ordinary**
112 Accounts Receivable	320 Retained Earnings
126 Supplies	**332 Dividends**
130 Prepaid Insurance	350 Income Summary
157 Equipment	
158 Accumulated Depreciation—Equipment	**Revenues**
	400 Service Revenue
Liabilities	**Expenses**
200 Notes Payable	631 Supplies Expense
201 Accounts Payable	711 Depreciation Expense
209 Unearned Service Revenue	722 Insurance Expense
212 Salaries and Wages Payable	**726 Salaries and Wages Expense**
230 Interest Payable	**729 Rent Expense**
	732 Utilities Expense
	905 Interest Expense

[3]*In homework problems, you can journalize all transactions before posting any of the journal entries.*

[4]After the last entry has been posted, the accountant should scan the reference column **in the journal**, to confirm that all postings have been made.

You will notice that there are gaps in the numbering system of the chart of accounts for Yazici Advertising A.Ş. Gaps are left to permit the insertion of new accounts as needed during the life of the business.

The Recording Process Illustrated

Illustrations 2-20 through 2-29 show the basic steps in the recording process, using the October transactions of Yazici Advertising A.Ş. Yazici's accounting period is a month. A basic analysis and a debit-credit analysis precede the journalizing and posting of each transaction. For simplicity, we use the T-account form in the illustrations instead of the standard account form.

Study these transaction analyses carefully. **The purpose of transaction analysis is first to identify the type of account involved, and then to determine whether to make a debit or a credit to the account.** You should always perform this type of analysis before preparing a journal entry. Doing so will help you understand the journal entries discussed in this chapter as well as more complex journal entries in later chapters.

Illustration 2-20
Investment of cash by shareholders

Transaction On October 1, C. R. Yazici invests ₺10,000 cash in an advertising company to be known as Yazici Advertising A.Ş.

Basic Analysis The asset Cash increases ₺10,000; equity (specifically, Share Capital—Ordinary) increases ₺10,000.

Equation Analysis

Assets	=	Liabilities	+	Equity	
Cash	=			Share Capital	
+10,000				+10,000	Issued Shares

Debit–Credit Analysis Debits increase assets: debit Cash ₺10,000.
Credits increase equity: credit Share Capital—Ordinary ₺10,000.

Journal Entry

Oct. 1	Cash	101	10,000	
	Share Capital—Ordinary	311		10,000
	(Issued shares for cash)			

Posting

Cash 101	
Oct. 1 10,000	

Share Capital—Ordinary 311	
	Oct. 1 10,000

• **HELPFUL HINT**
Follow these steps:
1. Determine what type of account is involved.
2. Determine what items increased or decreased and by how much.
3. Translate the increases and decreases into debits and credits.

Illustration 2-21
Purchase of office equipment

Transaction

On October 1, Yazici Advertising purchases office equipment costing ₺5,000 by signing a 3-month, 12%, ₺5,000 note payable.

Basic Analysis

The asset Equipment increases ₺5,000; the liability Notes Payable increases ₺5,000.

Equation Analysis

Assets	=	**Liabilities**	+	**Equity**
Equipment	=	Notes Payable		
+5,000		+5,000		

Debit–Credit Analysis

Debits increase assets: debit Equipment ₺5,000.
Credits increase liabilities: credit Notes Payable ₺5,000.

Journal Entry

Oct. 1	Equipment	157	5,000	
	Notes Payable	200		5,000
	(Issued 3-month, 12% note for office equipment)			

Posting

Equipment	157
Oct. 1 5,000	

Notes Payable	200
	Oct. 1 5,000

Illustration 2-22
Receipt of cash for future service

Transaction

On October 2, Yazici Advertising receives a ₺1,200 cash advance from R. Knox, a client, for advertising services that are expected to be completed by December 31.

Basic Analysis

The asset Cash increases ₺1,200; the liability Unearned Service Revenue increases ₺1,200 because the service has not been performed yet. That is, when Yazici receives an advance payment, it should record an unearned revenue (a liability) in order to recognize the obligation that exists. Note also that although many liabilities have the word "payable" in their title, unearned revenue is considered a liability because the liability is satisfied by providing a product or performing a service.

Equation Analysis

Assets	=	**Liabilities**	+	**Equity**
Cash	=	Unearned Service Revenue		
+1,200		+1,200		

Debit–Credit Analysis

Debits increase assets: debit Cash ₺1,200.
Credits increase liabilities: credit Unearned Service Revenue ₺1,200.

Journal Entry

Oct. 2	Cash	101	1,200	
	Unearned Service Revenue	209		1,200
	(Received cash from R. Knox for future service)			

Posting

Cash	101
Oct. 1 10,000	
2 1,200	

Unearned Service Revenue	209
	Oct. 2 1,200

Illustration 2-23
Payment of monthly rent

Transaction

On October 3, Yazici Advertising pays office rent for October in cash, ₺900.

Basic Analysis

Rent Expense increases ₺900 because the payment pertains only to the current month; the asset Cash decreases ₺900.

Equation Analysis

Assets	=	Liabilities	+	Equity	
Cash	=			Expenses	
−900				−900	Rent Expense

Debit–Credit Analysis

Debits increase expenses: debit Rent Expense ₺900.
Credits decrease assets: credit Cash ₺900.

Journal Entry

Oct. 3	Rent Expense	729	900	
	Cash	101		900
	(Paid October rent)			

Posting

Cash			101
Oct. 1	10,000	Oct. 3	900
2	1,200		

Rent Expense			729
Oct. 3	900		

Illustration 2-24
Payment for insurance

Transaction

On October 4, Yazici Advertising pays ₺600 for a one-year insurance policy that will expire next year on September 30.

Basic Analysis

The asset Prepaid Insurance increases ₺600 because the payment extends to more than the current month; the asset Cash decreases ₺600. Payments of expenses that will benefit more than one accounting period are prepaid expenses or prepayments. When a company makes a payment, it debits an asset account in order to show the service or benefit that will be received in the future.

Equation Analysis

Assets			=	Liabilities	+	Equity
Cash	+	Prepaid Insurance				
−600		+600				

Debit–Credit Analysis

Debits increase assets: debit Prepaid Insurance ₺600.
Credits decrease assets: credit Cash ₺600.

Journal Entry

Oct. 4	Prepaid Insurance	130	600	
	Cash	101		600
	(Paid one-year policy; effective date October 1)			

Posting

Cash			101
Oct. 1	10,000	Oct. 3	900
2	1,200	4	600

Prepaid Insurance			130
Oct. 4	600		

Illustration 2-25
Purchase of supplies on credit

Transaction	On October 5, Yazici Advertising purchases an estimated 3-month supply of advertising materials on account from Aero Supply for ₺2,500.
Basic Analysis	The asset Supplies increases ₺2,500; the liability Accounts Payable increases ₺2,500.
Equation Analysis	**Assets** = **Liabilities** + **Equity** Supplies = Accounts Payable +2,500 = +2,500
Debit – Credit Analysis	Debits increase assets: debit Supplies ₺2,500. Credits increase liabilities: credit Accounts Payable ₺2,500.

Journal Entry

Oct. 5	Supplies	126	2,500	
	Accounts Payable	201		2,500
	(Purchased supplies on account from Aero Supply)			

Posting

Supplies 126	
Oct. 5 2,500	

Accounts Payable 201	
	Oct. 5 2,500

Illustration 2-26
Hiring of employees

Event	On October 9, Yazici Advertising hires four employees to begin work on October 15. Each employee is to receive a weekly salary of ₺500 for a 5-day work week, payable every 2 weeks—first payment made on October 26.
Basic Analysis	A business transaction has not occurred. There is only an agreement between the employer and the employees to enter into a business transaction beginning on October 15. Thus, a debit–credit analysis is not needed because there is no accounting entry. (See transaction of October 26 for first entry.)

Illustration 2-27
Declaration and payment of dividend

Transaction On October 20, Yazici Advertising's board of directors declares and pays a ₺500 cash dividend to shareholders.

Basic Analysis The Dividends account increases ₺500; the asset Cash decreases ₺500.

Equation Analysis

Assets	=	Liabilities	+	Equity
Cash	=			Dividends
−500				−500

Debit–Credit Analysis Debits increase dividends: debit Dividends ₺500.
Credits decrease assets: credit Cash ₺500.

Journal Entry

Oct. 20	Dividends	332	500	
	Cash	101		500
	(Declared and paid a cash dividend)			

Posting

Cash			101
Oct. 1	10,000	Oct. 3	900
2	1,200	4	600
		20	500

Dividends			332
Oct. 20	500		

Illustration 2-28
Payment of salaries

Transaction On October 26, Yazici Advertising owes employee salaries of ₺4,000 and pays them in cash. (See October 9 event.)

Basic Analysis Salaries and Wages Expense increases ₺4,000; the asset Cash decreases ₺4,000.

Equation Analysis

Assets	=	Liabilities	+	Equity	
Cash	=			Expenses	
−4,000				−4,000	Salaries and Wages Expense

Debit–Credit Analysis Debits increase expenses: debit Salaries and Wages Expense ₺4,000.
Credits decrease assets: credit Cash ₺4,000.

Journal Entry

Oct. 26	Salaries and Wages Expense	726	4,000	
	Cash	101		4,000
	(Paid salaries to date)			

Posting

Cash			101
Oct. 1	10,000	Oct. 3	900
2	1,200	4	600
		20	500
		26	4,000

Salaries and Wages Expense			726
Oct. 26	4,000		

Illustration 2-29
Receipt of cash for services provided

Transaction

On October 31, Yazici Advertising receives ₺10,000 in cash from Copa Company for advertising services performed in October.

Basic Analysis

The asset Cash increases ₺10,000; the revenue account Service Revenue increases ₺10,000.

Equation Analysis

Assets	=	Liabilities	+	Equity	
Cash	=			Revenues	
+10,000				+10,000	Service Revenue

Debit–Credit Analysis

Debits increase assets: debit Cash ₺10,000.
Credits increase revenues: credit Service Revenue ₺10,000.

Journal Entry

Oct. 31	Cash	101	10,000	
	Service Revenue	400		10,000
	(Received cash for services performed)			

Posting

Cash			101
Oct. 1	10,000	Oct. 3	900
2	1,200	4	600
31	10,000	20	500
		26	4,000

Service Revenue			400
		Oct. 31	10,000

> **DO IT!**

Posting

Como Company SpA recorded the following transactions in a general journal during the month of March.

Mar. 4	Cash	2,280	
	Service Revenue		2,280
15	Salaries and Wages Expense	400	
	Cash		400
19	Utilities Expense	92	
	Cash		92

Post these entries to the Cash account of the general ledger to determine the ending balance in cash. The beginning balance in Cash on March 1 was €600.

Action Plan

✔ Recall that posting involves transferring the journalized debits and credits to specific accounts in the ledger.

✔ Determine the ending balance by netting the total debits and credits.

Solution

Cash			
3/1	600	3/15	400
3/4	2,280	3/19	92
3/31 Bal.	2,388		

Related exercise material: **BE2-7, BE2-8, E2-8, E2-9, E2-12, and DO IT! 2-3.**

✔ The Navigator

Summary Illustration of Journalizing and Posting

Illustration 2-30 shows the journal for Yazici Advertising A.Ş. for October. Illustration 2-31 (page 72) shows the ledger, with all balances in red.

Illustration 2-30
General journal entries

GENERAL JOURNAL — PAGE J1

Date	Account Titles and Explanation	Ref.	Debit	Credit
2017				
Oct. 1	Cash	101	10,000	
	Share Capital—Ordinary	311		10,000
	(Issued shares for cash)			
1	Equipment	157	5,000	
	Notes Payable	200		5,000
	(Issued 3-month, 12% note for office equipment)			
2	Cash	101	1,200	
	Unearned Service Revenue	209		1,200
	(Received cash from R. Knox for future service)			
3	Rent Expense	729	900	
	Cash	101		900
	(Paid October rent)			
4	Prepaid Insurance	130	600	
	Cash	101		600
	(Paid one-year policy; effective date October 1)			
5	Supplies	126	2,500	
	Accounts Payable	201		2,500
	(Purchased supplies on account from Aero Supply)			
20	Dividends	332	500	
	Cash	101		500
	(Declared and paid a cash dividend)			
26	Salaries and Wages Expense	726	4,000	
	Cash	101		4,000
	(Paid salaries to date)			
31	Cash	101	10,000	
	Service Revenue	400		10,000
	(Received cash for services performed)			

GENERAL LEDGER

Cash — No. 101

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1	10,000		10,000
2		J1	1,200		11,200
3		J1		900	10,300
4		J1		600	9,700
20		J1		500	9,200
26		J1		4,000	5,200
31		J1	10,000		**15,200**

Supplies — No. 126

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 5		J1	2,500		**2,500**

Prepaid Insurance — No. 130

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 4		J1	600		**600**

Equipment — No. 157

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1	5,000		**5,000**

Notes Payable — No. 200

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1		5,000	**5,000**

Accounts Payable — No. 201

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 5		J1		2,500	**2,500**

Unearned Service Revenue — No. 209

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 2		J1		1,200	**1,200**

Share Capital—Ordinary — No. 311

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1		10,000	**10,000**

Dividends — No. 332

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 20		J1	500		**500**

Service Revenue — No. 400

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31		J1		10,000	**10,000**

Salaries and Wages Expense — No. 726

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 26		J1	4,000		**4,000**

Rent Expense — No. 729

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 3		J1	900		**900**

Illustration 2-31
General ledger

The Trial Balance

Learning Objective 7

Prepare a trial balance and explain its purposes.

A **trial balance** is a list of accounts and their balances at a given time. Customarily, companies prepare a trial balance at the end of an accounting period. They list accounts in the order in which they appear in the ledger. Debit balances appear in the left column and credit balances in the right column.

The trial balance proves the mathematical equality of debits and credits after posting. Under the double-entry system, this equality occurs when the sum of the debit account balances equals the sum of the credit account balances. **A trial balance may also uncover errors in journalizing and posting.** For example, a trial balance may well have detected the error at Fidelity Investments discussed in the Feature Story. **In addition, a trial balance is useful in the preparation of financial statements**, as we will explain in the next two chapters.

The steps for preparing a trial balance are:

1. List the account titles and their balances.
2. Total the debit and credit columns.
3. Prove the equality of the two columns.

Illustration 2-32 shows the trial balance prepared from Yazici Advertising's ledger. Note that the total debits (₺28,700) equal the total credits (₺28,700).

Illustration 2-32
A trial balance

YAZICI ADVERTISING A.Ş.
Trial Balance
October 31, 2017

	Debit	Credit
Cash	₺ 15,200	
Supplies	2,500	
Prepaid Insurance	600	
Equipment	5,000	
Notes Payable		₺ 5,000
Accounts Payable		2,500
Unearned Service Revenue		1,200
Share Capital—Ordinary		10,000
Dividends	500	
Service Revenue		10,000
Salaries and Wages Expense	4,000	
Rent Expense	900	
	₺28,700	**₺28,700**

• **HELPFUL HINT**
To sum a column of figures is sometimes referred to as to *foot* the column. The column is then said to be *footed*.

A trial balance is a necessary checkpoint for uncovering certain types of errors. For example, if only the debit portion of a journal entry has been posted, the trial balance would bring this error to light.

• **HELPFUL HINT**
A trial balance is so named because it is a test to see if the sum of the debit balances equals the sum of the credit balances.

Limitations of a Trial Balance

A trial balance does not guarantee freedom from recording errors, however. Numerous errors may exist even though the totals of the trial balance columns agree. For example, the trial balance may balance even when (1) a transaction is not journalized, (2) a correct journal entry is not posted, (3) a journal entry is posted twice, (4) incorrect accounts are used in journalizing or posting, or (5) offsetting errors are made in recording the amount of a transaction. As long as equal debits and credits are posted, even to the wrong account or in the wrong amount, the total debits will equal the total credits. **The trial balance does not prove that the company has recorded all transactions or that the ledger is correct.**

Ethics Note

An *error* is the result of an unintentional mistake; it is neither ethical nor unethical. An *irregularity* is an intentional misstatement, which is viewed as unethical.

Locating Errors

Errors in a trial balance generally result from mathematical mistakes, incorrect postings, or simply transcribing data incorrectly. What do you do if you are faced with a trial balance that does not balance? First, determine the amount of the difference between the two columns of the trial balance. After this amount is known, the following steps are often helpful:

1. If the error is $1, $10, $100, or $1,000, re-add the trial balance columns and recompute the account balances.
2. If the error is divisible by 2, scan the trial balance to see whether a balance equal to half the error has been entered in the wrong column.
3. If the error is divisible by 9, retrace the account balances on the trial balance to see whether they are incorrectly copied from the ledger. For example, if a balance was $12 and it was listed as $21, a $9 error has been made. Reversing the order of numbers is called a **transposition error**.

4. If the error is not divisible by 2 or 9, scan the ledger to see whether an account balance in the amount of the error has been omitted from the trial balance, and scan the journal to see whether a posting of that amount has been omitted.

Currency Signs and Underlining

Note that currency signs do not appear in journals or ledgers. Currency signs are typically used only in the trial balance and the financial statements. Generally, a currency sign is shown only for the first item in the column and for the total of that column. A single line (a totaling rule) is placed under the column of figures to be added or subtracted. Total amounts are double-underlined to indicate they are final sums. Negative signs or parentheses do not appear in journals or ledgers.

Investor Insight **Why Accuracy Matters** — Hypo Real Estate Holding (DEU)

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Recently, the German Finance minister, Wolfgang Schauble, said that "statistical and communication problems" were to blame for a €55.5 billion error in the accounts of nationalized property lender Hypo Real Estate Holding (DEU). Mr. Schauble referred to the error as "an annoying mistake." This seems to be a considerable understatement considering that the error represented 2.6% of the German gross domestic product. Since the bank had been previously taken over by the German government, the error had resulted in an overstatement of the federal debt of €55.5 billion.

Q In order for this company to prepare and issue financial statements, its accounting equation (debits and credits) must have been in balance at year-end. How could this error have occurred? (See page 97.)

> DO IT!

Trial Balance

The following accounts come from the ledger of SnowGo Company Ltd. at December 31, 2017 (Japanese yen in thousands).

157	Equipment	¥88,000	311	Share Capital—Ordinary	¥20,000
332	Dividends	8,000	212	Salaries and Wages Payable	2,000
201	Accounts Payable	22,000	200	Notes Payable	19,000
726	Salaries and Wages Expense	42,000	732	Utilities Expense	3,000
112	Accounts Receivable	4,000	130	Prepaid Insurance	6,000
400	Service Revenue	95,000	101	Cash	7,000

Prepare a trial balance in good form.

Action Plan

✔ Determine normal balances and list accounts in the order they appear in the ledger.

✔ Accounts with debit balances appear in the left column, and those with credit balances in the right column.

✔ Total the debit and credit columns to prove equality.

Solution

SNOWGO COMPANY LTD.
Trial Balance
December 31, 2017
(in thousands)

	Debit	Credit
Cash	¥ 7,000	
Accounts Receivable	4,000	
Prepaid Insurance	6,000	
Equipment	88,000	
Notes Payable		¥ 19,000
Accounts Payable		22,000
Salaries and Wages Payable		2,000
Share Capital—Ordinary		20,000
Dividends	8,000	
Service Revenue		95,000
Utilities Expense	3,000	
Salaries and Wages Expense	42,000	
	¥158,000	¥158,000

Related exercise material: **BE2-9, BE2-10, E2-9, E2-10, E2-11, E2-13, E2-14, and DO IT! 2-4.**

✔ The Navigator

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Explain what an account is and how it helps in the recording process.** An account is a record of increases and decreases in specific asset, liability, or equity items.

2 **Define debits and credits and explain their use in recording business transactions.** The terms debit and credit are synonymous with left and right. Assets, dividends, and expenses are increased by debits and decreased by credits. Liabilities, share capital—ordinary, retained earnings, and revenues are increased by credits and decreased by debits.

3 **Identify the basic steps in the recording process.** The basic steps in the recording process are (a) analyze each transaction for its effects on the accounts, (b) enter the transaction information in a journal, and (c) transfer the journal information to the appropriate accounts in the ledger.

4 **Explain what a journal is and how it helps in the recording process.** The initial accounting record of a transaction is entered in a journal before the data are entered in the accounts. A journal (a) discloses in one place the complete effects of a transaction, (b) provides a chronological record of transactions, and (c) prevents or locates errors because the debit and credit amounts for each entry can be easily compared.

5 **Explain what a ledger is and how it helps in the recording process.** The ledger is the entire group of accounts maintained by a company. The ledger keeps in one place all the information about changes in specific account balances.

6 **Explain what posting is and how it helps in the recording process.** Posting is the transfer of journal entries to the ledger accounts. This phase of the recording process accumulates the effects of journalized transactions in the individual accounts.

7 **Prepare a trial balance and explain its purposes.** A trial balance is a list of accounts and their balances at a given time. Its primary purpose is to prove the equality of debits and credits after posting. A trial balance also uncovers errors in journalizing and posting and is useful in preparing financial statements.

GLOSSARY REVIEW

Account A record of increases and decreases in specific asset, liability, or equity items. (p. 54).

Chart of accounts A list of accounts and the account numbers that identify their location in the ledger. (p. 64).

Compound entry A journal entry that involves three or more accounts. (p. 61).

Credit The right side of an account. (p. 54).

Debit The left side of an account. (p. 54).

Dividend A distribution by a company to its shareholders on a pro rata (equal) basis. (p. 56).

Double-entry system A system that records in appropriate accounts the dual effect of each transaction. (p. 55).

General journal The most basic form of journal. (p. 60).

General ledger A ledger that contains all asset, liability, and equity accounts. (p. 62).

Journal An accounting record in which transactions are initially recorded in chronological order. (p. 60).

Journalizing The entering of transaction data in the journal. (p. 60).

Ledger The entire group of accounts maintained by a company. (p. 62).

Normal balance An account balance on the side where an increase in the account is recorded. (p. 55).

Posting The procedure of transferring journal entries to the ledger accounts. (p. 63).

Retained earnings Net income that is kept (retained) in the business. (p. 56).

Simple entry A journal entry that involves only two accounts. (p. 61).

T-account The basic form of an account. (p. 54).

Three-column form of account A form with columns for debit, credit, and balance amounts in an account. (p. 62).

Trial balance A list of accounts and their balances at a given time. (p. 72).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Which of the following statements about an account is **true**?
(a) The right side of an account is the debit or increase side.
(b) An account is an individual accounting record of increases and decreases in specific asset, liability, and equity items.
(c) There are separate accounts for specific assets and liabilities but only one account for equity items.
(d) The left side of an account is the credit or decrease side.

(LO 2) **2.** Debits:
(a) increase both assets and liabilities.
(b) decrease both assets and liabilities.
(c) increase assets and decrease liabilities.
(d) decrease assets and increase liabilities.

(LO 2) **3.** A revenue account:
(a) is increased by debits.
(b) is decreased by credits.
(c) has a normal balance of a debit.
(d) is increased by credits.

(LO 2) **4.** Accounts that normally have debit balances are:
(a) assets, expenses, and revenues.
(b) assets, expenses, and share capital—ordinary.
(c) assets, liabilities, and dividends.
(d) assets, dividends, and expenses.

(LO 2) **5.** The expanded accounting equation is:
(a) Assets + Liabilities = Share Capital + Retained Earnings + Dividends + Revenues + Expenses.
(b) Assets = Liabilities + Share Capital + Retained Earnings + Dividends + Revenues − Expenses.
(c) Assets = Liabilities − Share Capital − Retained Earnings − Dividends − Revenues − Expenses.
(d) Assets = Liabilities + Share Capital + Retained Earnings + Revenues − Expenses − Dividends.

(LO 3) **6.** Which of the following is **not** part of the recording process?
(a) Analyzing transactions.
(b) Preparing a trial balance.
(c) Entering transactions in a journal.
(d) Posting transactions.

7. Which of the following statements about a journal is **false**? (LO 4)
(a) It is not a book of original entry.
(b) It provides a chronological record of transactions.
(c) It helps to locate errors because the debit and credit amounts for each entry can be readily compared.
(d) It discloses in one place the complete effect of a transaction.

8. The purchase of supplies on account should result in: (LO 4)
(a) a debit to Supplies Expense and a credit to Cash.
(b) a debit to Supplies Expense and a credit to Supplies.
(c) a debit to Supplies and a credit to Accounts Payable.
(d) a debit to Supplies and a credit to Accounts Receivable.

9. A ledger: (LO 5)
(a) contains only asset and liability accounts.
(b) should show accounts in alphabetical order.
(c) is a collection of the entire group of accounts maintained by a company.
(d) is a book of original entry.

10. Posting: (LO 6)
(a) normally occurs before journalizing.
(b) transfers ledger transaction data to the journal.
(c) is an optional step in the recording process.
(d) transfers journal entries to ledger accounts.

11. Before posting a payment of €5,000, the Accounts Payable of Senator Company had a normal balance of €16,000. The balance after posting this transaction was: (LO 6)
(a) €21,000.
(b) €5,000.
(c) €11,000.
(d) Cannot be determined.

(LO 7) **12.** A trial balance:

(a) is a list of accounts with their balances at a given time.
(b) proves the mathematical accuracy of journalized transactions.
(c) will not balance if a correct journal entry is posted twice.
(d) proves that all transactions have been recorded.

(LO 7) **13.** A trial balance will not balance if:

(a) a correct journal entry is posted twice.
(b) the purchase of supplies on account is debited to Supplies and credited to Cash.
(c) a £100 cash dividend is debited to Dividends for £1,000 and credited to Cash for £100.
(d) a £450 payment on account is debited to Accounts Payable for £45 and credited to Cash for £45.

14. The trial balance of Clooney Ltd. had accounts with the following normal balances: Cash £5,000, Service Revenue £85,000, Salaries and Wages Payable £4,000, Salaries and Wages Expense £40,000, Rent Expense £10,000, Share Capital—Ordinary £42,000, Dividends £15,000, and Equipment £61,000. In preparing a trial balance, the total in the debit column is: (LO 7)

(a) £131,000.
(b) £216,000.
(c) £91,000.
(d) £116,000.

Solutions

1. (b) An account is an individual accounting record of increases and decreases in specific asset, liability, and equity items. The other choices are incorrect because (a) the right side of the account is the credit side, not the debit side, and can be the increase or the decrease side, depending on the specific classification account; (c) there are also separate accounts for different equity items; and (d) the left side of the account is the debit side, not the credit side, and can be either the decrease or the increase side, depending on the specific classification account.

2. (c) Debits increase assets but they decrease liabilities. The other choices are incorrect because debits (a) decrease, not increase, liabilities; (b) increase, not decrease, assets; and (d) increase, not decrease, assets and decrease, not increase, liabilities.

3. (d) A revenue account is increased by credits. The other choices are incorrect because a revenue account (a) is increased by credits, not debits; (b) is decreased by debits, not credits; and (c) has a normal balance of a credit, not a debit.

4. (d) Assets, dividends, and expenses all have normal debit balances. The other choices are incorrect because (a) revenues have normal credit balances, (b) share capital—ordinary has a normal credit balance, and (c) liabilities have normal credit balances.

5. (d) The expanded accounting equation is Assets = Liabilities + Share Capital + Retained Earnings + Revenues − Expenses − Dividends. The other choices are therefore incorrect.

6. (b) Preparing the trial balance is not part of the recording process. Choices (a) analyzing transactions, (c) entering transactions in a journal, and (d) posting transactions are all part of the recording process.

7. (a) The journal is a book of original entry. The other choices are true statements.

8. (c) The purchase of supplies on account results in a debit to Supplies and a credit to Accounts Payable. The other choices are incorrect because the purchase of supplies on account results in (a) a debit to Supplies, not Supplies Expense, and a credit to Accounts Payable, not Cash; (b) a debit to Supplies, not Supplies Expense; and (d) a credit to Accounts Payable, not Accounts Receivable.

9. (c) A ledger is a collection of all the accounts maintained by a company. The other choices are incorrect because a ledger (a) contains all account types—assets, liabilities, equity, revenue, and expense accounts–not just asset and liability accounts; (b) usually shows accounts in account number order, not alphabetical order; and (d) is not a book of original entry because entries made in the ledger come from the journals (the books of original entry).

10. (d) Posting transfers journal entries to ledger accounts. The other choices are incorrect because posting (a) occurs after journalizing, (b) transfers journal transaction data to the ledger; and (c) is not an optional step in the recording process.

11. (c) The balance is €11,000 (€16,000 normal balance − €5,000 payment), not (a) €21,000, (b) €5,000, or (d) cannot be determined.

12. (a) A trial balance is a list of accounts with their balances at a given time. The other choices are incorrect because (b) the trial balance does not prove that journalized transactions are correct; (c) if a journal entry is posted twice, the trial balance will still balance; and (d) the trial balance does not prove that all transactions have been recorded.

13. (c) The trial balance will not balance in this case because the debit of £1,000 to Dividends is not equal to the credit of £100 to Cash. The other choices are incorrect because (a) if a correct journal entry is posted twice, the trial balance will still balance; (b) if the purchase of supplies on account is debited to Supplies and credited to Cash, Cash and Accounts Payable will be understated but the trial balance will still balance; and (d) since the debit and credit amounts are the same, the trial balance will still balance but both Accounts Payable and Cash will be overstated.

14. (a) The total debit column = £5,000 (Cash) + £40,000 (Salaries and Wages Expense) + £10,000 (Rent Expense) + £15,000 (Dividends) + £61,000 (Equipment) = £131,000, not (b) £216,000, (c) £91,000, or (d) £116,000.

PRACTICE EXERCISES

Analyze transactions and determine their effect on accounts.
(LO 4)

1. Presented below is information related to Conan Real Estate Agency plc.

Oct.	1	Arnold Conan begins business as a real estate agent with a cash investment of £18,000 in exchange for shares.
	2	Hires an administrative assistant.
	3	Purchases office equipment for £1,700, on account.
	6	Sells a house and lot for B. Clinton; bills B. Clinton £4,200 for realty services performed.
	27	Pays £900 on the balance related to the transaction of October 3.
	30	Pays the administrative assistant £2,800 in salary for October.

Instructions

Journalize the transactions. (You may omit explanations.)

Solution

1.

GENERAL JOURNAL J1

Date	Account Titles and Explanation	Ref.	Debit	Credit
Oct. 1	Cash		18,000	
	Share Capital—Ordinary			18,000
2	No entry required			
3	Equipment		1,700	
	Accounts Payable			1,700
6	Accounts Receivable		4,200	
	Service Revenue			4,200
27	Accounts Payable		900	
	Cash			900
30	Salaries and Wages Expense		2,800	
	Cash			2,800

Journalize transactions from account data and prepare a trial balance.
(LO 4, 7)

2. The T-accounts below summarize the ledger of Garfunkle Landscaping Company at the end of the first month of operations.

Cash No. 101

4/1	18,000	4/15	700
4/12	800	4/25	1,400
4/29	700		
4/30	1,200		

Accounts Receivable No. 112

4/7	3,800	4/29	700

Supplies No. 126

4/4	1,900		

Accounts Payable No. 201

4/25	1,400	4/4	1,900

Unearned Service Revenue No. 209

		4/30	1,200

Share Capital—Ordinary No. 311

		4/1	18,000

Service Revenue No. 400

		4/7	3,800
		4/12	800

Salaries and Wages Expense No. 726

4/15	700		

Instructions

(a) Prepare the complete general journal (including explanations) from which the postings to Cash were made.

(b) Prepare a trial balance at April 30, 2017.

Solution

2. (a)

GENERAL JOURNAL

Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 1	Cash		18,000	
	Share Capital—Ordinary			18,000
	(Issued shares for cash)			
12	Cash		800	
	Service Revenue			800
	(Received cash for services performed)			
15	Salaries and Wages Expense		700	
	Cash			700
	(Paid salaries to date)			
25	Accounts Payable		1,400	
	Cash			1,400
	(Paid creditors on account)			
29	Cash		700	
	Accounts Receivable			700
	(Received cash in payment of account)			
30	Cash		1,200	
	Unearned Service Revenue			1,200
	(Received cash for future services)			

(b)

GARFUNKLE LANDSCAPING COMPANY
Trial Balance
April 30, 2017

	Debit	Credit
Cash	$18,600	
Accounts Receivable	3,100	
Supplies	1,900	
Accounts Payable		$ 500
Unearned Service Revenue		1,200
Share Capital—Ordinary		18,000
Service Revenue		4,600
Salaries and Wages Expense	700	
	$24,300	$24,300

PRACTICE PROBLEM

Journalize transactions, post, and prepare a trial balance.

(LO 4, 5, 6, 7)

A group of student investors in Hong Kong opened Campus Laundromat Ltd. on September 1, 2017. During the first month of operations, the following transactions occurred.

Sept. 1 Shareholders invested HK$200,000 cash in the business in exchange for ordinary shares.
2 Paid HK$10,000 cash for store rent for the month of September.
3 Purchased washers and dryers for HK$250,000, paying HK$100,000 in cash and signing a HK$150,000, 6-month, 12% note payable.
4 Paid HK$12,000 for a one-year accident insurance policy.
10 Received a bill from the *Daily News* for advertising the opening of the laundromat HK$2,000.
20 Declared and paid a cash dividend to shareholders HK$7,000.
30 Determined that cash receipts for laundry fees for the month were HK$62,000.

The chart of accounts for the company is the same as for Yazici Advertising A.Ş. (Illustration 2-19 on page 64) except for the following: No. 610 Advertising Expense.

Instructions

(a) Journalize the September transactions. (Use J1 for the journal page number.)

(b) Open ledger accounts and post the September transactions.

(c) Prepare a trial balance at September 30, 2017.

Solution

(a) **GENERAL JOURNAL** **J1**

Date	Account Titles and Explanation	Ref.	Debit	Credit
2017				
Sept. 1	Cash	101	200,000	
	Share Capital—Ordinary	311		200,000
	(Shareholders' investment of cash in business)			
2	Rent Expense	729	10,000	
	Cash	101		10,000
	(Paid September rent)			
3	Equipment	157	250,000	
	Cash	101		100,000
	Notes Payable	200		150,000
	(Purchased laundry equipment for cash and 6-month, 12% note payable)			
4	Prepaid Insurance	130	12,000	
	Cash	101		12,000
	(Paid one-year insurance policy)			
10	Advertising Expense	610	2,000	
	Accounts Payable	201		2,000
	(Received bill from *Daily News* for advertising)			
20	Dividends	332	7,000	
	Cash	101		7,000
	(Declared and paid a cash dividend)			
30	Cash	101	62,000	
	Service Revenue	400		62,000
	(Received cash for services performed)			

(b) **GENERAL LEDGER**

Cash **No. 101**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 1		J1	200,000		200,000
2		J1		10,000	190,000
3		J1		100,000	90,000
4		J1		12,000	78,000
20		J1		7,000	71,000
30		J1	62,000		133,000

Prepaid Insurance **No. 130**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 4		J1	12,000		12,000

Equipment **No. 157**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 3		J1	250,000		250,000

Notes Payable **No. 200**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 3		J1		150,000	150,000

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 10		J1		2,000	2,000

Share Capital—Ordinary **No. 311**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 1		J1		200,000	200,000

Service Revenue **No. 400**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 30		J1		62,000	62,000

Dividends **No. 332**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 20		J1	7,000		7,000

Advertising Expense **No. 610**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 10		J1	2,000		2,000

Rent Expense **No. 729**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Sept. 2		J1	10,000		10,000

(c)

CAMPUS LAUNDROMAT LTD.
Trial Balance
September 30, 2017

	Debit	Credit
Cash	HK$133,000	
Prepaid Insurance	12,000	
Equipment	250,000	
Notes Payable		HK$150,000
Accounts Payable		2,000
Share Capital—Ordinary		200,000
Dividends	7,000	
Service Revenue		62,000
Advertising Expense	2,000	
Rent Expense	10,000	
	HK$414,000	HK$414,000

WileyPLUS Brief Exercises, DO IT! Review, Exercises, and Problems, and many additional resources are available for practice in WileyPLUS.

QUESTIONS

1. Describe the parts of a T-account.
2. "The terms *debit* and *credit* mean increase and decrease, respectively." Do you agree? Explain.
3. Jason Hilbert, a fellow student, contends that the double-entry system means each transaction must be recorded twice. Is Jason correct? Explain.
4. Sandra Browne, a beginning accounting student, believes debit balances are favorable and credit balances are unfavorable. Is Sandra correct? Discuss.
5. State the rules of debit and credit as applied to (a) asset accounts, (b) liability accounts, and (c) equity accounts (revenue, expenses, dividends, share capital—ordinary, and retained earnings).
6. What is the normal balance for each of the following accounts? (a) Accounts Receivable. (b) Cash. (c) Dividends. (d) Accounts Payable. (e) Service Revenue. (f) Salaries and Wages Expense. (g) Share Capital—Ordinary.
7. Indicate whether each of the following accounts is an asset, a liability, or an equity account and whether it has a normal debit or credit balance: (a) Accounts Receivable, (b) Accounts Payable, (c) Equipment, (d) Dividends, (e) Supplies.
8. For the following transactions, indicate the account debited and the account credited.
   (a) Supplies are purchased on account.
   (b) Cash is received on signing a note payable.
   (c) Employees are paid salaries in cash.
9. Indicate whether the following accounts generally will have (a) debit entries only, (b) credit entries only, or (c) both debit and credit entries.
   (1) Cash.
   (2) Accounts Receivable.
   (3) Dividends.
   (4) Accounts Payable.
   (5) Salaries and Wages Expense.
   (6) Service Revenue.
10. What are the basic steps in the recording process?
11. What are the advantages of using a journal in the recording process?
12. (a) When entering a transaction in the journal, should the debit or credit be written first?
    (b) Which should be indented, the debit or credit?
13. Describe a compound entry, and provide an example.
14. (a) Should business transaction debits and credits be recorded directly in the ledger accounts?
    (b) What are the advantages of first recording transactions in the journal and then posting to the ledger?
15. The account number is entered as the last step in posting the amounts from the journal to the ledger. What is the advantage of this step?
16. Journalize the following business transactions.
    (a) Alberto Rivera invests R$9,000 cash in the business in exchange for ordinary shares.
    (b) Insurance of R$800 is paid for the year.

(c) Supplies of R$2,000 are purchased on account.
(d) Cash of R$7,500 is received for services performed.

17. (a) What is a ledger?
(b) What is a chart of accounts and why is it important?

18. What is a trial balance and what are its purposes?

19. Joe Kirby is confused about how accounting information flows through the accounting system. He believes the flow of information is as follows.
(a) Debits and credits posted to the ledger.
(b) Business transaction occurs.
(c) Information entered in the journal.
(d) Financial statements are prepared.
(e) Trial balance is prepared.

Is Joe correct? If not, indicate to Joe the proper flow of the information.

20. Two students are discussing the use of a trial balance. They wonder whether the following errors, each considered separately, would prevent the trial balance from balancing. What would you tell them?
(a) The bookkeeper debited Cash for €600 and credited Salaries and Wages Expense for €600 for payment of wages.
(b) Cash collected on account was debited to Cash for €900 and Service Revenue was credited for €90.

21. What are the normal balances for TSMC's Cash, Accounts Payable, and Interest Expense accounts?

BRIEF EXERCISES

Indicate debit and credit effects and normal balance.
(LO 2)

BE2-1 For each of the following accounts, indicate the effects of (a) a debit and (b) a credit on the accounts and (c) the normal balance of the account.

1. Accounts Payable.
2. Advertising Expense.
3. Service Revenue.
4. Accounts Receivable.
5. Share Capital—Ordinary.
6. Dividends.

Identify accounts to be debited and credited.
(LO 2)

BE2-2 Transactions for the Kaustav Sen Company ASA, which performs welding services, for the month of June are presented below. Identify the accounts to be debited and credited for each transaction.

June	1	Kaustav Sen invests €4,000 cash in exchange for ordinary shares in a small welding business.
	2	Purchases equipment on account for €900.
	3	€800 cash is paid to landlord for June rent.
	12	Sent an invoice to L. Nigh €300 for welding work performed on account.

Journalize transactions.
(LO 4)

BE2-3 Using the data in BE2-2, journalize the transactions. (You may omit explanations.)

Identify and explain steps in recording process.
(LO 3)

BE2-4 Tim Weber, a fellow student, is unclear about the basic steps in the recording process. Identify and briefly explain the steps in the order in which they occur.

Indicate basic and debit-credit analysis.
(LO 2)

BE2-5 J.A. Motzek SA has the following transactions during August of the current year. Indicate (a) the effect on the accounting equation and (b) the debit-credit analysis illustrated on pages 65–70.

Aug.	1	Opens an office as a financial advisor, investing R$5,000 in cash in exchange for ordinary shares.
	4	Pays insurance in advance for 6 months, R$1,800 cash.
	16	Receives R$1,100 from clients for services performed.
	27	Pays secretary R$1,000 salary.

Journalize transactions.
(LO 4)

BE2-6 Using the data in BE2-5, journalize the transactions. (You may omit explanations.)

Post journal entries to T-accounts.
(LO 6)

BE2-7 Selected transactions for the Gilles Ltd. are presented in journal form on the next page. Post the transactions to T-accounts. Make one T-account for each item and determine each account's ending balance.

J1

Date	Account Titles and Explanation	Ref.	Debit	Credit
May 5	Accounts Receivable		5,000	
	Service Revenue			5,000
	(Billed for services performed)			
12	Cash		2,100	
	Accounts Receivable			2,100
	(Received cash in payment of account)			
15	Cash		3,000	
	Service Revenue			3,000
	(Received cash for services performed)			

BE2-8 Selected journal entries for the Gilles Ltd. are presented in BE2-7. Post the transactions using the standard form of account.

Post journal entries to standard form of account.
(LO 6)

BE2-9 From the ledger balances given below, prepare a trial balance for the Starr SE at June 30, 2017. List the accounts in the order shown on page 73. All account balances are normal.

Prepare a trial balance.
(LO 7)

Accounts Payable €8,600, Cash €6,800, Share Capital—Ordinary €20,000, Dividends €800, Equipment €17,000, Service Revenue €6,000, Accounts Receivable €3,000, Salaries and Wages Expense €6,000, and Rent Expense €1,000.

BE2-10 An inexperienced bookkeeper prepared the following trial balance. Prepare a correct trial balance, assuming all account balances are normal.

Prepare a correct trial balance.
(LO 7)

CHENG COMPANY LTD.
Trial Balance
December 31, 2017

	Debit	Credit
Cash	£16,800	
Prepaid Insurance		£ 3,500
Accounts Payable		3,000
Unearned Service Revenue	4,200	
Share Capital—Ordinary		13,000
Dividends		4,500
Service Revenue		25,600
Salaries and Wages Expense	18,600	
Rent Expense		2,400
	£39,600	£52,000

> DO IT! REVIEW

DO IT! 2-1 Graham Kahl has just rented space in a strip mall. In this space, he will open a photography studio, to be called "Picture This!" A friend has advised Graham to set up a double-entry set of accounting records in which to record all of his business transactions.

Identify normal balances.
(LO 2)

Identify the statement of financial position accounts that Graham will likely need to record the transactions needed to open his business (a corporation). Indicate whether the normal balance of each account is a debit or credit.

DO IT! 2-2 Graham Kahl engaged in the following activities in establishing his photography studio, Picture This!:

Record business activities.
(LO 4)

1. Opened a bank account in the name of Picture This! and deposited £8,000 of his own money into this account in exchange for ordinary shares.

2. Purchased photography supplies at a total cost of £1,600. The business paid £400 in cash and the balance is on account.
3. Obtained estimates on the cost of photography equipment from three different manufacturers.

In what form (type of record) should Graham record these three activities? Prepare the entries to record the transactions.

Post transactions. (LO 6)

DO IT! 2-3 Graham Kahl recorded the following transactions during the month of April.

April 3	Cash	3,100	
	Service Revenue		3,100
16	Rent Expense	600	
	Cash		600
20	Salaries and Wages Expense	500	
	Cash		500

Post these entries to the Cash T-account of the general ledger to determine the ending balance in cash. The beginning balance in cash on April 1 was £1,600.

Prepare a trial balance. (LO 7)

DO IT! 2-4 The following accounts are taken from the ledger of Chillin' Company SA at December 31, 2017.

200	Notes Payable	R$20,000	101	Cash	R$6,000
311	Share Capital—Ordinary	25,000	126	Supplies	5,000
157	Equipment	76,000	729	Rent Expense	2,000
332	Dividends	8,000	212	Salaries and Wages Payable	3,000
726	Salaries and Wages Expense	38,000	201	Accounts Payable	9,000
400	Service Revenue	86,000	112	Accounts Receivable	8,000

Prepare a trial balance in good form.

EXERCISES

Analyze statements about accounting and the recording process. (LO 1)

E2-1 Larry Burns has prepared the following list of statements about accounts.

1. An account is an accounting record of either a specific asset or a specific liability.
2. An account shows only increases, not decreases, in the item it relates to.
3. Some items, such as cash and accounts receivable, are combined into one account.
4. An account has a left, or credit side, and a right, or debit side.
5. A simple form of an account, consisting of just the account title, the left side, and the right side, is called a T-account.

Instructions
Identify each statement as true or false. If false, indicate how to correct the statement.

Identify debits, credits, and normal balances. (LO 2)

E2-2 Selected transactions for B. Madar SE, an interior decorating firm, in its first month of business, are shown below.

Jan.	2	Invested €15,000 cash in the business in exchange for ordinary shares.
	3	Purchased used car for €7,000 cash for use in the business.
	9	Purchased supplies on account for €500.
	11	€1,800 of services were performed and billed.
	16	Paid €200 cash for advertising.
	20	Received €700 cash from customers billed on January 11.
	23	Paid creditor €300 cash on balance owed.
	28	Declared and paid a €1,000 cash dividend.

Instructions
For each transaction indicate the following.

(a) The basic type of account debited and credited (asset, liability, equity).
(b) The specific account debited and credited (cash, rent expense, service revenue, etc.).
(c) Whether the specific account is increased or decreased.
(d) The normal balance of the specific account.

Use the following format, in which the January 2 transaction is given as an example.

	Account Debited				Account Credited			
Date	**(a) Basic Type**	**(b) Specific Account**	**(c) Effect**	**(d) Normal Balance**	**(a) Basic Type**	**(b) Specific Account**	**(c) Effect**	**(d) Normal Balance**
Jan. 2	Asset	Cash	Increase	Debit	Equity	Share Capital	Increase	Credit

E2-3 Data for B. Madar SE, interior decorating, are presented in E2-2.

Journalize transactions. (LO 4)

Instructions
Journalize the transactions using journal page J1. (You may omit explanations.)

E2-4 Presented below is information related to Beijing Real Estate Agency Ltd.

Analyze transactions and determine their effect on accounts. (LO 2)

Oct. 1 Lynn Robbins begins business as a real estate agent with a cash investment of ¥200,000 in exchange for ordinary shares.
2 Hires an administrative assistant.
3 Purchases office furniture for ¥19,000, on account.
6 Sells a house and lot for N. Fennig; bills N. Fennig ¥32,000 for realty services performed.
27 Pays ¥8,500 on the balance related to the transaction of October 3.
30 Pays the administrative assistant ¥25,000 in salary for October.

Instructions
Prepare the debit-credit analysis for each transaction as illustrated on pages 65–70.

E2-5 Transaction data for Beijing Real Estate Agency Ltd. are presented in E2-4.

Journalize transactions. (LO 4)

Instructions
Journalize the transactions. (You may omit explanations.)

E2-6 Minsk Industries OAO had the following transactions.

Analyze transactions and journalize. (LO 2, 3, 4)

1. Borrowed руб50,000 from the bank by signing a note.
2. Paid руб25,000 cash for a computer.
3. Purchased руб4,500 of supplies on account.

Instructions
(a) Indicate what accounts are increased and decreased by each transaction.
(b) Journalize each transaction. (Omit explanations.)

E2-7 Rockford Enterprises Ltd. had the following selected transactions.

Analyze transactions and journalize. (LO 2, 3, 4)

1. Kris Rockford invested £5,500 cash in the business in exchange for ordinary shares.
2. Paid office rent of £1,100.
3. Performed consulting services worth £4,700 on account.
4. Declared and paid a £400 cash dividend.

Instructions
(a) Indicate the effect each transaction has on the accounting equation (Assets = Liabilities + Equity), using plus and minus signs.
(b) Journalize each transaction. (Omit explanations.)

E2-8 Rachel Manny has prepared the following list of statements about the general ledger.

Analyze statements about the ledger. (LO 5)

1. The general ledger contains all the asset and liability accounts, but no equity accounts.
2. The general ledger is sometimes referred to as simply the ledger.

3. The accounts in the general ledger are arranged in alphabetical order.
4. Each account in the general ledger is numbered for easier identification.
5. The general ledger is a book of original entry.

Instructions
Identify each statement as true or false. If false, indicate how to correct the statement.

Post journal entries and prepare a trial balance.
(LO 6, 7)

E2-9 Selected transactions from the journal of Roberta Mendez SLU, investment broker, are presented below.

Date	Account Titles and Explanation	Ref.	Debit	Credit
Aug. 1	Cash		5,000	
	Share Capital—Ordinary			5,000
	(Investment of cash for shares)			
10	Cash		2,700	
	Service Revenue			2,700
	(Received cash for services performed)			
12	Equipment		5,000	
	Cash			1,500
	Notes Payable			3,500
	(Purchased office equipment for cash and notes payable)			
25	Account Receivable		1,900	
	Service Revenue			1,900
	(Billed clients for services performed)			
31	Cash		850	
	Accounts Receivable			850
	(Receipt of cash on account)			

Instructions
(a) Post the transactions to T-accounts.
(b) Prepare a trial balance at August 31, 2017.

Journalize transactions from account data and prepare a trial balance.
(LO 4, 7)

E2-10 The T-accounts below summarize the ledger of Pierre Landscaping Company SA at the end of the first month of operations.

Cash — No. 101

4/1	10,000	4/15	720
4/12	900	4/25	1,500
4/29	400		
4/30	1,000		

Accounts Receivable — No. 112

4/7	3,200	4/29	400

Supplies — No. 126

4/4	1,800		

Accounts Payable — No. 201

4/25	1,500	4/4	1,800

Unearned Service Revenue — No. 209

		4/30	1,000

Share Capital—Ordinary — No. 311

		4/1	10,000

Service Revenue — No. 400

		4/7	3,200
		4/12	900

Salaries and Wages Expense — No. 726

4/15	720		

Instructions
(a) Prepare the complete general journal (including explanations) from which the postings to Cash were made.
(b) Prepare a trial balance at April 30, 2017.

Journalize transactions from account data and prepare a trial balance.

(LO 4, 7)

E2-11 Presented below is the ledger for Sparks Co. Ltd.

Cash			No. 101
10/1	5,000	10/4	400
10/10	650	10/12	1,500
10/10	3,000	10/15	280
10/20	500	10/30	300
10/25	2,000	10/31	600

Accounts Receivable			No. 112
10/6	1,100	10/20	500
10/20	940		

Supplies			No. 126
10/4	400		

Equipment			No. 157
10/3	2,000		

Notes Payable			No. 200
		10/10	3,000

Accounts Payable			No. 201
10/12	1,500	10/3	2,000

Share Capital—Ordinary			No. 311
		10/1	5,000
		10/25	2,000

Dividends			No. 332
10/30	300		

Service Revenue			No. 400
		10/6	1,100
		10/10	650
		10/20	940

Salaries and Wages Expense			No. 726
10/31	600		

Rent Expense			No. 729
10/15	280		

Instructions

(a) Reproduce the journal entries for the transactions that occurred on October 1, 10, and 20, and provide explanations for each.

(b) Determine the October 31 balance for each of the accounts above, and prepare a trial balance at October 31, 2017.

Prepare journal entries and post using standard account form.

(LO 4, 6)

E2-12 Selected transactions for Isabella Rossini Company SpA during its first month in business are presented below.

Sept. 1 Invested €10,000 cash in the business in exchange for ordinary shares.
5 Purchased equipment for €12,000 paying €4,000 in cash and the balance on account.
25 Paid €2,400 cash on balance owed for equipment.
30 Declared and paid a €500 cash dividend.

Rossini's chart of accounts shows No. 101 Cash, No. 157 Equipment, No. 201 Accounts Payable, No. 311 Share Capital—Ordinary, and No. 332 Dividends.

Instructions

(a) Journalize the transactions on page J1 of the journal. (Omit explanations.)

(b) Post the transactions using the standard account form.

Analyze errors and their effects on trial balance.

(LO 7)

E2-13 The bookkeeper for Arno Equipment Repair NV made a number of errors in journalizing and posting, as described below.

1. A credit posting of €400 to Accounts Receivable was omitted.
2. A debit posting of €750 for Prepaid Insurance was debited to Insurance Expense.
3. A collection from a customer of €100 in payment of its account owed was journalized and posted as a debit to Cash €100 and a credit to Service Revenue €100.
4. A credit posting of €300 to Property Taxes Payable was made twice.
5. A cash purchase of supplies for €250 was journalized and posted as a debit to Supplies €230 and a credit to Cash €230.
6. A debit of €495 to Advertising Expense was posted as €459.

Instructions

For each error:

(a) Indicate whether the trial balance will balance.

(b) If the trial balance will not balance, indicate the amount of the difference.

(c) Indicate the trial balance column that will have the larger total.

Consider each error separately. Use the following form, in which error (1) is given as an example.

Error	(a) In Balance	(b) Difference	(c) Larger Column
(1)	No	$400	debit

Prepare a trial balance.
(LO 2, 7)

E2-14 The accounts in the ledger of Tempus Fugit Delivery Service Ltd. contain the following balances on July 31, 2017.

Accounts Receivable	£10,642	Prepaid Insurance	£ 1,968
Accounts Payable	8,396	Maintenance and Repairs Expense	961
Cash	?	Service Revenue	10,610
Equipment	49,360	Dividends	700
Gasoline Expense	758	Share Capital—Ordinary	40,000
Utilities Expense	523	Salaries and Wages Expense	4,428
Notes Payable	26,450	Salaries and Wages Payable	815
		Retained Earnings	4,636

Instructions
Prepare a trial balance with the accounts arranged as illustrated in the chapter and fill in the missing amount for Cash.

Identify cash flow activities.
(LO 7)

E2-15 The statement of cash flows classifies each transaction as an operating activity, an investing activity, or a financing activity. Operating activities are the types of activities the company performs to generate profits. Investing activities include the purchase of long-lived assets such as equipment or the purchase of investment securities. Financing activities are borrowing money, issuing shares, and paying dividends.

Presented below are the following transactions.

1. Issued shares for €20,000 cash.
2. Issued note payable for €10,000 cash.
3. Purchased equipment for €11,000 cash.
4. Received €15,000 cash for services performed.
5. Paid €1,000 cash for rent.
6. Paid €600 cash dividend to shareholders.
7. Paid €6,500 cash for salaries.

Instructions
Classify each of these transactions as operating, investing, or financing activities.

PROBLEMS: SET A

Journalize a series of transactions.
(LO 2, 4)

P2-1A Prairie Park ASA was started on April 1 by F. L. Wright and associates. The following selected events and transactions occurred during April.

Apr.	1	Shareholders invested €50,000 cash in the business in exchange for ordinary shares.
	4	Purchased land costing €34,000 for cash.
	8	Incurred advertising expense of €1,800 on account.
	11	Paid salaries to employees €1,500.
	12	Hired park manager at a salary of €4,000 per month, effective May 1.
	13	Paid €1,500 cash for a one-year insurance policy.
	17	Declared and paid a €1,400 cash dividend.
	20	Received €6,400 in cash for admission fees.
	25	Sold 100 coupon books for €30 each. Each book contains 10 coupons that entitle the holder to one admission to the park.
	30	Received €8,500 in cash admission fees.
	30	Paid €900 on balance owed for advertising incurred on April 8.

Prairie Park uses the following accounts: Cash, Prepaid Insurance, Land, Accounts Payable, Unearned Service Revenue, Share Capital—Ordinary, Dividends, Service Revenue, Advertising Expense, and Salaries and Wages Expense.

Instructions
Journalize the April transactions.

P2-2A Lena Fohn is a licensed accountant. During the first month of operations of her business, Lena Fohn, AG, the following events and transactions occurred.

Journalize transactions, post, and prepare a trial balance.

(LO 2, 4, 6, 7)

May	1	Shareholders invested €20,000 cash in exchange for ordinary shares.
	2	Hired a secretary-receptionist at a salary of €2,000 per month.
	3	Purchased €1,500 of supplies on account from Hartig Supply Company.
	7	Paid office rent of €900 cash for the month.
	11	Completed a tax assignment and billed client €2,800 for services performed.
	12	Received €3,500 advance on a management consulting engagement.
	17	Received cash of €1,200 for services performed for Lucille Co.
	31	Paid secretary-receptionist €2,000 salary for the month.
	31	Paid 40% of balance due Hartig Supply Company.

Lena uses the following chart of accounts: No. 101 Cash, No. 112 Accounts Receivable, No. 126 Supplies, No. 201 Accounts Payable, No. 209 Unearned Service Revenue, No. 311 Share Capital—Ordinary, No. 400 Service Revenue, No. 726 Salaries and Wages Expense, and No. 729 Rent Expense.

Instructions
(a) Journalize the transactions.
(b) Post to the ledger accounts.
(c) Prepare a trial balance on May 31, 2017.

(c) Trial balance totals €28,400

P2-3A Sean Browne owns and manages a computer repair service, which had the following trial balance on December 31, 2016 (the end of its fiscal year).

Journalize and post transactions and prepare a trial balance.

(LO 2, 4, 6, 7)

BYTE REPAIR SERVICE, LTD.
Trial Balance
December 31, 2016

Cash	£ 8,000	
Accounts Receivable	16,000	
Supplies	13,000	
Prepaid Rent	3,000	
Equipment	24,000	
Accounts Payable		£19,000
Share Capital—Ordinary		33,000
Retained Earnings		12,000
	£64,000	£64,000

Summarized transactions for January 2017 were as follows.

1. Advertising costs, paid in cash, £1,000.
2. Additional supplies acquired on account £4,000.
3. Miscellaneous expenses, paid in cash, £1,100.
4. Cash collected from customers in payment of accounts receivable £13,000.
5. Cash paid to creditors for accounts payable due £15,000.
6. Repair services performed during January: for cash £5,000; on account £9,000.
7. Wages for January, paid in cash, £3,000.
8. Dividends during January were £2,000.

Instructions
(a) Open T-accounts for each of the accounts listed in the trial balance, and enter the opening balances for 2017.
(b) Prepare journal entries to record each of the January transactions. (Omit explanations.)
(c) Post the journal entries to the accounts in the ledger. (Add accounts as needed.)
(d) Prepare a trial balance as of January 31, 2017.

(d) Trial balance totals £67,000

Prepare a correct trial balance
(LO 7)

P2-4A The trial balance of the Jason Company Ltd. shown below does not balance.

JASON COMPANY LTD.
Trial Balance
May 31, 2017

	Debit	Credit
Cash	£ 3,850	
Accounts Receivable		£ 2,750
Prepaid Insurance	700	
Equipment	12,000	
Accounts Payable		4,500
Unearned Service Revenue	560	
Share Capital—Ordinary		11,700
Service Revenue	8,690	
Salaries and Wages Expense	4,200	
Advertising Expense		1,100
Utilities Expense	800	
	£30,800	£20,050

Your review of the ledger reveals that each account has a normal balance. You also discover the following errors.

1. The totals of the debit sides of Prepaid Insurance, Accounts Payable, and Utilities Expense were each understated £100.
2. Transposition errors were made in Accounts Receivable and Service Revenue. Based on postings made, the correct balances were £2,570 and £8,960, respectively.
3. A debit posting to Salaries and Wages Expense of £200 was omitted.
4. A £1,000 cash dividend was debited to Share Capital—Ordinary for £1,000 and credited to Cash for £1,000.
5. A £520 purchase of supplies on account was debited to Equipment for £520 and credited to Cash for £520.
6. A cash payment of £450 for advertising was debited to Advertising Expense for £45 and credited to Cash for £45.
7. A collection from a customer for £420 was debited to Cash for £420 and credited to Accounts Payable for £420.

Instructions

Trial balance totals £26,720

Prepare a correct trial balance. Note that the chart of accounts includes the following: Dividends and Supplies. (*Hint:* It helps to prepare the correct journal entry for the transaction described and compare it to the mistake made.)

Journalize transactions, post, and prepare a trial balance.
(LO 2, 4, 6, 7)

P2-5A The Classic Theater Ltd. opened on April 1. All facilities were completed on March 31. At this time, the ledger showed No. 101 Cash €6,000, No. 140 Land €10,000, No. 145 Buildings (concession stand, projection room, ticket booth, and screen) €8,000, No. 157 Equipment €6,000, No. 201 Accounts Payable €2,000, No. 275 Mortgage Payable €8,000, and No. 311 Share Capital—Ordinary €20,000. During April, the following events and transactions occurred.

Apr.	2	Paid film rental of €800 on first movie.
	3	Ordered two additional films at €1,000 each.
	9	Received €1,800 cash from admissions.
	10	Made €2,000 payment on mortgage and €1,000 for accounts payable due.
	11	Classic Theater contracted with D. Zarle Company to operate the concession stand. Zarle is to pay 18% of gross concession receipts (payable monthly) for the rental of the concession stand.
	12	Paid advertising expenses €300.
	20	Received one of the films ordered on April 3 and was billed €1,000. The film will be shown in April.
	25	Received €5,500 cash from admissions.
	29	Paid salaries €1,600.
	30	Received statement from D. Zarle showing gross concession receipts of €1,200 and the balance due to The Classic Theater of €216 (€1,200 × 18%) for April. Zarle paid one-half of the balance due and will remit the remainder on May 5.
	30	Prepaid €1,300 rental on special film to be run in May.

In addition to the accounts identified above, the chart of accounts shows No. 112 Accounts Receivable, No. 136 Prepaid Rent, No. 400 Service Revenue, No. 429 Rent Revenue, No. 610 Advertising Expense, No. 726 Salaries and Wages Expense, and No. 729 Rent Expense.

Instructions

(a) Enter the beginning balances in the ledger as of April 1. Insert a check mark (✓) in the reference column of the ledger for the beginning balance.
(b) Journalize the April transactions.
(c) Post the April journal entries to the ledger. Assume that all entries are posted from page 1 of the journal.
(d) Prepare a trial balance on April 30, 2017.

(d) Trial balance totals €35,516

PROBLEMS: SET B

P2-1B Surepar Disc Golf Course was opened on March 1 by Bill Arnsdorf. The following selected events and transactions occurred during March:

Journalize a series of transactions.

(LO 2, 4)

Mar. 1 Invested €60,000 cash in the business in exchange for ordinary shares.
3 Purchased Lee's Golf Land for €38,000 cash. The price consists of land €23,000, shed €9,000, and equipment €6,000. (Make one compound entry.)
5 Advertised the opening of the driving range and miniature golf course, paying advertising expenses of €1,300.
6 Paid cash €3,000 for a one-year insurance policy.
10 Purchased golf discs and other equipment for €1,050 from Parton Company payable in 30 days.
18 Received €440 in cash for golf fees recognized.
19 Sold 100 coupon books for €18 each. Each book contains 4 coupons that enable the holder to play one round of disc golf.
25 Declared and paid an €800 cash dividend.
30 Paid salaries of €250.
30 Paid Parton Company in full.
31 Received €200 cash for fees recognized.

Surepar uses the following accounts: Cash, Prepaid Insurance, Land, Buildings, Equipment, Accounts Payable, Unearned Service Revenue, Share Capital—Ordinary, Dividends, Service Revenue, Advertising Expense, and Salaries and Wages Expense.

Instructions

Journalize the March transactions.

P2-2B Judi Dench is a licensed dentist. During the first month of the operation of her business, the following events and transactions occurred.

Journalize transactions, post, and prepare a trial balance.

(LO 2, 4, 6, 7)

April 1 Shareholders invested £40,000 cash in exchange for ordinary shares.
1 Hired a secretary-receptionist at a salary of £600 per week payable monthly.
2 Paid office rent for the month £1,400.
3 Purchased dental supplies on account from Halo Company £5,200.
10 Performed dental services and billed insurance companies £6,600.
11 Received £1,000 cash advance from Rich Welk for an implant.
20 Received £2,100 cash for services performed for Phil Stueben.
30 Paid secretary-receptionist for the month £2,400.
30 Paid £1,900 to Halo Company for accounts payable due.

Judi uses the following chart of accounts: No. 101 Cash, No. 112 Accounts Receivable, No. 126 Supplies, No. 201 Accounts Payable, No. 209 Unearned Service Revenue, No. 311 Share Capital—Ordinary, No. 400 Service Revenue, No. 726 Salaries and Wages Expense, and No. 729 Rent Expense.

Instructions

(a) Journalize the transactions.
(b) Post to the ledger accounts.
(c) Prepare a trial balance on April 30, 2017.

(c) Trial balance totals £53,000

Journalize transactions, post, and prepare a trial balance.
(LO 2, 4, 6, 7)

P2-3B Richardson Services Ltd. was formed on May 1, 2017. The following transactions took place during the first month.

Transactions on May 1:

1. Shareholders invested £50,000 cash in exchange for ordinary shares.
2. Hired two employees to work in the warehouse. They will each be paid a salary of £2,800 per month.
3. Signed a 2-year rental agreement on a warehouse; paid £24,000 cash in advance for the first year.
4. Purchased furniture and equipment costing £30,000. A cash payment of £6,000 was made immediately; the remainder will be paid in 6 months.
5. Paid £1,800 cash for a one-year insurance policy on the furniture and equipment.

Transactions during the remainder of the month:

6. Purchased basic office supplies for £940 cash.
7. Purchased more office supplies for £1,300 on account.
8. Total revenues recognized were £18,000—£5,000 cash and £13,000 on account.
9. Paid £400 to suppliers for accounts payable due.
10. Received £3,000 from customers in payment of accounts receivable.
11. Received utility bills in the amount of £260, to be paid next month.
12. Paid the monthly salaries of the two employees, totalling £5,600.

Instructions

(a) Prepare journal entries to record each of the events listed. (Omit explanations.)
(b) Post the journal entries to T-accounts.
(c) Prepare a trial balance as of May 31, 2017.

(c) Trial balance totals £93,160

Prepare a correct trial balance.
(LO 7)

P2-4B The trial balance of Mueller SE shown below does not balance.

MUELLER SE
Trial Balance
June 30, 2017

	Debit	Credit
Cash		€ 3,840
Accounts Receivable	€ 2,898	
Supplies	800	
Equipment	3,000	
Accounts Payable		2,666
Unearned Service Revenue	2,200	
Share Capital—Ordinary		9,000
Dividends	800	
Service Revenue		2,380
Salaries and Wages Expense	3,400	
Utilities Expense	910	
	€14,008	€17,886

Each of the listed accounts has a normal balance per the general ledger. An examination of the ledger and journal reveals the following errors.

1. Cash received from a customer in payment of its account was debited for €570, and Accounts Receivable was credited for the same amount. The actual collection was for €750.
2. The purchase of a computer on account for €620 was recorded as a debit to Supplies for €620 and a credit to Accounts Payable for €620.
3. Services were performed on account for a client for €890. Accounts Receivable was debited for €890, and Service Revenue was credited for €89.
4. A debit posting to Salaries and Wages Expense of €700 was omitted.
5. A payment of a balance due for €309 was credited to Cash for €309 and credited to Accounts Payable for €390.
6. The payment of a €600 cash dividend was debited to Salaries and Wages Expense for €600 and credited to Cash for €600.

Instructions

Prepare a correct trial balance. (*Hint:* It helps to prepare the correct journal entry for the transaction described and compare it to the mistake made.)

Trial balance totals €16,348

P2-5B The Wilson Theater Ltd., owned by Tegan Wilson, will begin operations in March. The Wilson will be unique in that it will show only triple features of sequential theme movies. As of March 1, the ledger of Wilson showed No. 101 Cash £7,000, No. 140 Land £22,000, No. 145 Buildings (concession stand, projection room, ticket booth, and screen) £10,000, No. 157 Equipment £8,000, No. 201 Accounts Payable £7,000, and No. 311 Share Capital—Ordinary £40,000. During the month of March, the following events and transactions occurred.

Journalize transactions, post, and prepare a trial balance.

(LO 2, 4, 6, 7)

Mar. 2 Rented the three *Indiana Jones* movies to be shown for the first 3 weeks of March. The film rental was £3,500; £1,000 was paid in cash and £2,500 will be paid on March 10.
3 Ordered the *Lord of the Rings* movies to be shown the last 10 days of March. It will cost £240 per night.
9 Received £4,000 cash from admissions.
10 Paid balance due on *Indiana Jones* movies rental and £1,600 on March 1 accounts payable.
11 Wilson Theater contracted with M. Brewer to operate the concession stand. Brewer is to pay 15% of gross concession receipts (payable monthly) for the right to operate the concession stand.
12 Paid advertising expenses £450.
20 Received £4,400 cash from customers for admissions.
20 Received the *Lord of Rings* movies and paid the rental fee of £2,400.
31 Paid salaries of £2,500.
31 Received statement from M. Brewer showing gross receipts from concessions of £3,000 and the balance due to Wilson Theater of £450 (£3,000 × 15%) for March. Brewer paid one-half the balance due and will remit the remainder on April 5.
31 Received £9,000 cash from customers for admissions.

In addition to the accounts identified above, the chart of accounts includes No. 112 Accounts Receivable, No. 400 Service Revenue, No. 429 Rent Revenue, No. 610 Advertising Expense, No. 729 Rent Expense, and No. 726 Salaries and Wages Expense.

Instructions

(a) Enter the beginning balances in the ledger. Insert a check mark (✓) in the reference column of the ledger for the beginning balance.
(b) Journalize the March transactions.
(c) Post the March journal entries to the ledger. Assume that all entries are posted from page 1 of the journal.
(d) Prepare a trial balance on March 31, 2017.

(d) Trial balance totals £63,250

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapter 1.)

MC2 After researching the different forms of business organization, Mei-ling Lee decides to operate "Matcha Creations" as a corporation. She then starts the process of getting the business running. In November 2017, the following activities take place.

Nov. 8 Mei-ling sells her investments for NT$520, which she deposits in her personal bank account.
8 She opens a bank account under the name "Matcha Creations" and transfers NT$500 from her personal account to the new account in exchange for ordinary shares.
11 Mei-ling pays NT$65 to have advertising brochures and posters printed. She plans to distribute these as opportunities arise. (*Hint:* Use Advertising Expense.)
13 She buys baking supplies, such as flour, sugar, butter, and matcha, for NT$125 cash.
14 Mei-ling starts to gather some baking equipment to take with her when teaching the cookie classes. She has an excellent top-of-the-line food processor and

mixer that originally cost her NT$750. Mei-ling decides to start using it only in her new business. She estimates that the equipment is currently worth NT$300. She invests the equipment in the business in exchange for ordinary shares.

16 Mei-ling realizes that her initial cash investment is not enough. Her grandmother lends her NT$2,000 cash, for which Mei-ling signs a note payable in the name of the business. Mei-ling deposits the money in the business bank account. (*Hint:* The note does not have to be repaid for 24 months. As a result, the notes payable should be reported in the accounts as the last liability and also on the statement of financial position as the last liability.)

17 She buys more baking equipment for NT$900 cash.

20 She teaches her first class and collects NT$125 cash.

25 Mei-ling books a second class for December 4 for NT$150. She receives NT$30 cash in advance as a down payment.

30 Mei-ling pays NT$1,320 for a one-year insurance policy that will expire on December 1, 2018.

Instructions

(a) Prepare journal entries to record the November transactions.
(b) Post the journal entries to general ledger accounts.
(c) Prepare a trial balance at November 30.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP2-1 The financial statements of TSMC are presented in Appendix A. The notes accompanying the statements contain the following selected accounts. The company's complete annual report, including the notes to the financial statements, is available in the Investors section of the company's website, *www.tsmc.com*.

Accounts (Trade) Payable	Tax Payable
Accounts (Trade) Receivable	Interest Expense (finance cost)
Property, Plant, and Equipment	Inventories

Instructions

(a) Answer the following questions.
  (1) What is the increase and decrease side for each account?
  (2) What is the normal balance for each account?
(b) Identify the probable other account in the transaction and the effect on that account when:
  (1) Accounts (Trade) Receivable is decreased.
  (2) Accounts (Trade) Payable is decreased.
  (3) Inventories are increased.
(c) Identify the other account(s) that ordinarily would be involved when:
  (1) Interest Expense is increased.
  (2) Property, Plant, and Equipment is increased.

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP2-2 Nestlé's financial statements are presented in Appendix B. Financial statements for Petra Foods are presented in Appendix C.

Instructions

(a) Based on the information contained in the financial statements, determine the normal balance of the listed accounts for each company.

Nestlé	Petra Foods
1. Inventory	1. Accounts (Trade) Receivable
2. Property, Plant, and Equipment	2. Cash and Cash Equivalents
3. Accounts (Trade) Payable	3. Cost of Sales (expense)
4. Interest Expense (finance cost)	4. Sales (revenue)

(b) Identify the other account ordinarily involved when:
(1) Accounts (Trade) Receivable is increased.
(2) Salaries and Wages Payable is decreased.
(3) Property, Plant, and Equipment is increased.
(4) Interest Expense is increased.

Real-World Focus

BYP2-3 Much information about specific companies is available on the Internet. Such information includes basic descriptions of the company's location, activities, industry, financial health, and financial performance.

Address: **finance.yahoo.com**, or go to **www.wiley.com/college/weygandt**

Steps
1. Type in a company name, or use index to find company name.
2. Choose **Profile**. Perform instructions (a)–(c) below.
3. Click on the company's specific industry to identify competitors. Perform instructions (d)–(g) below.

Instructions
Answer the following questions.

(a) What is the company's industry?
(b) What was the company's total sales?
(c) What was the company's net income?
(d) What are the names of four of the company's competitors?
(e) Choose one of these competitors.
(f) What is this competitor's name? What were its sales? What was its net income?
(g) Which of these two companies is larger by size of sales? Which one reported higher net income?

Critical Thinking

Decision-Making Across the Organization

BYP2-4 Amy Torbert operates Hollins Riding Academy. The academy's primary sources of revenue are riding fees and lesson fees, which are paid on a cash basis. Amy also boards horses for owners, who are billed monthly for boarding fees. In a few cases, boarders pay in advance of expected use. For its revenue transactions, the academy maintains the following accounts: No. 1 Cash, No. 5 Boarding Accounts Receivable, No. 27 Unearned Boarding Revenue, No. 51 Riding Revenue, No. 52 Lesson Revenue, and No. 53 Boarding Revenue.

The academy owns 10 horses, a stable, a riding corral, riding equipment, and office equipment. These assets are accounted for in accounts No. 11 Horses, No. 12 Building, No. 13 Riding Corral, No. 14 Riding Equipment, and No. 15 Office Equipment.

For its expenses, the academy maintains the following accounts: No. 6 Hay and Feed Supplies, No. 7 Prepaid Insurance, No. 21 Accounts Payable, No. 60 Salaries Expense, No. 61 Advertising Expense, No. 62 Utilities Expense, No. 63 Veterinary Expense, No. 64 Hay and Feed Expense, and No. 65 Insurance Expense.

Amy makes periodic payments of cash dividends to shareholders. To record equity in the business and dividends, Torbert maintains three accounts: No. 50 Share Capital—Ordinary, No. 51 Retained Earnings, and No. 52 Dividends.

During the first month of operations, an inexperienced bookkeeper was employed. Amy Torbert asks you to review the following eight entries of the 50 entries made during the month. In each case, the explanation for the entry is correct.

May 1	Cash	18,000	
	Share Capital—Ordinary		18,000
	(Invested £18,000 cash in exchange for shares)		
5	Cash	250	
	Riding Revenue		250
	(Received £250 cash for lessons performed)		
7	Cash	500	
	Boarding Revenue		500
	(Received £500 for boarding of horses beginning June 1)		
14	Riding Equipment	80	
	Cash		800
	(Purchased desk and other office equipment for £800 cash)		
15	Salaries Expense	440	
	Cash		440
	(Issued dividend checks to shareholders)		
20	Cash	148	
	Riding Revenue		184
	(Received £184 cash for riding fees)		
30	Veterinary Expense	75	
	Accounts Payable		75
	(Received bill of £75 from veterinarian for services rendered)		
31	Hay and Feed Expense	1,500	
	Cash		1,500
	(Purchased an estimated 2 months' supply of feed and hay on account for £1,500)		

Instructions

With the class divided into groups, answer the following.

(a) Identify each journal entry that is correct. For each journal entry that is incorrect, prepare the entry that should have been made by the bookkeeper.
(b) Which of the incorrect entries would prevent the trial balance from balancing?
(c) What was the correct net income for May, assuming the bookkeeper reported net income of £4,600 after posting all 50 entries?
(d) What was the correct cash balance at May 31, assuming the bookkeeper reported a balance of £12,475 after posting all 50 entries (and the only errors occurred in the items listed above)?

Communication Activity

BYP2-5 Shandler's Maid Company offers home-cleaning service. Two recurring transactions for the company are billing customers for services rendered and paying employee salaries. For example, on March 15, bills totaling €6,000 were sent to customers and €2,000 was paid in salaries to employees.

Instructions

Write a memo to your instructor that explains and illustrates the steps in the recording process for each of the March 15 transactions. Use the format illustrated in the textbook under the heading, "The Recording Process Illustrated" (page 65).

Ethics Case

BYP2-6 Sara Rankin is the assistant chief accountant at Hokey Company Ltd., a manufacturer of computer chips and cellular phones. The company presently has total sales of €20 million. It is the end of the first quarter. Sara is hurriedly trying to prepare a general ledger trial balance so that quarterly financial statements can be prepared and released to management and the regulatory agencies. The total credits on the trial balance exceed the debits by €1,000. In order to meet the 4 p.m. deadline, Sara decides to force the debits and credits into balance by adding the amount of the difference to the Equipment account. She chose Equipment because it is one of the larger account balances; percentage-wise, it will be the least misstated. Sara "plugs" the difference! She believes that the difference will not affect anyone's decisions. She wishes that she had another few days to find the error but realizes that the financial statements are already late.

Instructions

(a) Who are the stakeholders in this situation?
(b) What are the ethical issues involved in this case?
(c) What are Sara's alternatives?

Answers to Insight and Accounting Across the Organization Questions

p. 57 Keeping Score Q: Do you think that the Manchester United (GBR) football (soccer) club would be likely to have the same major revenue and expense accounts as Taiwan's Brother Elephants baseball team? **A:** Because their businesses are similar—professional sports—many of the revenue and expense accounts for these teams might be similar.
p. 62 What Would Sam Do? Q: Why did Sam Walton keep separate pigeonholes and blue binders? Why bother to keep separate records for each store? **A:** Using separate pigeonholes and blue binders for each store enabled Walton to accumulate and track the performance of each individual store easily. Keeping separate records for each store provided Walton with more information about performance of individual stores and managers, and greater control. Walton would want and need the same advantages if he were starting his business today. The difference is that he might now have started with a computerized system for small businesses.
p. 74 Why Accuracy Matters Q: In order for this company to prepare and issue financial statements, its accounting equation (debits and credits) must have been in balance at year-end. How could this error have occurred? **A:** A company's accounting equation (its books) can be in balance yet its financial statements have errors or misstatements because of the following: entire transactions were not recorded, transactions were recorded at wrong amounts, transactions were recorded in the wrong accounts, or transactions were recorded in the wrong accounting period. Audits of financial statements uncover some, but obviously not all, errors or misstatements.

A Look at U.S. GAAP

Learning Objective 8
Compare the procedures for the accounting process under IFRS and U.S. GAAP.

Companies that use GAAP follow the same set of procedures and records to keep track of transaction data as do IFRS companies. Thus, the material in Chapter 2 dealing with the account, general rules of debit and credit, and steps in the recording process—the journal, ledger, and chart of accounts—is the same under both GAAP and IFRS.

Key Points

- Both the IASB and FASB go beyond the basic definitions provided in this textbook for the key elements of financial statements, that is, assets, liabilities, equity, revenues, and expenses. The more substantive definitions, using the FASB definitional structure, are provided in the Chapter 1 *A Look at U.S. GAAP* section on page 50.
- In deciding whether the United States should adopt IFRS, some of the issues the U.S. Securities and Exchange Commission (SEC) said should be considered are:
  - Whether IFRS is sufficiently developed and consistent in application.
  - Whether the IASB is sufficiently independent.
  - Whether IFRS is established for the benefit of investors.
  - The issues involved in educating investors about IFRS.
  - The impact of a switch to IFRS on U.S. laws and regulations.
  - The impact on companies including changes to their accounting systems, contractual arrangements, corporate governance, and litigation.
  - The issues involved in educating accountants, so they can prepare statements under IFRS.

Similarities

- A trial balance under GAAP follows the same format as shown in the textbook.
- As shown in the textbook, currency signs are typically used only in the trial balance and the financial statements. The same practice is followed under GAAP, using the U.S. dollar. For example, the income statement shown below for Apple Inc. (USA) is denominated in its own currency—the U.S. dollar.

APPLE INC.
Consolidated Statements of Operations
(in millions except per share data)
For the Year Ended September 28, 2013

Net sales	$170,910
Cost of sales	106,606
Gross margin	64,304
Operating expenses:	
Research and development	4,475
Selling, general and administrative	10,830
Total operating expenses	15,305
Operating income	48,999
Other income/(expense), net	1,156
Income before provision for income taxes	50,155
Provision for income taxes	13,118
Net income	$ 37,037

Differences

- In the United States, equity is often referred to as either shareholders' equity or stockholders' equity, and Share Capital—Ordinary is referred to as Common Stock. The statement of financial position is often called the balance sheet in the United States.
- Rules for accounting for specific events sometimes differ across countries. For example, IFRS companies rely less on historical cost and more on fair value than U.S. companies. Despite the differences, the double-entry accounting system is the basis of accounting systems worldwide.

Looking to the Future

The basic recording process shown in this textbook is followed by companies across the globe. It is unlikely to change in the future. The definitional structure of assets, liabilities, equity, revenues, and expenses may change over time as the IASB and FASB evaluate their overall conceptual framework for establishing accounting standards.

GAAP Practice

GAAP Self-Test Questions

1. Which statement is **correct** regarding GAAP?
   (a) GAAP reverses the rules of debits and credits, that is, debits are on the right and credits are on the left.
   (b) GAAP uses the same process for recording transactions as IFRS.
   (c) The chart of accounts under GAAP is different because revenues follow assets.
   (d) None of the above statements are correct.

2. The expanded accounting equation under GAAP is as follows:
(a) Assets = Liabilities + Common Stock − Retained Earnings − Dividends + Revenues − Expenses.
(b) Assets + Liabilities = Common Stock + Retained Earnings − Dividends + Revenues − Expenses.
(c) Assets = Liabilities + Common Stock + Retained Earnings − Dividends + Revenues − Expenses.
(d) Assets = Liabilities + Common Stock − Retained Earnings − Dividends − Revenues − Expenses.

3. A trial balance:
(a) is the same under GAAP and IFRS.
(b) proves that transactions are recorded correctly.
(c) proves that all transactions have been recorded.
(d) will not balance if a correct journal entry is posted twice.

4. One difference between GAAP and IFRS is that:
(a) IFRS uses accrual-accounting concepts, and GAAP uses primarily the cash basis of accounting.
(b) GAAP uses a different posting process than IFRS.
(c) IFRS uses more fair value measurements than GAAP.
(d) the limitations of a trial balance are different between GAAP and IFRS.

5. The general policy for using proper currency signs (dollar, yen, pound, etc.) is the same for both GAAP and this textbook. This policy is as follows:
(a) Currency signs only appear in ledgers and journal entries.
(b) Currency signs are only shown in the trial balance.
(c) Currency signs are shown for all compound journal entries.
(d) Currency signs are shown in trial balances and financial statements.

GAAP Exercises

GAAP2-1 Describe some of the issues the SEC must consider in deciding whether the United States should adopt IFRS.

GAAP Financial Reporting Problem: Apple Inc. (USA)

GAAP2-2 The financial statements of Apple Inc. are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions

(a) Apple has the following selected accounts:

Accounts Payable	Inventories
Accounts Receivable	Net Sales
Buildings	Research and Development

(1) What is the increase and decrease side of each account?
(2) What is the normal balance for each account?

(b) Identify the probable other account in the transaction and the effect on that account when:
(1) Accounts Receivable is decreased.
(2) Accounts Payable is decreased.
(3) Inventories is increased.

Answers to GAAP Self-Test Questions

1. b **2.** c **3.** a **4.** c **5.** d

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✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER 3 Adjusting the Accounts

FEATURE STORY What Was Your Profit?

The accuracy of the financial reporting system depends on answers to a few fundamental questions: At what point has revenue been recognized? When have expenses really been incurred?

Unfortunately, all too often companies overstate their revenues. For example, during the dot-com boom, most dot-coms earned a large percentage of their revenue from selling advertising space on their websites. To boost reported revenue, some dot-coms began swapping website ad space. Company A would put an ad for its website on company B's website, and company B would put an ad for its website on company A's website. No money changed hands, but each company recorded revenue (for the value of the space that it gave the other company on its site). This practice did little to boost net income, and it resulted in no additional cash flow—but it did boost *reported revenue.* Regulators eventually put an end to this misleading practice.

Another type of transgression results from companies recording revenues or expenses in the wrong year. In fact, shifting revenues and expenses is one of the most common abuses of financial accounting. For example, here is a sample of British companies that have recently disclosed issues regarding revenue recognition: the Nigerian unit of candy company Cadbury (GBR); vehicle and accident management company Helphire (GBR), which appeared to overstate the amount it was due in reimbursement from insurance companies; and Alterian (GBR), a software firm that specializes in social media, email, and web content management and analytics.

Perhaps one of the most unusual cases of reporting expenses in the wrong period was revealed by Olympus Corporation (JPN). The company admitted that it had covered up investment losses for more than a decade. It then tried to eliminate the losses from the books through a fraudulent process of overstating the price of some acquired assets and then writing down those assets in subsequent adjusting entries.

Unfortunately, revelations such as these have become all too common in the corporate world. It is no wonder that a survey of affluent investors reported that 85% of respondents believed that there should be tighter regulation of financial disclosures; 66% said they did not trust the management of publicly traded companies.

Why do so many companies violate basic financial reporting rules and sound ethics? Many speculate that executives are under increasing pressure to meet higher and higher earnings expectations. If actual results aren't as good as hoped for, some give in to temptation and "adjust" their numbers to meet market expectations.

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- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 130–136
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Explain the time period assumption.
2. Explain the accrual basis of accounting.
3. Explain the reasons for adjusting entries.
4. Identify the major types of adjusting entries.
5. Prepare adjusting entries for deferrals.
6. Prepare adjusting entries for accruals.
7. Describe the nature and purpose of an adjusted trial balance.

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PREVIEW OF CHAPTER 3

In Chapter 1, you learned a neat little formula: Net income = Revenues − Expenses. In Chapter 2, you learned some rules for recording revenue and expense transactions. Guess what? Things are not really that nice and neat. In fact, it is often difficult for companies to determine in what time period they should report some revenues and expenses. In other words, in measuring net income, timing is everything.

The content and organization of Chapter 3 are as follows.

ADJUSTING THE ACCOUNTS

Timing Issues	The Basics of Adjusting Entries	The Adjusted Trial Balance and Financial Statements
• Fiscal and calendar years • Accrual- vs. cash-basis accounting • Recognizing revenues and expenses	• Types of adjusting entries • Adjusting entries for deferrals • Adjusting entries for accruals • Summary of basic relationships	• Preparing the adjusted trial balance • Preparing financial statements

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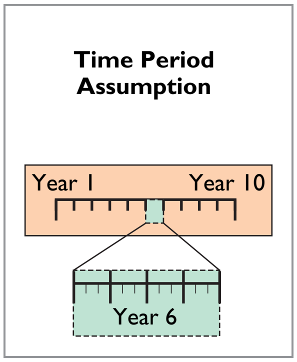
Timing Issues

Learning Objective 1
Explain the time period assumption.

If we could wait to prepare financial statements until a company ended its operations, no adjustments would be needed. At that point, we could easily determine its final statement of financial position and the amount of lifetime income it earned.

However, most companies need immediate feedback about how well they are doing. For example, management usually wants monthly financial statements, and taxing agencies require all businesses to file annual tax returns. Therefore, **accountants divide the economic life of a business into artificial time periods**. This convenient assumption is referred to as the **time period assumption**.



Many business transactions affect more than one of these arbitrary time periods. For example, the airplanes purchased by Cathay Pacific (HKG) five years ago are still in use today. We must determine the relevance of each business transaction to specific accounting periods. (How much of the cost of an airplane contributed to operations this year?)

Fiscal and Calendar Years

• Alternative Terminology The time period assumption is also called the *periodicity assumption*.

Both small and large companies prepare financial statements periodically in order to assess their financial condition and results of operations. **Accounting time periods are generally a month, a quarter, or a year.** Monthly and quarterly time periods are called **interim periods**. Most large companies must prepare both quarterly and annual financial statements.

An accounting time period that is one year in length is a **fiscal year**. A fiscal year usually begins with the first day of a month and ends 12 months later on the last day of a month. Many businesses use the **calendar year** (January 1 to December 31) as their accounting period. Some do not, such as Vodafone Group's (GBR) fiscal year which ends March 31. Further, sometimes a company's year-end will vary from year to year. For example, JJB Sports' (GBR) fiscal year ends on the Sunday that falls closest before January 31, resulting in accounting periods of either 52 or 53 weeks.

Accrual- versus Cash-Basis Accounting

Learning Objective 2
Explain the accrual basis of accounting.

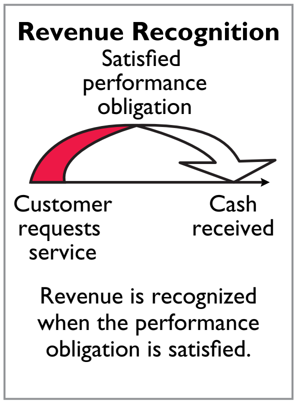
What you will learn in this chapter is **accrual-basis accounting**. Under the accrual basis, companies record transactions that change a company's financial statements **in the periods in which the events occur**. For example, using the accrual basis to determine net income means companies recognize revenues when they perform the services (rather than when they receive cash). It also means recognizing expenses when incurred (rather than when paid).

An alternative to the accrual basis is the cash basis. Under **cash-basis accounting**, companies record revenue when they receive cash. They record an expense when they pay out cash. The cash basis seems appealing due to its simplicity, but it often produces misleading financial statements. It fails to record revenue for a company that has performed services but for which the company has not received the cash. As a result, the cash basis does not match expenses with revenues.

Accrual-basis accounting is therefore in accordance with International Financial Reporting Standards (IFRS). Individuals and some small companies, however, do use cash-basis accounting. The cash basis is justified for small businesses because they often have few receivables and payables. Medium and large companies use accrual-basis accounting.

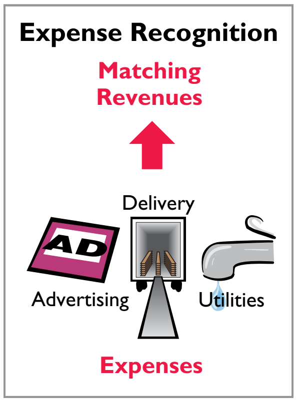
Recognizing Revenues and Expenses

It can be difficult to determine when to report revenues and expenses. The revenue recognition principle and the expense recognition principle help in this task.



REVENUE RECOGNITION PRINCIPLE

When a company agrees to perform a service or sell a product to a customer, it has a **performance obligation**. When the company meets this performance obligation, it recognizes revenue. The **revenue recognition principle** therefore requires that companies recognize revenue in the accounting period in which the performance obligation is satisfied. To illustrate, assume that Soon's Dry Cleaning cleans clothing on June 30, but customers do not claim and pay for their clothes until the first week of July. Soon's should record revenue in June when it performed the service (satisfied the performance obligation) rather than in July when it received the cash. At June 30, Soon's would report a receivable on its statement of financial position and revenue in its income statement for the service performed.



EXPENSE RECOGNITION PRINCIPLE

Accountants follow a simple rule in recognizing expenses: "Let the expenses follow the revenues." Thus, expense recognition is tied to revenue recognition. In the dry cleaning example, this means that Soon's should report the salary expense incurred in performing the June 30 cleaning service in the same period in which it recognizes the service revenue. The critical issue in expense recognition is when the expense makes its contribution to revenue. This may or may not be the same period in which the expense is paid. If Soon's does not pay the salary incurred on June 30 until July, it would report salaries payable on its June 30 statement of financial position.

This practice of expense recognition is referred to as the **expense recognition principle** (often referred to as the **matching principle**). It dictates that efforts (expenses) be matched with results (revenues). Illustration 3-1 summarizes the revenue and expense recognition principles.

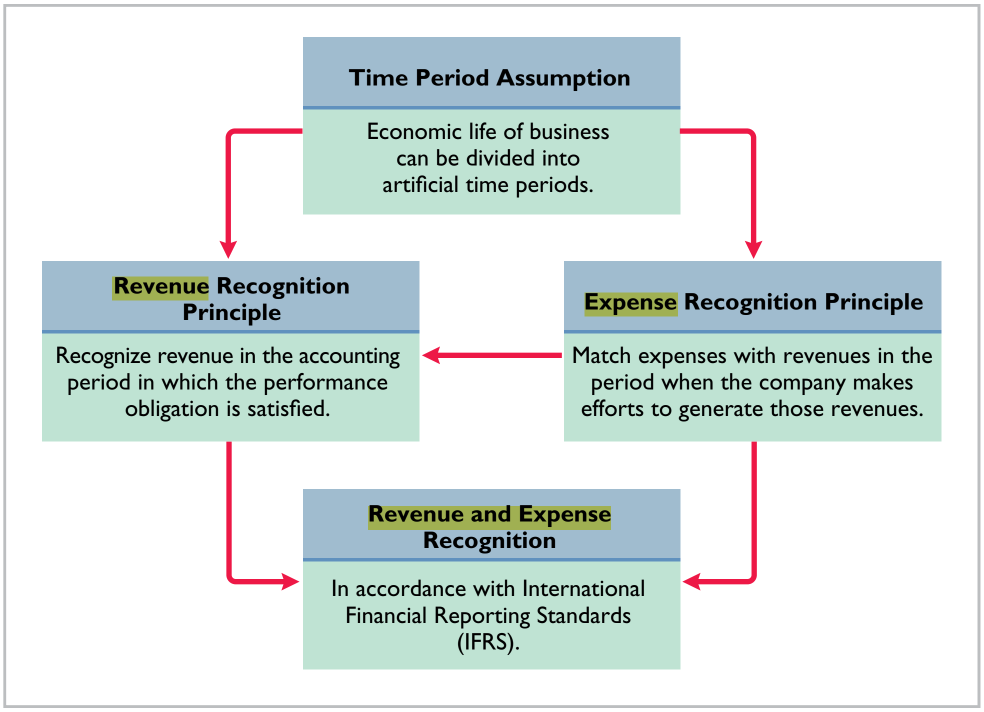


Illustration 3-1
IFRS relationships in revenue and expense recognition

• HELPFUL HINT
Recognize means to record or to report.

Ethics Insight Cooking the Books?

Krispy Kreme (USA)

© Turnervisual/iStockphoto

Allegations of abuse of the revenue recognition principle have become all too common in recent years. For example, it was alleged that Krispy Kreme (USA) sometimes doubled the number of doughnuts shipped to wholesale customers at the end of a quarter to boost quarterly results. The customers shipped the unsold doughnuts back after the beginning of the next quarter for a refund. Conversely, Computer Associates International (USA) was accused of backdating sales—that is, reporting a sale in one period that did not actually occur until the next period in order to achieve the earlier period's sales targets.

Q What motivates sales executives and finance and accounting executives to participate in activities that result in inaccurate reporting of revenues? (See page 157.)

DO IT!

Timing Concepts

Several timing concepts are discussed on pages 102–103. Below, a list of concepts is provided in the left column, with descriptions of the concepts in the right column. There are more descriptions provided than concepts. Match the description of the concept to the concept.

1. ____Accrual-basis accounting.
2. ____Calendar year.
3. ____Time period assumption.
4. ____Expense recognition principle.

(a) Monthly and quarterly time periods.
(b) Efforts (expenses) should be matched with results (revenues).
(c) Accountants divide the economic life of a business into artificial time periods.
(d) Companies record revenues when they receive cash and record expenses when they pay out cash.
(e) An accounting time period that starts on January 1 and ends on December 31.
(f) Companies record transactions in the period in which the events occur.

Action Plan

✔ Review the glossary terms identified on pages 102–103.

✔ Study carefully the revenue recognition principle, the expense recognition principle, and the time period assumption.

Solution

1. f 2. e 3. c 4. b

Related exercise material: **E3-1, E3-2, E3-3, and DO IT! 3-1.**

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The Basics of Adjusting Entries

Learning Objective 3

Explain the reasons for adjusting entries.

In order for revenues to be recorded in the period in which services are performed, and for expenses to be recognized in the period in which they are incurred, companies make adjusting entries. **Adjusting entries ensure that the revenue recognition and expense recognition principles are followed.**

Adjusting entries are necessary because the **trial balance**—the first pulling together of the transaction data—may not contain up-to-date and complete data. This is true for several reasons:

1. Some events are not recorded daily because it is not efficient to do so. Examples are the use of supplies and the earning of wages by employees.
2. Some costs are not recorded during the accounting period because these costs expire with the passage of time rather than as a result of recurring daily transactions. Examples are charges related to the use of buildings and equipment, rent, and insurance.
3. Some items may be unrecorded. An example is a utility service bill that will not be received until the next accounting period.

Adjusting entries are required every time a company prepares financial statements. The company analyzes each account in the trial balance to determine whether it is complete and up-to-date for financial statement purposes. **Every adjusting entry will include one income statement account and one statement of financial position account.**

Types of Adjusting Entries

Learning Objective 4

Identify the major types of adjusting entries.

Adjusting entries are classified as either **deferrals** or **accruals**. As Illustration 3-2 shows, each of these classes has two subcategories.

Illustration 3-2
Categories of adjusting entries

Deferrals:

1. **Prepaid expenses**: Expenses paid in cash before they are used or consumed.
2. **Unearned revenues**: Cash received before services are performed.

Accruals:

1. **Accrued revenues**: Revenues for services performed but not yet received in cash or recorded.
2. **Accrued expenses**: Expenses incurred but not yet paid in cash or recorded.

Subsequent sections give examples of each type of adjustment. Each example is based on the October 31 trial balance of Yazici Advertising A.Ş. from Chapter 2, reproduced in Illustration 3-3.

Illustration 3-3
Trial balance

YAZICI ADVERTISING A.Ş.
Trial Balance
October 31, 2017

	Debit	Credit
Cash	₺ 15,200	
Supplies	2,500	
Prepaid Insurance	600	
Equipment	5,000	
Notes Payable		₺ 5,000
Accounts Payable		2,500
Unearned Service Revenue		1,200
Share Capital—Ordinary		10,000
Retained Earnings		–0–
Dividends	500	
Service Revenue		10,000
Salaries and Wages Expense	4,000	
Rent Expense	900	
	₺28,700	**₺28,700**

We assume that Yazici uses an accounting period of one month. Thus, monthly adjusting entries are made. The entries are dated October 31.

Adjusting Entries for Deferrals

Learning Objective 5

Prepare adjusting entries for deferrals.

To defer means to postpone or delay. **Deferrals** are expenses or revenues that are recognized at a date later than the point when cash was originally exchanged. Companies make adjusting entries for deferrals to record the portion of the deferred item that was incurred as an expense or recognized as revenue during the current accounting period. The two types of deferrals are prepaid expenses and unearned revenues.

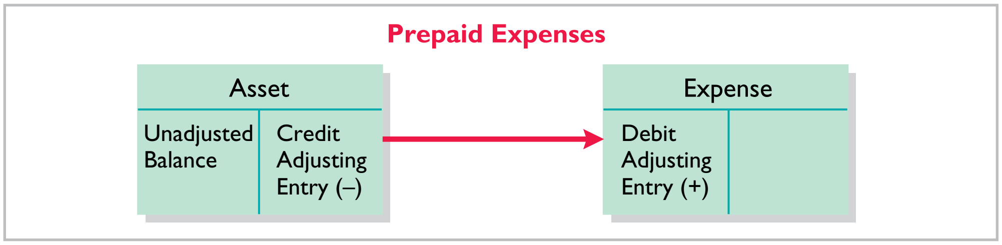
PREPAID EXPENSES

When companies record payments of expenses that will benefit more than one accounting period, they record an asset called **prepaid expenses** or **prepayments**. When expenses are prepaid, an asset account is increased (debited) to show the service or benefit that the company will receive in the future. Examples of common prepayments are insurance, supplies, advertising, and rent. In addition, companies make prepayments when they purchase buildings and equipment.

Prepaid expenses are costs that expire either with the passage of time (e.g., rent and insurance) **or through use** (e.g., supplies). The expiration of these costs does not require daily entries, which would be impractical and unnecessary. Accordingly, companies postpone the recognition of such cost expirations until they prepare financial statements. At each statement date, they make adjusting entries to record the expenses applicable to the current accounting period and to show the remaining amounts in the asset accounts.

Prior to adjustment, assets are overstated and expenses are understated. Therefore, as shown in Illustration 3-4, **an adjusting entry for prepaid expenses results in an increase (a debit) to an expense account and a decrease (a credit) to an asset account**.

Illustration 3-4
Adjusting entries for prepaid expenses



Let's look in more detail at some specific types of prepaid expenses, beginning with supplies.

SUPPLIES The purchase of supplies, such as paper and envelopes, results in an increase (a debit) to an asset account. During the accounting period, the company uses supplies. Rather than record supplies expense as the supplies are used, companies recognize supplies expense at the **end** of the accounting period. At the end of the accounting period, the company counts the remaining supplies. The difference between the unadjusted balance in the Supplies (asset) account and the actual cost of supplies on hand represents the supplies used (an expense) for that period.

Recall from Chapter 2 that Yazici Advertising purchased supplies costing ₺2,500 on October 5. Yazici recorded the purchase by increasing (debiting) the asset Supplies. This account shows a balance of ₺2,500 in the October 31 trial balance. An inventory count at the close of business on October 31 reveals that ₺1,000 of supplies are still on hand. Thus, the cost of supplies used is ₺1,500 (₺2,500 − ₺1,000). This use of supplies decreases an asset, Supplies. It also decreases equity by increasing an expense account, Supplies Expense. This is shown in Illustration 3-5.

Illustration 3-5
Adjustment for supplies

Basic Analysis: The expense Supplies Expense is increased ₺1,500; the asset Supplies is decreased ₺1,500.

Equation Analysis:

Assets	=	Liabilities	+	Equity
Supplies	=			Supplies Expense
−₺1,500				−₺1,500

Debit–Credit Analysis: Debits increase expenses: debit Supplies Expense ₺1,500. Credits decrease assets: credit Supplies ₺1,500.

Journal Entry:

Oct. 31	Supplies Expense	1,500	
	Supplies		1,500
	(To record supplies used)		

Posting:

Supplies			126
Oct. 5	2,500	Oct. 31	**Adj. 1,500**
Oct. 31	Bal. 1,000		

Supplies Expense			631
Oct. 31	**Adj. 1,500**		
Oct. 31	Bal. 1,500		

After adjustment, the asset account Supplies shows a balance of ₺1,000, which is equal to the cost of supplies on hand at the statement date. In addition, Supplies Expense shows a balance of ₺1,500, which equals the cost of supplies used in October. **If Yazici does not make the adjusting entry, October expenses are understated and net income is overstated by ₺1,500. Moreover, both assets and equity will be overstated by ₺1,500 on the October 31 statement of financial position.**

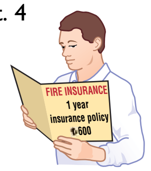
INSURANCE Companies purchase insurance to protect themselves from losses due to fire, theft, and unforeseen events. Insurance must be paid in advance, often for more than one year. The cost of insurance (premiums) paid in advance is recorded as an increase (debit) in the asset account Prepaid Insurance. At the financial statement date, companies increase (debit) Insurance Expense and decrease (credit) Prepaid Insurance for the cost of insurance that has expired during the period.

On October 4, Yazici Advertising paid ₺600 for a one-year fire insurance policy. Coverage began on October 1. Yazici recorded the payment by increasing (debiting) Prepaid Insurance. This account shows a balance of ₺600 in the October 31 trial balance. Insurance of ₺50 (₺600 ÷ 12) expires each month. The expiration of prepaid insurance decreases an asset, Prepaid Insurance. It also decreases equity by increasing an expense account, Insurance Expense.

As shown in Illustration 3-6 (page 108), the asset Prepaid Insurance shows a balance of ₺550, which represents the unexpired cost for the remaining 11 months of coverage. At the same time, the balance in Insurance Expense equals the insurance cost that expired in October. **If Yazici does not make this adjustment, October expenses are understated by ₺50 and net income is overstated by**

Insurance

Oct. 4



Insurance purchased; record asset

Insurance Policy			
Oct ₺50	Nov ₺50	Dec ₺50	Jan ₺50
Feb ₺50	March ₺50	April ₺50	May ₺50
June ₺50	July ₺50	Aug ₺50	Sept ₺50
Insurance = ₺600/year			

Oct. 31
Insurance expired; record insurance expense

₺50. Moreover, both assets and equity will be overstated by ₺50 on the October 31 statement of financial position.

Illustration 3-6
Adjustment for insurance

Basic Analysis

The expense Insurance Expense is increased ₺50; the asset Prepaid Insurance is decreased ₺50.

Equation Analysis

Assets	=	Liabilities	+	Equity
Prepaid Insurance	=			Insurance Expense
−₺50				−₺50

Debit–Credit Analysis

Debits increase expenses: debit Insurance Expense ₺50.
Credits decrease assets: credit Prepaid Insurance ₺50.

Journal Entry

Oct. 31	Insurance Expense	50	
	Prepaid Insurance		50
	(To record insurance expired)		

Posting

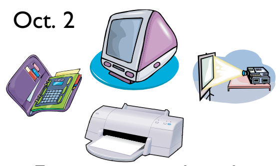
Prepaid Insurance			130
Oct. 4	600	Oct. 31	Adj. 50
Oct. 31	Bal. 550		

Insurance Expense			722
Oct. 31	Adj. 50		
Oct. 31	Bal. 50		

DEPRECIATION A company typically owns a variety of assets that have long lives, such as buildings, equipment, and motor vehicles. The period of service is referred to as the **useful life** of the asset. Because a building is expected to be of service for many years, it is recorded as an asset, rather than an expense, on the date it is acquired. As explained in Chapter 1, companies record such assets **at cost**, as required by the historical cost principle. To follow the expense recognition principle, companies allocate a portion of this cost as an expense during each period of the asset's useful life. **Depreciation** is the process of allocating the cost of an asset to expense over its useful life.

Depreciation

Oct. 2



Equipment purchased; record asset

Equipment			
Oct ₺40	Nov ₺40	Dec ₺40	Jan ₺40
Feb ₺40	March ₺40	April ₺40	May ₺40
June ₺40	July ₺40	Aug ₺40	Sept ₺40
Depreciation = ₺480/year			

Oct. 31
Depreciation recognized; record depreciation expense

Need for Adjustment. The acquisition of long-lived assets is essentially a long-term prepayment for the use of an asset. An adjusting entry for depreciation is needed to recognize the cost that has been used (an expense) during the period and to report the unused cost (an asset) at the end of the period. One very important point to understand: **Depreciation is an allocation concept, not a valuation concept.** That is, depreciation **allocates an asset's cost to the periods in which it is used. Depreciation does not attempt to report the actual change in the value of the asset.**

For Yazici Advertising, assume that depreciation on the equipment is ₺480 a year, or ₺40 per month. As shown in Illustration 3-7 on the next page, rather than decrease (credit) the asset account directly, Yazici instead credits Accumulated Depreciation—Equipment. Accumulated Depreciation is called a **contra asset account**. Such an account is offset against an asset account on the statement of financial position. Thus, the Accumulated Depreciation—Equipment account offsets the asset account Equipment. **This account keeps track of the total amount of depreciation expense taken over the life of the asset.** To keep the accounting equation in balance, Yazici decreases equity by increasing an expense account, Depreciation Expense.

Basic Analysis

The expense Depreciation Expense is increased ₺40; the contra asset Accumulated Depreciation—Equipment is increased ₺40.

Equation Analysis

Assets	=	Liabilities	+	Equity
Accumulated Depreciation—Equipment	=			Depreciation Expense
−₺40				−₺40

Debit–Credit Analysis

Debits increase expenses: debit Depreciation Expense ₺40.
Credits increase contra assets: credit Accumulated Depreciation—Equipment ₺40.

Journal Entry

Oct. 31	Depreciation Expense	40	
	Accumulated Depreciation—Equipment		40
	(To record monthly depreciation)		

Posting

Equipment			157
Oct. 2	5,000		
Oct. 31	Bal. 5,000		

Accumulated Depreciation—Equipment			158
		Oct. 31	Adj. 40
		Oct. 31	Bal. 40

Depreciation Expense			711
Oct. 31	Adj. 40		
Oct. 31	Bal. 40		

Illustration 3-7
Adjustment for depreciation

The balance in the Accumulated Depreciation—Equipment account will increase ₺40 each month, and the balance in Equipment remains ₺5,000.

Statement Presentation. As indicated, Accumulated Depreciation—Equipment is a contra asset account. It is offset against Equipment on the statement of financial position. The normal balance of a contra asset account is a credit. A theoretical alternative to using a contra asset account would be to decrease (credit) the asset account by the amount of depreciation each period. But using the contra account is preferable for a simple reason: It discloses **both** the original cost of the equipment **and** the total cost that has been expensed to date. Thus, in the statement of financial position, Yazici deducts Accumulated Depreciation—Equipment from the related asset account, as shown in Illustration 3-8.

• **HELPFUL HINT**
All contra accounts have increases, decreases, and normal balances opposite to the account to which they relate.

Equipment	₺ 5,000
Less: Accumulated depreciation—equipment	40
	₺4,960

Illustration 3-8
Statement of financial position presentation of accumulated depreciation

Book value is the difference between the cost of any depreciable asset and its related accumulated depreciation. In Illustration 3-8, the book value of the equipment at the statement of financial position date is ₺4,960. The book value and the fair value of the asset are generally two different values. As noted earlier, **the purpose of depreciation is not valuation but a means of cost allocation**.

• **Alternative Terminology**
Book value is also referred to as *carrying value.*

Depreciation expense identifies the portion of an asset's cost that expired during the period (in this case, in October). **Without this adjusting entry, assets,**

equity, and net income are overstated by ₺40 and depreciation expense is understated by ₺40.

Illustration 3-9 summarizes the accounting for prepaid expenses.

Illustration 3-9
Accounting for prepaid expenses

ACCOUNTING FOR PREPAID EXPENSES

Examples	Reason for Adjustment	Accounts Before Adjustment	Adjusting Entry
Insurance, supplies, advertising, rent, depreciation	Prepaid expenses recorded in asset accounts have been used.	Assets overstated. Expenses understated.	Dr. Expenses Cr. Assets or Contra Assets

Unearned Revenues

Oct. 2

Cash is received in advance; liability is recorded

Oct. 31
Some service has been performed; some revenue is recorded

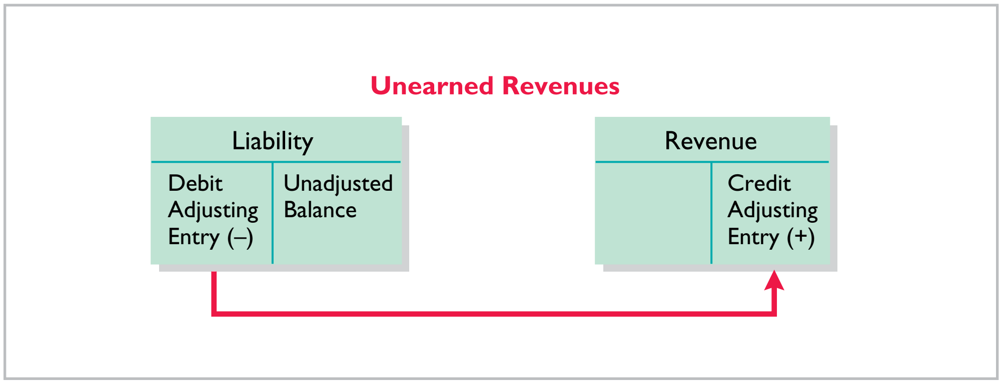
UNEARNED REVENUES

When companies receive cash before services are performed, they record a liability by increasing (crediting) a liability account called **unearned revenue**. In other words, a company now has a performance obligation (liability) to perform a service for one of its customers. Items like rent, magazine subscriptions, and customer deposits for future service may result in unearned revenues. Airlines such as Ryanair (IRL), Qatar Airways (QAT), and Singapore Airlines (SGP), for instance, treat receipts from the sale of tickets as unearned revenue until the flight service is provided.

Unearned revenues are the opposite of prepaid expenses. Indeed, unearned revenue on the books of one company is likely to be a prepaid expense on the books of the company that has made the advance payment. For example, if identical accounting periods are assumed, a landlord will have unearned rent revenue when a tenant has prepaid rent.

When a company receives payment for services to be performed in a future accounting period, it increases (credits) an unearned revenue (a liability) account to recognize the liability that exists. The company subsequently recognizes revenues when it performs the service. During the accounting period, it is not practical to make daily entries as the company performs services. Instead, the company delays recognition of revenue until the adjustment process. Then, the company makes an adjusting entry to record the revenue for services performed during the period and to show the liability that remains at the end of the accounting period. Typically, prior to adjustment, liabilities are overstated and revenues are understated. Therefore, as shown in Illustration 3-10, **the adjusting entry for unearned revenues results in a decrease (a debit) to a liability account and an increase (a credit) to a revenue account**.

Illustration 3-10
Adjusting entries for unearned revenues



Yazici Advertising received ₺1,200 on October 2 from R. Knox for advertising services expected to be completed by December 31. Yazici credited the payment to Unearned Service Revenue. This liability account shows a balance of ₺1,200 in the October 31 trial balance. From an evaluation of the services Yazici performed for Knox during October, the company determines that it should recognize ₺400 of revenue in October. The liability (Unearned Service Revenue) is therefore decreased, and equity (Service Revenue) is increased.

As shown in Illustration 3-11, the liability Unearned Service Revenue now shows a balance of ₺800. That amount represents the remaining advertising services expected to be performed in the future. At the same time, Service Revenue shows total revenue recognized in October of ₺10,400. **Without this adjustment, revenues and net income are understated by ₺400. Moreover, liabilities are overstated and equity is understated by ₺400 on the October 31 statement of financial position.**

• **Alternative Terminology**
Unearned revenue is sometimes referred to as *deferred revenue*.

Basic Analysis

The liability Unearned Service Revenue is decreased ₺400; the revenue Service Revenue is increased ₺400.

Equation Analysis

Assets	=	Liabilities	+	Equity
		Unearned Service Revenue		Service Revenue
		−₺400		+₺400

Debit–Credit Analysis

Debits decrease liabilities: debit Unearned Service Revenue ₺400.
Credits increase revenues: credit Service Revenue ₺400.

Journal Entry

Oct. 31	Unearned Service Revenue	400	
	Service Revenue		400
	(To record revenue for services performed)		

Posting

Unearned Service Revenue			209
Oct. 31	Adj. 400	Oct. 2	1,200
		Oct. 31	Bal. 800

Service Revenue			400
		Oct. 3	10,000
		31 Adj.	400
		Oct. 31	Bal. 10,400

Illustration 3-11
Service revenue accounts after adjustment

Illustration 3-12 summarizes the accounting for unearned revenues.

ACCOUNTING FOR UNEARNED REVENUES

Examples	Reason for Adjustment	Accounts Before Adjustment	Adjusting Entry
Rent, magazine subscriptions, customer deposits for future service	Unearned revenues recorded in liability accounts are now recognized as revenue for services performed.	Liabilities overstated. Revenues understated.	Dr. Liabilities Cr. Revenues

Illustration 3-12
Accounting for unearned revenues

Accounting Across the Organization **Turning Gift Cards into Revenue**

Marks & Spencer plc (GBR)

REUTERS/Toby Melville/NewsCom

Those of you who are marketing majors (and even most of you who are not) know that gift cards are among the hottest marketing tools in merchandising today. Customers at stores such as Marks & Spencer plc (GBR) purchase gift cards and give them to someone for later use.

Although these programs are popular with marketing executives, they create accounting questions. Should revenue be recorded at the time the gift card is sold, or when it is exercised? How should expired gift cards be accounted for?

Source: Robert Berner, "Gift Cards: No Gift to Investors," *BusinessWeek* (March 14, 2005), p. 86.

Q Suppose that Robert Jones purchases a €100 gift card at Carrefour (FRA) on December 24, 2016, and gives it to his wife, Mary Jones, on December 25, 2016. On January 3, 2017, Mary uses the card to purchase €100 worth of CDs. When do you think Carrefour should recognize revenue and why? (See page 157.)

> DO IT!

Adjusting Entries for Deferrals

The ledger of Zhū Company on March 31, 2017, includes these selected accounts before adjusting entries are prepared.

	Debit	Credit
Prepaid Insurance	¥ 3,600,000	
Supplies	2,800,000	
Equipment	25,000,000	
Accumulated Depreciation—Equipment		¥5,000,000
Unearned Service Revenue		9,200,000

An analysis of the accounts shows the following.

1. Insurance expires at the rate of ¥100,000 per month.
2. Supplies on hand total ¥800,000.
3. The equipment depreciates ¥200,000 a month.
4. One-half of the unearned service revenue was performed in March.

Prepare the adjusting entries for the month of March.

Action Plan

✔ Make adjusting entries at the end of the period for revenues recognized and expenses incurred in the period.

Solution

1. Insurance Expense	100,000	
Prepaid Insurance		100,000
(To record insurance expired)		
2. Supplies Expense	2,000,000	
Supplies		2,000,000
(To record supplies used)		
3. Depreciation Expense	200,000	
Accumulated Depreciation—Equipment		200,000
(To record monthly depreciation)		

Action Plan (cont'd)

✔ Don't forget to make adjusting entries for deferrals. Failure to adjust for deferrals leads to overstatement of the asset or liability and understatement of the related expense or revenue.

4. Unearned Service Revenue	4,600,000	
Service Revenue		4,600,000
(To record revenue for services performed)		

Related exercise material: **BE3-3, BE3-4, BE3-5, BE3-6, and DO IT! 3-2.**

✔ The Navigator

Adjusting Entries for Accruals

Learning Objective 6

Prepare adjusting entries for accruals.

The second category of adjusting entries is **accruals**. Prior to an accrual adjustment, the revenue account (and the related asset account) or the expense account (and the related liability account) are understated. Thus, the adjusting entry for accruals will **increase both a statement of financial position and an income statement account**.

ACCRUED REVENUES

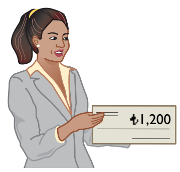
Revenues for services performed but not yet recorded at the statement date are **accrued revenues**. Accrued revenues may accumulate (accrue) with the passing of time, as in the case of interest revenue. These are unrecorded because the earning of interest does not involve daily transactions. Companies do not record interest revenue on a daily basis because it is often impractical to do so. Accrued revenues also may result from services that have been performed but not yet billed or collected, as in the case of commissions and fees. These may be unrecorded because only a portion of the total service has been performed and the clients will not be billed until the service has been completed.

An adjusting entry records the receivable that exists at the statement of financial position date and the revenue for the services performed during the period. Prior to adjustment, both assets and revenues are understated. As shown in Illustration 3-13, **an adjusting entry for accrued revenues results in an increase (a debit) to an asset account and an increase (a credit) to a revenue account**.

Accrued Revenues

Revenue and receivable are recorded for unbilled services

Nov. 10



Cash is received; receivable is reduced

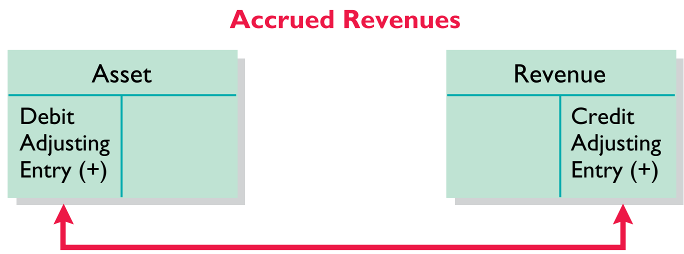


Illustration 3-13
Adjusting entries for accrued revenues

• HELPFUL HINT
For accruals, there may have been no prior entry, and the accounts requiring adjustment may both have zero balances prior to adjustment.

In October, Yazici Advertising performed services worth ₺200 that were not billed to clients on or before October 31. Because these services are not billed, they are not recorded. The accrual of unrecorded service revenue increases an asset account, Accounts Receivable. It also increases equity by increasing a revenue account, Service Revenue, as shown in Illustration 3-14.

Illustration 3-14
Adjustment for accrued revenue

Basic Analysis
The asset Accounts Receivable is increased ₺200; the revenue Service Revenue is increased ₺200.

Equation Analysis

Assets	=	Liabilities	+	Equity
Accounts Receivable				Service Revenue
+₺200				+₺200

Debit–Credit Analysis
Debits increase assets: debit Accounts Receivable ₺200.
Credits increase revenues: credit Service Revenue ₺200.

Journal Entry

Oct. 31	Accounts Receivable	200	
	Service Revenue		200
	(To record revenue for services performed)		

Posting

Accounts Receivable			112
Oct. 31	Adj. 200		
Oct. 31	Bal. 200		

Service Revenue			400
	Oct. 3		10,000
	31		400
	31	Adj.	200
	Oct. 31	Bal.	10,600

Equation analyses summarize the effects of transactions on the three elements of the accounting equation, as well as the effect on cash flows.

The asset Accounts Receivable shows that clients owe Yazici ₺200 at the statement of financial position date. The balance of ₺10,600 in Service Revenue represents the total revenue for services performed by Yazici during the month (₺10,000 + ₺400 + ₺200). **Without the adjusting entry, assets and equity on the statement of financial position and revenues and net income on the income statement are understated.**

On November 10, Yazici receives cash of ₺200 for the services performed in October and makes the following entry.

A	=	L	+	E
+200				
−200				

Cash Flows
+200

Nov. 10	Cash	200	
	Accounts Receivable		200
	(To record cash collected on account)		

The company records the collection of the receivables by a debit (increase) to Cash and a credit (decrease) to Accounts Receivable.

Illustration 3-15 summarizes the accounting for accrued revenues.

Illustration 3-15
Accounting for accrued revenues

ACCOUNTING FOR ACCRUED REVENUES

Examples	Reason for Adjustment	Accounts Before Adjustment	Adjusting Entry
Interest, rent, services performed but not collected	Services performed but not yet recorded.	Assets understated. Revenues understated.	Dr. Assets Cr. Revenues

ACCRUED EXPENSES

Expenses incurred but not yet paid or recorded at the statement date are called **accrued expenses**. Interest, taxes, and salaries are common examples of accrued expenses.

Companies make adjustments for accrued expenses to record the obligations that exist at the statement of financial position date and to recognize the expenses that apply to the current accounting period. Prior to adjustment, both liabilities and expenses are understated. Therefore, as Illustration 3-16 shows, **an adjusting entry for accrued expenses results in an increase (a debit) to an expense account and an increase (a credit) to a liability account**.

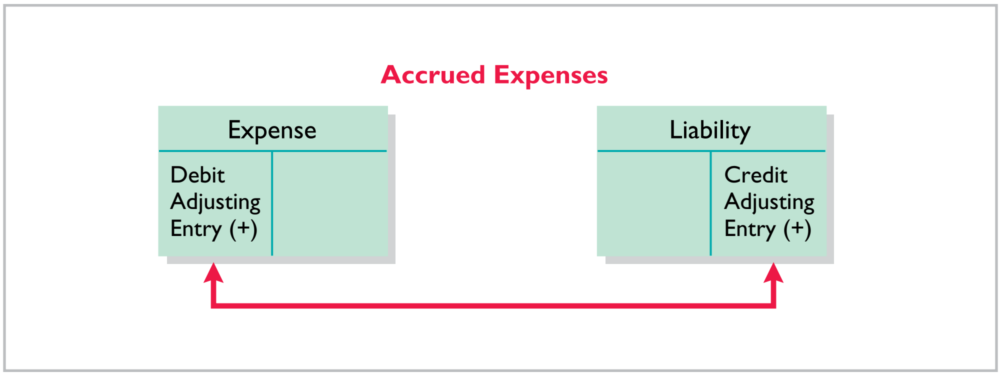


Illustration 3-16
Adjusting entries for accrued expenses

Let's look in more detail at some specific types of accrued expenses, beginning with accrued interest.

ACCRUED INTEREST Yazici Advertising signed a three-month note payable in the amount of ₺5,000 on October 1. The note requires Yazici to pay interest at an annual rate of 12%.

The amount of the interest recorded is determined by three factors: (1) the face value of the note; (2) the interest rate, which is always expressed as an annual rate; and (3) the length of time the note is outstanding. For Yazici, the total interest due on the ₺5,000 note at its maturity date three months in the future is ₺150 (₺5,000 $\times$ 12% $\times \frac{3}{12}$), or ₺50 for one month. Illustration 3-17 shows the formula for computing interest and its application to Yazici for the month of October.

Ethics Note

A report released by Fannie Mae's (USA) board of directors stated that improper adjusting entries at the mortgage-finance company resulted in delayed recognition of expenses caused by interest-rate changes. The motivation for such accounting apparently was the desire to achieve earnings estimates.

Face Value of Note	×	Annual Interest Rate	×	Time in Terms of One Year	=	Interest
₺5,000	×	12%	×	$\frac{1}{12}$	=	₺50

Illustration 3-17
Formula for computing interest

• HELPFUL HINT
In computing interest, we express the time period as a fraction of a year.

As Illustration 3-18 (page 116) shows, the accrual of interest at October 31 increases a liability account, Interest Payable. It also decreases equity by increasing an expense account, Interest Expense.

Interest Expense shows the interest charges for the month of October. Interest Payable shows the amount of interest the company owes at the statement date. Yazici will not pay the interest until the note comes due at the end of three months. Companies use the Interest Payable account, instead of crediting Notes Payable, to disclose the two different types of obligations—interest and principal—in the accounts and statements. **Without this adjusting entry, liabilities and interest expense are understated, and net income and equity are overstated.**

Basic Analysis	The expense Interest Expense is increased ₺50; the liability Interest Payable is increased ₺50.
Equation Analysis	**Assets** = **Liabilities** (Interest Payable +₺50) + **Equity** (Interest Expense −₺50)
Debit–Credit Analysis	Debits increase expenses: debit Interest Expense ₺50. Credits increase liabilities: credit Interest Payable ₺50.

Journal Entry

Oct. 31	Interest Expense	50	
	Interest Payable		50
	(To record interest on notes payable)		

Posting

Interest Expense			905
Oct. 31	Adj. 50		
Oct. 31	Bal. 50		

Interest Payable			230
		Oct. 31	Adj. 50
		Oct. 31	Bal. 50

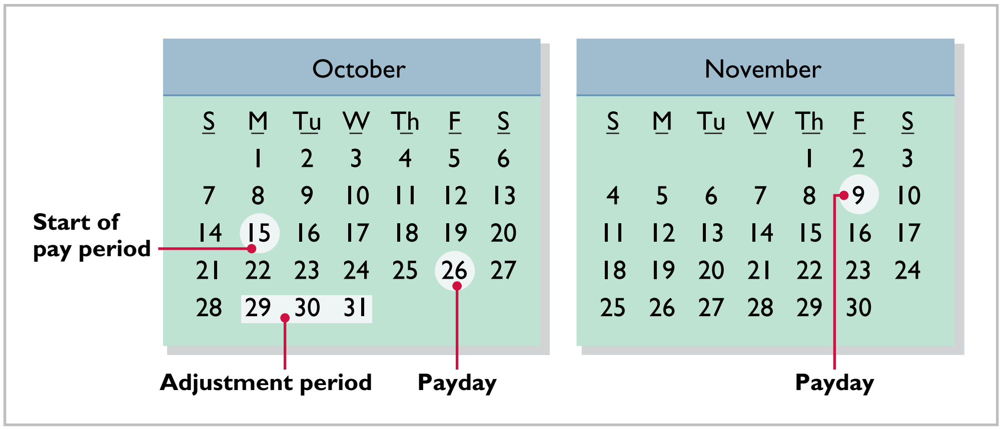
Illustration 3-18
Adjustment for accrued interest

ACCRUED SALARIES AND WAGES Companies pay for some types of expenses, such as employee salaries and wages, after the services have been performed. Yazici paid salaries and wages on October 26 for its employees' first two weeks of work. The next payment of salaries will not occur until November 9. As Illustration 3-19 shows, three working days remain in October (October 29–31).

At October 31, the salaries and wages for these three days represent an accrued expense and a related liability to Yazici. The employees receive total salaries and wages of ₺2,000 for a five-day work week, or ₺400 per day. Thus, accrued salaries and wages at October 31 are ₺1,200 (₺400 × 3). This accrual increases a liability, Salaries and Wages Payable. It also decreases equity by increasing an expense account, Salaries and Wages Expense, as shown in Illustration 3-20.

After this adjustment, the balance in Salaries and Wages Expense of ₺5,200 (13 days × ₺400) is the actual salary and wages expense for October. The balance

Illustration 3-19
Calendar showing Yazici's pay periods



Basic Analysis	The expense Salaries and Wages Expense is increased ₺1,200; the liability Salaries and Wages Payable is increased ₺1,200.
Equation Analysis	**Assets** = **Liabilities** (Salaries and Wages Payable +₺1,200) + **Equity** (Salaries and Wages Expense −₺1,200)
Debit–Credit Analysis	Debits increase expenses: debit Salaries and Wages Expense ₺1,200. Credits increase liabilities: credit Salaries and Wages Payable ₺1,200.

Journal Entry

Oct. 31	Salaries and Wages Expense	1,200	
	Salaries and Wages Payable		1,200
	(To record accrued salaries and wages)		

Posting

Salaries and Wages Expense			726
Oct. 26		4,000	
31	Adj.	1,200	
Oct. 31	Bal.	5,200	

Salaries and Wages Payable			212
	Oct. 31	Adj.	1,200
	Oct. 31	Bal.	1,200

Illustration 3-20
Adjustment for accrued salaries and wages

in Salaries and Wages Payable of ₺1,200 is the amount of the liability for salaries and wages Yazici owes as of October 31. **Without the ₺1,200 adjustment for salaries and wages, Yazici's expenses are understated ₺1,200 and its liabilities are understated ₺1,200.**

Yazici pays salaries and wages every two weeks. Consequently, the next payday is November 9, when the company will again pay total salaries and wages of ₺4,000. The payment consists of ₺1,200 of salaries and wages payable at October 31 plus ₺2,800 of salaries and wages expense for November (7 working days, as shown in the November calendar × ₺400). Therefore, Yazici makes the following entry on November 9.

Nov. 9	Salaries and Wages Payable	1,200	
	Salaries and Wages Expense	2,800	
	Cash		4,000
	(To record November 9 payroll)		

A = L + E
−1,200
−2,800 Exp
−4,000
Cash Flows
−4,000

This entry eliminates the liability for Salaries and Wages Payable that Yazici recorded in the October 31 adjusting entry, and it records the proper amount of Salaries and Wages Expense for the period between November 1 and November 9.

Illustration 3-21 summarizes the accounting for accrued expenses.

Illustration 3-21
Accounting for accrued expenses

ACCOUNTING FOR ACCRUED EXPENSES

Examples	Reason for Adjustment	Accounts Before Adjustment	Adjusting Entry
Interest, rent, salaries	Expenses have been incurred but not yet paid in cash or recorded.	Expenses understated. Liabilities understated.	Dr. Expenses Cr. Liabilities

People, Planet, and Profit Insight **Got Junk?**

© Nathan Gleave/iStockphoto

Do you have an old computer or two that you no longer use? How about an old TV that needs replacing? Many people do. Approximately 163,000 computers and televisions become obsolete *each day*. Yet, estimates indicate that only 11% of computers are recycled and 75% of all computers ever sold are sitting in storage somewhere, waiting to be disposed of. Each of these old TVs and computers is loaded with lead, cadmium, mercury, and other toxic chemicals. If you have one of these electronic gadgets, you have a responsibility, and a probable cost, for disposing of it. Companies have the same problem, but their discarded materials may include lead paint, asbestos, and other toxic chemicals.

Q What accounting issue might this cause for companies? (See page 157.)

> DO IT!

Adjusting Entries for Accruals

Micro Computer Services began operations on August 1, 2017. At the end of August 2017, management attempted to prepare monthly financial statements. The following information relates to August. (Amounts are in Chinese yuan.)

1. At August 31, the company owed its employees ¥8,000 in salaries and wages that will be paid on September 1.
2. On August 1, the company borrowed ¥300,000 from a local bank on a 15-year mortgage. The annual interest rate is 10%.
3. Revenue for services performed but unrecorded for August totaled ¥11,000.

Prepare the adjusting entries needed at August 31, 2017.

Solution

1. Salaries and Wages Expense	8,000	
Salaries and Wages Payable		8,000
(To record accrued salaries)		
2. Interest Expense	2,500	
Interest Payable		2,500
(To record accrued interest: ¥300,000 × 10% × $\frac{1}{12}$ = ¥2,500)		
3. Accounts Receivable	11,000	
Service Revenue		11,000
(To record revenue for services performed)		

Action Plan

✔ Make adjusting entries at the end of the period for revenues recognized and expenses incurred in the period.

✔ Don't forget to make adjusting entries for accruals. Adjusting entries for accruals will increase both a statement of financial position account and an income statement account.

Related exercise material: **BE3-7, E3-5, E3-6, E3-7, E3-8, E3-9, E3-10, E3-11, E3-12, and DO IT! 3-3.**

✔ The Navigator

Summary of Basic Relationships

Illustration 3-22 summarizes the four basic types of adjusting entries. Take some time to study and analyze the adjusting entries. Be sure to note that **each adjusting entry affects one statement of financial position account and one income statement account**.

Type of Adjustment	Accounts Before Adjustment	Adjusting Entry
Prepaid expenses	Assets overstated. Expenses understated.	Dr. Expenses Cr. Assets or Contra Assets
Unearned revenues	Liabilities overstated. Revenues understated.	Dr. Liabilities Cr. Revenues
Accrued revenues	Assets understated. Revenues understated.	Dr. Assets Cr. Revenues
Accrued expenses	Expenses understated. Liabilities understated.	Dr. Expenses Cr. Liabilities

Illustration 3-22
Summary of adjusting entries

Illustrations 3-23 (below) and 3-24 (on page 120) show the journalizing and posting of adjusting entries for Yazici Advertising A.Ş. on October 31. The ledger identifies all adjustments by the reference J2 because they have been recorded on page 2 of the general journal. The company may insert a center caption "Adjusting Entries" between the last transaction entry and the first adjusting entry in the journal. When you review the general ledger in Illustration 3-24, note that the entries highlighted in red are the adjustments.

Illustration 3-23
General journal showing adjusting entries

GENERAL JOURNAL J2

Date	Account Titles and Explanation	Ref.	Debit	Credit
2017	Adjusting Entries			
Oct. 31	Supplies Expense	631	1,500	
	Supplies	126		1,500
	(To record supplies used)			
31	Insurance Expense	722	50	
	Prepaid Insurance	130		50
	(To record insurance expired)			
31	Depreciation Expense	711	40	
	Accumulated Depreciation—Equipment	158		40
	(To record monthly depreciation)			
31	Unearned Service Revenue	209	400	
	Service Revenue	400		400
	(To record revenue for services performed)			
31	Accounts Receivable	112	200	
	Service Revenue	400		200
	(To record revenue for services performed)			
31	Interest Expense	905	50	
	Interest Payable	230		50
	(To record interest on notes payable)			
31	Salaries and Wages Expense	726	1,200	
	Salaries and Wages Payable	212		1,200
	(To record accrued salaries and wages)			

• HELPFUL HINT
1. Adjusting entries should not involve debits or credits to cash.
2. Evaluate whether the adjustment makes sense. For example, an adjustment to recognize supplies used should increase supplies expense.
3. Double-check all computations.
4. Each adjusting entry affects one statement of financial position account and one income statement account.

Illustration 3-24
General ledger after adjustment

GENERAL LEDGER

Cash No. 101

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1	10,000		10,000
2		J1	1,200		11,200
3		J1		900	10,300
4		J1		600	9,700
20		J1		500	9,200
26		J1		4,000	5,200
31		J1	10,000		15,200

Accounts Receivable No. 112

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	200		200

Supplies No. 126

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 5		J1	2,500		2,500
31	Adj. entry	J2		1,500	1,000

Prepaid Insurance No. 130

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 4		J1	600		600
31	Adj. entry	J2		50	550

Equipment No. 157

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1	5,000		5,000

Accumulated Depreciation—Equipment No. 158

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2		40	40

Notes Payable No. 200

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1		5,000	5,000

Accounts Payable No. 201

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 5		J1		2,500	2,500

Unearned Service Revenue No. 209

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 2		J1		1,200	1,200
31	Adj. entry	J2	400		800

Salaries and Wages Payable No. 212

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2		1,200	1,200

Interest Payable No. 230

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2		50	50

Share Capital—Ordinary No. 311

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1		10,000	10,000

Retained Earnings No. 320

Date	Explanation	Ref.	Debit	Credit	Balance
2017					

Dividends No. 332

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 20		J1	500		500

Service Revenue No. 400

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31		J1		10,000	10,000
31	Adj. entry	J2		400	10,400
31	Adj. entry	J2		200	10,600

Supplies Expense No. 631

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	1,500		1,500

Depreciation Expense No. 711

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	40		40

Insurance Expense No. 722

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	50		50

Salaries and Wages Expense No. 726

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 26		J1	4,000		4,000
31	Adj. entry	J2	1,200		5,200

Rent Expense No. 729

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 3		J1	900		900

Interest Expense No. 905

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	50		50

The Adjusted Trial Balance and Financial Statements

Learning Objective 7
Describe the nature and purpose of an adjusted trial balance.

After a company has journalized and posted all adjusting entries, it prepares another trial balance from the ledger accounts. This trial balance is called an **adjusted trial balance**. It shows the balances of all accounts, including those adjusted, at the end of the accounting period. The purpose of an adjusted trial balance is to **prove the equality** of the total debit balances and the total credit balances in the ledger after all adjustments. Because the accounts contain all data needed for financial statements, the adjusted trial balance is the **primary basis for the preparation of financial statements**.

Preparing the Adjusted Trial Balance

Illustration 3-25 presents the adjusted trial balance for Yazici Advertising prepared from the ledger accounts in Illustration 3-24. The amounts affected by the adjusting entries are highlighted in red. Compare these amounts to those in the unadjusted trial balance in Illustration 3-3 on page 105. In this comparison, you will see that there are more accounts in the adjusted trial balance as a result of the adjusting entries made at the end of the month.

Illustration 3-25
Adjusted trial balance

YAZICI ADVERTISING A.Ş.
Adjusted Trial Balance
October 31, 2017

	Debit	Credit
Cash	₺ 15,200	
Accounts Receivable	**200**	
Supplies	**1,000**	
Prepaid Insurance	**550**	
Equipment	5,000	
Accumulated Depreciation—Equipment		₺ **40**
Notes Payable		5,000
Accounts Payable		2,500
Interest Payable		**50**
Unearned Service Revenue		**800**
Salaries and Wages Payable		**1,200**
Share Capital—Ordinary		10,000
Retained Earnings		–0–
Dividends	500	
Service Revenue		10,600
Salaries and Wages Expense	**5,200**	
Supplies Expense	**1,500**	
Rent Expense	900	
Insurance Expense	**50**	
Interest Expense	**50**	
Depreciation Expense	**40**	
	₺30,190	**₺30,190**

Preparing Financial Statements

Companies can prepare financial statements directly from the adjusted trial balance. Illustrations 3-26 and 3-27 present the interrelationships of data in the adjusted trial balance and the financial statements.

As Illustration 3-26 shows, companies prepare the income statement from the revenue and expense accounts. Next, they use the Retained Earnings and Dividends accounts and the net income (or net loss) from the income statement to prepare the retained earnings statement. As Illustration 3-27 shows, companies then prepare the statement of financial position from the asset and liability accounts and the ending retained earnings balance as reported in the retained earnings statement.

Illustration 3-26

Preparation of the income statement and retained earnings statement from the adjusted trial balance

YAZICI ADVERTISING A.Ş.
Adjusted Trial Balance
October 31, 2017

Account	Debit	Credit
Cash	₺15,200	
Accounts Receivable	200	
Supplies	1,000	
Prepaid Insurance	550	
Equipment	5,000	
Accumulated Depreciation—Equipment		₺ 40
Notes Payable		5,000
Accounts Payable		2,500
Unearned Service Revenue		800
Salaries and Wages Payable		1,200
Interest Payable		50
Share Capital—Ordinary		10,000
Retained Earnings		–0–
Dividends	500	
Service Revenue		10,600
Salaries and Wages Expense	5,200	
Supplies Expense	1,500	
Rent Expense	900	
Insurance Expense	50	
Interest Expense	50	
Depreciation Expense	40	
	₺30,190	₺30,190

YAZICI ADVERTISING A.Ş.
Income Statement
For the Month Ended October 31, 2017

Revenues		
Service revenue		₺10,600
Expenses		
Salaries and wages expense	₺5,200	
Supplies expense	1,500	
Rent expense	900	
Insurance expense	50	
Interest expense	50	
Depreciation expense	40	
Total expenses		7,740
Net income		₺ 2,860

YAZICI ADVERTISING A.Ş.
Retained Earnings Statement
For the Month Ended October 31, 2017

Retained earnings, October 1	₺ –0–
Add: Net income	2,860
	2,860
Less: Dividends	500
Retained earnings, October 31	₺2,360

To statement of financial position

YAZICI ADVERTISING A.Ş.
Adjusted Trial Balance
October 31, 2017

Account	Debit	Credit
Cash	₺15,200	
Accounts Receivable	200	
Supplies	1,000	
Prepaid Insurance	550	
Equipment	5,000	
Accumulated Depreciation—Equipment		₺ 40
Notes Payable		5,000
Accounts Payable		2,500
Unearned Service Revenue		800
Salaries and Wages Payable		1,200
Interest Payable		50
Share Capital—Ordinary		10,000
Retained Earnings		–0–
Dividends	500	
Service Revenue		10,600
Salaries and Wages Expense	5,200	
Supplies Expense	1,500	
Rent Expense	900	
Insurance Expense	50	
Interest Expense	50	
Depreciation Expense	40	
	₺30,190	₺30,190

YAZICI ADVERTISING A.Ş.
Statement of Financial Position
October 31, 2017

Assets		
Equipment	₺5,000	
Less: Accumulated depreciation—equip.	40	₺ 4,960
Prepaid insurance		550
Supplies		1,000
Accounts receivable		200
Cash		15,200
Total assets		₺21,910
Equity and Liabilities		
Equity		
Share capital—ordinary	₺10,000	
Retained earnings	2,360	₺12,360
Liabilities		
Notes payable	5,000	
Accounts payable	2,500	
Unearned service revenue	800	
Salaries and wages payable	1,200	
Interest payable	50	9,550
Total equity and liabilities		₺21,910

Balance at Oct. 31 from retained earnings statement in Illustration 3-26

Illustration 3-27
Preparation of the statement of financial position from the adjusted trial balance

> **DO IT!**

Trial Balance

Kang Company was organized on April 1, 2017. The company prepares quarterly financial statements. The adjusted trial balance amounts at June 30 are shown below. (Amounts are in millions.)

	Debit		Credit
Cash	₩ 6,700	Accumulated Depreciation—Equipment	₩ 850
Accounts Receivable	600	Notes Payable	5,000
Prepaid Rent	900	Accounts Payable	1,510
Supplies	1,000	Salaries and Wages Payable	400
Equipment	15,000	Interest Payable	50
Dividends	600	Unearned Rent Revenue	500
Salaries and Wages Expense	9,400	Share Capital—Ordinary	14,000
Rent Expense	1,500	Service Revenue	14,200
Depreciation Expense	850	Rent Revenue	800
Supplies Expense	200		
Utilities Expense	510		
Interest Expense	50		
	₩37,310		₩37,310

(a) Determine the net income for the quarter April 1 to June 30.
(b) Determine the total assets and total liabilities at June 30, 2017, for Kang Company.
(c) Determine the amount that appears for retained earnings at June 30, 2017.

Action Plan

✔ In an adjusted trial balance, make sure all asset, liability, revenue, and expense accounts are properly stated.

✔ To determine the ending balance in Retained Earnings, add net income and subtract dividends.

Solution

(a) The net income is determined by adding revenues and subtracting expenses. The net income is computed as follows (in millions).

Revenues		
Service revenue	₩14,200	
Rent revenue	800	
Total revenues		₩15,000
Expenses		
Salaries and wages expense	₩ 9,400	
Rent expense	1,500	
Depreciation expense	850	
Utilities expense	510	
Supplies expense	200	
Interest expense	50	
Total expenses		12,510
Net income		₩ 2,490

(b) Total assets and liabilities are computed as follows (in millions).

Assets		
Equipment	₩15,000	
Less: Accumulated depreciation—equipment	850	₩14,150
Prepaid rent		900
Supplies		1,000
Accounts receivable		600
Cash		6,700
Total assets		₩23,350

Liabilities	
Notes payable	₩5,000
Accounts payable	1,510
Unearned rent revenue	500
Salaries and wages payable	400
Interest payable	50
Total liabilities	₩7,460

(c)

Retained earnings, April 1	₩ 0
Add: Net income	2,490
Less: Dividends	600
Retained earnings, June 30	₩ 1,890

Related exercise material: **BE3-9, BE3-10, E3-11, E3-13, and DO IT! 3-4.**

✔ The Navigator

APPENDIX 3A Alternative Treatment of Prepaid Expenses and Unearned Revenues

Learning Objective *8

Prepare adjusting entries for the alternative treatment of deferrals.

In discussing adjusting entries for prepaid expenses and unearned revenues, we illustrated transactions for which companies made the initial entries to statement of financial position accounts. In the case of prepaid expenses, the company debited the prepayment to an asset account. In the case of unearned revenues, the company credited a liability account to record the cash received.

Some companies use an alternative treatment: (1) When a company prepays an expense, it debits that amount to an expense account. (2) When it receives payment for future services, it credits the amount to a revenue account. In this appendix, we describe the circumstances that justify such entries and the different adjusting entries that may be required. This alternative treatment of prepaid expenses and unearned revenues has the same effect on the financial statements as the procedures described in the chapter.

Prepaid Expenses

Prepaid expenses become expired costs either through the passage of time (e.g., insurance) or through consumption (e.g., advertising supplies). If, at the time of purchase, the company expects to consume the supplies before the next financial statement date, **it may choose to debit (increase) an expense account rather than an asset account. This alternative treatment is simply more convenient.**

Assume that Yazici Advertising A.Ş. expects that it will use before the end of the month all of the supplies purchased on October 5. A debit of ₺2,500 to Supplies Expense (rather than to the asset account Supplies) on October 5 will eliminate the need for an adjusting entry on October 31. At October 31, the Supplies Expense account will show a balance of ₺2,500, which is the cost of supplies used between October 5 and October 31.

But what if the company does not use all the supplies? For example, what if an inventory of ₺1,000 of advertising supplies remains on October 31? Obviously, the company would need to make an adjusting entry. Prior to adjustment, the expense account Supplies Expense is overstated ₺1,000, and the asset account Supplies is understated ₺1,000. Thus, Yazici makes the following adjusting entry.

Oct. 31	Supplies	1,000	
	Supplies Expense		1,000
	(To record supplies inventory)		

A	=	L	+	E
+1,000				
				+1,000 Exp

Cash Flows
no effect

After the company posts the adjusting entry, the accounts show the following.

Illustration 3A-1
Prepaid expenses accounts after adjustment

Supplies		Supplies Expense	
10/31 **Adj.** **1,000**		10/5 2,500	10/31 **Adj.** **1,000**
		10/31 **Bal.** **1,500**	

After adjustment, the asset account Supplies shows a balance of ₺1,000, which is equal to the cost of supplies on hand at October 31. In addition, Supplies Expense shows a balance of ₺1,500. This is equal to the cost of supplies used between October 5 and October 31. Without the adjusting entry, expenses are overstated and net income is understated by ₺1,000 in the October income statement. Also, both assets and equity are understated by ₺1,000 on the October 31 statement of financial position.

Illustration 3A-2 compares the entries and accounts for advertising supplies in the two adjustment approaches.

Illustration 3A-2
Adjustment approaches—a comparison

Prepayment Initially Debited to Asset Account (per chapter)				**Prepayment Initially Debited to Expense Account (per appendix)**			
Oct. 5	Supplies	2,500		Oct. 5	Supplies Expense	2,500	
	Accounts Payable		2,500		Accounts Payable		2,500
Oct. 31	Supplies Expense	1,500		Oct. 31	Supplies	1,000	
	Supplies		1,500		Supplies Expense		1,000

After Yazici posts the entries, the accounts appear as follows.

Illustration 3A-3
Comparison of accounts

(per chapter) Supplies

10/5		2,500	10/31	**Adj.**	**1,500**
10/31	**Bal.**	**1,000**			

(per appendix) Supplies

10/31	**Adj.**	**1,000**			

(per chapter) Supplies Expense

10/31	**Adj.**	**1,500**			

(per appendix) Supplies Expense

10/5		2,500	10/31	**Adj.**	**1,000**
10/31	**Bal.**	**1,500**			

Note that the account balances under each alternative are the same at October 31: Supplies ₺1,000 and Supplies Expense ₺1,500.

Unearned Revenues

Unearned revenues are recognized as revenue at the time services are performed. Similar to the case for prepaid expenses, companies may credit (increase) a revenue account when they receive cash for future services.

• HELPFUL HINT
The required adjusted balances here are Service Revenue ₺400 and Unearned Service Revenue ₺800.

To illustrate, assume that Yazici Advertising received ₺1,200 for future services on October 2. Yazici expects to perform the services before October 31.[1] In such a case, the company credits Service Revenue. If Yazici in fact performs the service before October 31, no adjustment is needed.

However, if at the statement date Yazici has not performed ₺800 of the services, it would make an adjusting entry. Without the entry, the revenue account Service Revenue is overstated ₺800, and the liability account Unearned Service Revenue is understated ₺800. Thus, Yazici makes the following adjusting entry.

A = L + E
−800 Rev
+800

Cash Flows
no effect

Oct. 31	Service Revenue	800	
	Unearned Service Revenue		800
	(To record unearned service revenue)		

After Yazici posts the adjusting entry, the accounts show the following.

Illustration 3A-4
Unearned service revenue accounts after adjustment

Unearned Service Revenue

			10/31	**Adj.**	**800**

Service Revenue

10/31	**Adj.**	**800**	10/2		1,200
			10/31	**Bal.**	**400**

The liability account Unearned Service Revenue shows a balance of ₺800. This equals the services that will be performed in the future. In addition, the balance in Service Revenue equals the services performed in October. Without the adjusting entry, both revenues and net income are overstated by ₺800 in the October income statement. Also, liabilities are understated by ₺800, and equity is overstated by ₺800 on the October 31 statement of financial position.

Illustration 3A-5 compares the entries and accounts for initially recording unearned service revenue in (1) a liability account or (2) a revenue account.

[1]This example focuses only on the alternative treatment of unearned revenues. For simplicity, we have ignored the entries to Service Revenue pertaining to the immediate recognition of revenue (₺10,000) and the adjusting entry for accrued revenue (₺200).

Illustration 3A-5
Adjustment approaches—a comparison

Unearned Service Revenue Initially Credited to Liability Account (per chapter)				**Unearned Service Revenue Initially Credited to Revenue Account (per appendix)**			
Oct. 2	Cash	1,200		Oct. 2	Cash	1,200	
	Unearned Service Revenue		1,200		Service Revenue		1,200
Oct. 31	Unearned Service Revenue	400		Oct. 31	Service Revenue	800	
	Service Revenue		400		Unearned Service Revenue		800

After Yazici posts the entries, the accounts appear as follows.

Illustration 3A-6
Comparison of accounts

(per chapter) Unearned Service Revenue

10/31 **Adj. 400**	10/2 1,200
	10/31 **Bal. 800**

(per appendix) Unearned Service Revenue

	10/31 **Adj. 800**

(per chapter) Service Revenue

	10/31 **Adj. 400**

(per appendix) Service Revenue

10/31 **Adj. 800**	10/2 1,200
	10/31 **Bal. 400**

Note that the balances in the accounts are the same under the two alternatives: Unearned Service Revenue ₺800 and Service Revenue ₺400.

Summary of Additional Adjustment Relationships

Illustration 3A-7 provides a summary of basic relationships for deferrals.

Illustration 3A-7
Summary of basic relationships for deferrals

Type of Adjustment	Reason for Adjustment	Accounts before Adjustment	Adjusting Entry
Prepaid expenses	(a) Prepaid expenses initially recorded in asset accounts have been used.	Assets overstated. Expenses understated.	Dr. Expenses Cr. Assets
	(b) **Prepaid expenses initially recorded in expense accounts have not been used.**	**Assets understated. Expenses overstated.**	**Dr. Assets Cr. Expenses**
Unearned revenues	(a) Unearned revenues initially recorded in liability accounts are now recognized as revenue.	Liabilities overstated. Revenues understated.	Dr. Liabilities Cr. Revenues
	(b) **Unearned revenues initially recorded in revenue accounts are still unearned.**	**Liabilities understated. Revenues overstated.**	**Dr. Revenues Cr. Liabilities**

Alternative adjusting entries **do not apply** to accrued revenues and accrued expenses because **no entries occur before companies make these types of adjusting entries**.

APPENDIX 3B Concepts in Action

Learning Objective *9

Discuss financial reporting concepts.

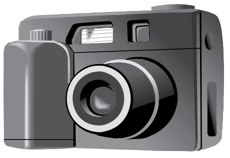
This appendix provides a summary of the financial reporting concepts used in this textbook. In addition, it provides other useful concepts that accountants use as a basis for recording and reporting financial information.

Qualities of Useful Information

Recently, the IASB and FASB completed the first phase of a joint project in which they developed a conceptual framework to serve as the basis for future accounting standards. The framework begins by stating that the primary objective of financial reporting is to provide financial information that is **useful** to investors and creditors for making decisions about providing capital. According to the IASB, useful information should possess two fundamental qualities, relevance and faithful representation, as shown in Illustration 3B-1.

Illustration 3B-1
Fundamental qualities of useful information

Relevance Accounting information has **relevance** if it would make a difference in a business decision. Information is considered relevant if it provides information that has **predictive value**, that is, helps provide accurate expectations about the future, and has **confirmatory value**, that is, confirms or corrects prior expectations. **Materiality** is a company-specific aspect of relevance. An item is material when its **size** makes it likely to influence the decision of an investor or creditor.



Faithful Representation **Faithful representation** means that information accurately depicts what really happened. To provide a faithful representation, information must be **complete** (nothing important has been omitted), **neutral** (is not biased toward one position or another), and **free from error**.

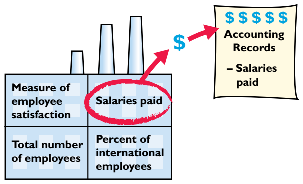
ENHANCING QUALITIES

In addition to the two fundamental qualities, the IASB and FASB also describe a number of enhancing qualities of useful information. These include **comparability**, **verifiability**, **timeliness**, and **understandability**. In accounting, **comparability** results when different companies use the same accounting principles. Another type of comparability is consistency. **Consistency** means that a company uses the same accounting principles and methods from year to year. Information is **verifiable** if independent observers, using the same methods, obtain similar results. For accounting information to have relevance, it must be **timely**. That is, it must be available to decision-makers before it loses its capacity to influence decisions. For example, public companies like SAP (DEU) or Tencent Holdings (CHN) usually provide their annual reports to investors within 60 days of their year-end. Information has the quality of **understandability** if it is presented in a clear and concise fashion, so that reasonably informed users of that information can interpret it and comprehend its meaning.

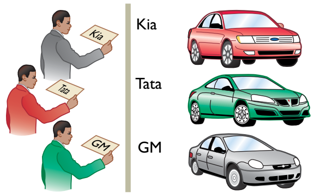
Assumptions in Financial Reporting

To develop accounting standards, the IASB relies on some key assumptions, as shown in Illustration 3B-2. These include assumptions about the monetary unit, economic entity, time period, and going concern.

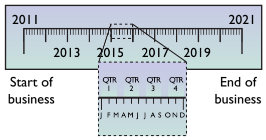
Illustration 3B-2
Key assumptions in financial reporting



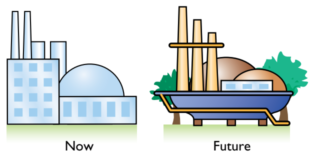
Monetary Unit Assumption The **monetary unit assumption** (discussed in Chapter 1) requires that only those things that can be expressed in money are included in the accounting records. This means that certain important information needed by investors, creditors, and managers, such as customer satisfaction, is not reported in the financial statements.



Economic Entity Assumption The **economic entity assumption** (discussed in Chapter 1) states that the activities of the entity must be kept separate and distinct from the activities of the owner. In order to assess a company's performance and financial position accurately, it is important not to blur company transactions with personal transactions (especially those of its managers) or transactions of other companies.



Time Period (Periodicity) Assumption Notice that the income statement, retained earnings statement, and statement of cash flows all cover periods of one year, and the statement of financial position is prepared at the end of each year. The **time period assumption** (discussed in Chapter 3) states that the life of a business can be divided into artificial time periods and that useful reports covering those periods can be prepared for the business.



Going Concern Assumption The **going concern assumption** (discussed in Chapter 9) states that the business will remain in operation for the foreseeable future. Of course, many businesses do fail, but in general it is reasonable to assume that the business will continue operating.

Ethics Note

The importance of the economic entity assumption is illustrated by scandals involving Adelphia (USA). In this case, senior company employees entered into transactions that blurred the line between the employees' financial interests and those of the company. For example, Adelphia guaranteed over $2 billion of loans to the founding family.

Principles in Financial Reporting

MEASUREMENT PRINCIPLES

IFRS generally uses one of two measurement principles, the historical cost principle or the fair value principle. Selection of which principle to follow generally relates to trade-offs between relevance and faithful representation.

HISTORICAL COST PRINCIPLE The **historical cost principle** (or cost principle, discussed in Chapter 1) dictates that companies record assets at their cost. This is true not only at the time the asset is purchased but also over the time the asset is held. For example, if land that was purchased for €30,000 increases in value to €40,000, it continues to be reported at €30,000.

FAIR VALUE PRINCIPLE The **fair value principle** (discussed in Chapter 1) indicates that assets and liabilities should be reported at fair value (the price received to sell an asset or settle a liability). Fair value information may be more useful than historical cost for certain types of assets and liabilities. For example, certain investment securities are reported at fair value because market price information is often readily available for these types of assets. In choosing between cost and fair value, two qualities that make accounting information useful for decision-making are used—relevance and faithful representation. In determining which measurement principle to use, the factual nature of cost figures are weighed versus the relevance of fair value. In general, most assets follow the historical cost principle because fair values may not be representationally faithful.

Only in situations where assets are actively traded, such as investment securities, is the fair value principle applied.

REVENUE RECOGNITION PRINCIPLE

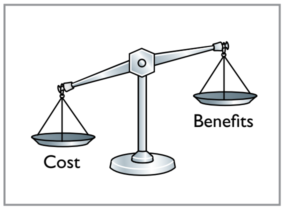
The **revenue recognition principle** requires that companies recognize revenue in the accounting period in which the performance obligation is satisfied. As discussed earlier in the chapter, in a service company, revenue is recognized at the time the service is performed. In a merchandising company, the performance obligation is generally satisfied when the goods transfer from the seller to the buyer (discussed in Chapter 4). At this point, the sales transaction is complete and the sales price established.

EXPENSE RECOGNITION PRINCIPLE

The **expense recognition principle** (often referred to as the matching principle, discussed earlier in the chapter) dictates that efforts (expenses) be matched with results (revenues). Thus, expenses follow revenues.

FULL DISCLOSURE PRINCIPLE

The **full disclosure principle** (discussed in Chapter 11) requires that companies disclose all circumstances and events that would make a difference to financial statement users. If an important item cannot reasonably be reported directly in one of the four types of financial statements, then it should be discussed in notes that accompany the statements.



Cost Constraint

Providing information is costly. In deciding whether companies should be required to provide a certain type of information, accounting standard-setters consider the **cost constraint**. It weighs the cost that companies will incur to provide the information against the benefit that financial statement users will gain from having the information available.

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Explain the time period assumption.** The time period assumption assumes that the economic life of a business is divided into artificial time periods.

2 **Explain the accrual basis of accounting.** Accrual-basis accounting means that companies record events that change a company's financial statements in the periods in which those events occur, rather than in the periods in which the company receives or pays cash.

3 **Explain the reasons for adjusting entries.** Companies make adjusting entries at the end of an accounting period. Such entries ensure that companies recognize revenues in the period in which the performance obligation is satisfied and recognize expenses in the period in which they are incurred.

4 **Identify the major types of adjusting entries.** The major types of adjusting entries are deferrals (prepaid expenses and unearned revenues) and accruals (accrued revenues and accrued expenses).

5 **Prepare adjusting entries for deferrals.** Deferrals are either prepaid expenses or unearned revenues. Companies make adjusting entries for deferrals to record the portion of the prepayment that represents the expense incurred or the revenue for services performed in the current accounting period.

6 **Prepare adjusting entries for accruals.** Accruals are either accrued revenues or accrued expenses. Companies make adjusting entries for accruals to record revenues for services performed and expenses incurred in the current accounting period that have not been recognized through daily entries.

7 **Describe the nature and purpose of an adjusted trial balance.** An adjusted trial balance shows the balances of all accounts, including those that have been adjusted, at the end of an accounting period. Its purpose is to prove the equality of the total debit balances and total credit balances in the ledger after all adjustments.

***8 Prepare adjusting entries for the alternative treatment of deferrals.** Companies may initially debit prepayments to an expense account. Likewise, they may credit unearned revenues to a revenue account. At the end of the period, these accounts may be overstated. The adjusting entries for prepaid expenses include a debit to an asset account and a credit to an expense account. Adjusting entries for unearned revenues include a debit to a revenue account and a credit to a liability account.

***9 Discuss financial reporting concepts.** To be judged useful, information should have the primary characteristics of relevance and faithful representation. In addition, it should be comparable, consistent, verifiable, timely, and understandable.

The *monetary unit assumption* requires that companies include in the accounting records only transaction data that can be expressed in terms of money. The *economic entity assumption* states that economic events can be identified with a particular unit of accountability. The *time period assumption* states that the economic life of a business can be divided into artificial time periods and that meaningful accounting reports can be prepared for each period. The *going concern assumption* states that the company will continue in operation long enough to carry out its existing objectives and commitments.

The *historical cost principle* states that companies should record assets at their cost. The *fair value principle* indicates that assets and liabilities should be reported at fair value. The *revenue recognition principle* requires that companies recognize revenue in the accounting period in which the performance obligation is satisfied. The *expense recognition principle* dictates that efforts (expenses) be matched with results (revenues). The *full disclosure principle* requires that companies disclose circumstances and events that matter to financial statement users.

The *cost constraint* weighs the cost that companies incur to provide a type of information against its benefits to financial statement users.

GLOSSARY REVIEW

Accrual-basis accounting Accounting basis in which companies record transactions that change a company's financial statements in the periods in which the events occur. (p. 102).

Accruals Adjusting entries for either accrued revenues or accrued expenses. (p. 105).

Accrued expenses Expenses incurred but not yet paid in cash or recorded. (p. 114).

Accrued revenues Revenues for services performed but not yet received in cash or recorded. (p. 113).

Adjusted trial balance A list of accounts and their balances after the company has made all adjustments. (p. 121).

Adjusting entries Entries made at the end of an accounting period to ensure that companies follow the revenue and expense recognition principles. (p. 104).

Book value The difference between the cost of a depreciable asset and its related accumulated depreciation. (p. 109).

Calendar year An accounting period that extends from January 1 to December 31. (p. 102).

Cash-basis accounting Accounting basis in which companies record revenue when they receive cash and an expense when they pay out cash. (p. 102).

***Comparability** Ability to compare the accounting information of different companies because they use the same accounting principles. (p. 128).

***Consistency** Use of the same accounting principles and methods from year to year within a company. (p. 128).

Contra asset account An account offset against an asset account on the statement of financial position. (p. 108).

***Cost constraint** Constraint of determining whether the cost that companies will incur to provide the information will outweigh the benefit that financial statement users will gain from having the information available. (p. 130).

Deferrals Adjusting entries for either prepaid expenses or unearned revenues. (p. 105).

Depreciation The allocation of the cost of an asset to expense over its useful life in a rational and systematic manner. (p. 108).

***Economic entity assumption** An assumption that every economic entity can be separately identified and accounted for. (p. 129).

Expense recognition principle (matching principle) The principle that companies match efforts (expenses) with accomplishments (revenues). (pp. 103, 130).

***Fair value principle** Assets and liabilities should be reported at fair value (the price received to sell an asset or settle a liability). (p. 129).

***Faithful representation** Information that accurately depicts what really happened. (p. 128).

Fiscal year An accounting period that is one year in length. (p. 102).

***Full disclosure principle** Accounting principle that dictates that companies disclose circumstances and events that make a difference to financial statement users. (p. 130).

***Going concern assumption** The assumption that the company will continue in operation for the foreseeable future. (p. 129).

***Historical cost principle** An accounting principle that states that companies should record assets at their cost. (p. 129).

Interim periods Monthly or quarterly accounting time periods. (p. 102).

***Materiality** A company-specific aspect of relevance. An item is material when its size makes it likely to influence the decision of an investor or creditor. (p. 128).

***Monetary unit assumption** An assumption that requires that only those things that can be expressed in money are included in the accounting records. (p. 129).

Prepaid expenses (prepayments) Expenses paid in cash before they are used or consumed. (p. 106).

***Relevance** The quality of information that indicates the information makes a difference in a decision. (p. 128).

Revenue recognition principle The principle that companies recognize revenue in the accounting period in which the performance obligation is satisfied. (pp. 103, 130).

***Timely** Information that is available to decision-makers before it loses its capacity to influence decisions. (p. 128).

Time period assumption An assumption that accountants can divide the economic life of a business into artificial time periods. (pp. 102, 129).

***Understandability** Information presented in a clear and concise fashion so that users can interpret it and comprehend its meaning. (p. 128).

Unearned revenue A liability recorded for cash received before services are performed. (p. 110).

Useful life The length of service of a long-lived asset. (p. 108).

***Verifiable** The quality of information that occurs when independent observers, using the same methods, obtain similar results. (p. 128).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** The time period assumption states that:
(a) companies must wait until the calendar year is completed to prepare financial statements.
(b) companies use the fiscal year to report financial information.
(c) the economic life of a business can be divided into artificial time periods.
(d) companies record information in the time period in which the events occur.

(LO 2) **2.** The revenue recognition principle states that:
(a) revenue should be recognized in the accounting period in which a performance obligation is satisfied.
(b) expenses should be matched with revenues.
(c) the economic life of a business can be divided into artificial time periods.
(d) the fiscal year should correspond with the calendar year.

(LO 2) **3.** Which of the following statements about the accrual basis of accounting is **false**?
(a) Events that change a company's financial statements are recorded in the periods in which the events occur.
(b) Revenue is recognized in the period in which services are performed.
(c) The accrual basis is in accordance with IFRS.
(d) Revenue is recorded only when cash is received, and expense is recorded only when cash is paid.

(LO 2) **4.** The principle or assumption dictating that efforts (expenses) be matched with accomplishments (revenues) is the:
(a) expense recognition principle.
(b) cost assumption.
(c) time period assumption.
(d) revenue recognition principle.

(LO 3) **5.** Adjusting entries are made to ensure that:
(a) expenses are recognized in the period in which they are incurred.
(b) revenues are recorded in the period in which services are performed.
(c) statement of financial position and income statement accounts have correct balances at the end of an accounting period.
(d) All the responses above are correct.

6. Each of the following is a major type (or category) of adjusting entries **except**: (LO 4)
(a) prepaid expenses.
(b) accrued revenues.
(c) accrued expenses.
(d) recognized revenues.

7. The trial balance shows Supplies NT$13,500 and Supplies Expense NT$0. If NT$6,000 of supplies are on hand at the end of the period, the adjusting entry is: (LO 5)

(a)	Supplies	6,000	
	Supplies Expense		6,000
(b)	Supplies	7,500	
	Supplies Expense		7,500
(c)	Supplies Expense	7,500	
	Supplies		7,500
(d)	Supplies Expense	6,000	
	Supplies		6,000

8. Adjustments for prepaid expenses: (LO 5)
(a) decrease assets and increase revenues.
(b) decrease expenses and increase assets.
(c) decrease assets and increase expenses.
(d) decrease revenues and increase assets.

9. Accumulated Depreciation is: (LO 5)
(a) a contra asset account.
(b) an expense account.
(c) an equity account.
(d) a liability account.

10. Queenan Company computes depreciation on delivery equipment at HK$10,000 for the month of June. The adjusting entry to record this depreciation is as follows. (LO 5)

(a) Accumulated Depreciation— Queenan Company	10,000	
Depreciation Expense		10,000
(b) Depreciation Expense	10,000	
Equipment		10,000
(c) Depreciation Expense	10,000	
Accumulated Depreciation— Equipment		10,000
(d) Equipment Expense	10,000	
Accumulated Depreciation— Equipment		10,000

(LO 5) **11.** Adjustments for unearned revenues:
(a) decrease liabilities and increase revenues.
(b) have an assets-and-revenues-account relationship.
(c) increase assets and increase revenues.
(d) decrease revenues and decrease assets.

(LO 6) **12.** Adjustments for accrued revenues:
(a) have a liabilities-and-revenues-account relationship.
(b) have an assets-and-revenues-account relationship.
(c) decrease assets and revenues.
(d) decrease liabilities and increase revenues.

(LO 6) **13.** Kathy Siska earned a salary of R$400 for the last week of September. She will be paid on October 1. The adjusting entry for Kathy's employer at September 30 is:
(a) No entry is required.

(b) Salaries and Wages Expense	400	
Salaries and Wages Payable		400
(c) Salaries and Wages Expense	400	
Cash		400
(d) Salaries and Wages Payable	400	
Cash		400

14. Which of the following statements is **incorrect** concerning the adjusted trial balance? (LO 7)
(a) An adjusted trial balance proves the equality of the total debit balances and the total credit balances in the ledger after all adjustments are made.
(b) The adjusted trial balance provides the primary basis for the preparation of financial statements.
(c) The adjusted trial balance lists the account balances segregated by assets and liabilities.
(d) The adjusted trial balance is prepared after the adjusting entries have been journalized and posted.

***15.** The trial balance shows Supplies €0 and Supplies Expense €1,500. If €800 of supplies are on hand at the end of the period, the adjusting entry is: (LO 8)
(a) debit Supplies 800 and credit Supplies Expense 800.
(b) debit Supplies Expense 800 and credit Supplies 800.
(c) debit Supplies 700 and credit Supplies Expense 700.
(d) debit Supplies Expense 700 and credit Supplies 700.

***16.** Neutrality is an ingredient of: (LO 9)

	Faithful Representation	Relevance
(a)	Yes	Yes
(b)	No	No
(c)	Yes	No
(d)	No	Yes

***17.** Which item is a constraint in financial accounting? (LO 9)
(a) Comparability. (c) Cost.
(b) Materiality. (d) Consistency.

Solutions

1. (c) The economic life of a business can be divided into artificial time periods. The other choices are incorrect because (a) companies report their activities on a more frequent basis and not necessarily based on a calendar year; (b) companies report financial information more frequently than annually, such as monthly or quarterly, in order to evaluate results of operations; and (d) this statement describes accrual-basis accounting.

2. (a) Revenue should be recognized in the accounting period in which a performance obligation is satisfied. The other choices are incorrect because (b) defines the expense recognition principle, (c) describes the time period assumption, and (d) a company's fiscal year does not need to correspond with the calendar year.

3. (d) Under the accrual basis of accounting, revenue is recognized when the performance obligation is satisfied, not when cash is received, and expense is recognized when incurred, not when cash is paid. The other choices are true statements.

4. (a) The expense recognition principle dictates that expenses be matched with revenues. The other choices are incorrect because (b) there is no cost assumption, but the historical cost principle states that assets should be recorded at their cost; (c) the time period assumption states that the economic life of a business can be divided into artificial time periods; and (d) the revenue recognition principle indicates that revenue should be recognized in the accounting period in which a performance obligation is satisfied.

5. (d) Adjusting entries are made for the reasons noted in choices (a), (b), and (c). The other choices are true statements, but (d) is the better answer.

6. (d) Unearned revenues, not recognized revenues, is one of the major categories of adjusting entries. The other choices all list one of the major categories of adjusting entries.

7. (c) Debiting Supplies Expense for NT$7,500 and crediting Supplies for NT$7,500 will decrease Supplies and increase Supplies Expense. The other choices are incorrect because (a) will increase Supplies and decrease Supplies Expense and also for the wrong amounts, (b) will increase Supplies and decrease Supplies Expense, and (d) will cause Supplies to have an incorrect balance of NT$7,500 (NT$13,500 − NT$6,000) and Supplies Expense to have an incorrect balance of NT$6,000 (NT$0 + NT$6,000).

8. (c) Adjustments for prepaid expenses decrease assets and increase expenses. The other choices are incorrect because an adjusting entry for prepaid expenses (a) increases expenses, not revenues; (b) increases, not decreases, expenses and decreases, not increases, assets; and (d) increases, not decreases, revenues and decreases, not increases, assets.

9. (a) Accumulated Depreciation is a contra asset account; it is offset against an asset account on the statement of financial position. The other choices are incorrect because Accumulated Depreciation is not (b) an expense account nor located on the income statement, (c) an equity account, or (d) a liability account.

10. (c) The adjusting entry is to debit Depreciation Expense and credit Accumulated Depreciation—Equipment. The other choices are incorrect because (a) the contra asset account title includes the asset being depreciated, not the company name; (b) the credit should be to the contra asset account, not directly to the asset; and (d) the debit for this entry should be Depreciation Expense, not Equipment Expense.

11. (a) Adjustments for unearned revenues will consist of a debit (decrease) to unearned revenues (a liability) and a credit (increase) to a revenue account. Choices (b), (c), and (d) are incorrect because adjustments for unearned revenues will increase revenues but will have no effect on assets.

12. (b) Adjustments for accrued revenues will have an assets-and-revenues-account relationship. Choices (a) and (d) are incorrect because adjustments for accrued revenues have no effect on liabilities. Choice (c) is incorrect because these adjustments will increase, not decrease, both assets and revenues.

13. (b) The adjusting entry should be to debit Salaries and Wages Expense for R$400 and credit Salaries and Wages Payable for R$400. The other choices are incorrect because (a) if an adjusting entry is not made, the amount of money owed (liability) that is shown on the statement of financial position will be understated and the amount of salaries and wages expense will also be understated; (c) the credit account is incorrect as adjusting entries never affect cash; and (d) the debit account should be Salaries and Wages Expense and the credit account should be Salaries and Wages Payable. Adjusting entries never affect cash.

14. (c) The accounts on the trial balance can be segregated by the balance in the account—either debit or credit—not whether they are assets or liabilities. All accounts in the ledger are included in the adjusted trial balance, not just assets and liabilities. The other choices are true statements.

***15. (a)** This adjusting entry correctly states the Supplies account at €800 (€0 + €800) and the Supplies Expense account at €700 (€1,500 − €800). The other choices are incorrect because (b) will cause the Supplies account to have a credit balance (assets have a normal debit balance) and the Supplies Expense account to be stated at €2,300, which is too high; (c) will result in a €700 balance in the Supplies account (€100 too low) and an €800 balance in the Supplies Expense account (€100 too high); and (d) will cause the Supplies account to have a credit balance (assets have a normal debit balance) and the Supplies Expense account to be stated at €2,200, which is too high.

***16. (c)** Neutrality is one of the enhancing qualities that makes information more representationally faithful, not relevant. Therefore, choices (a), (b), and (d) are incorrect.

***17. (c)** Cost is a constraint in financial accounting. The other choices are all enhancing qualities of useful information.

PRACTICE EXERCISES

Prepare adjusting entries.
(LO 3, 4, 5, 6)

1. Chen's Dental Practice opened on January 1, 2017. During the first month of operations, the following transactions occurred.

1. Performed services for patients totaling HK$7,850, which has not yet been recorded.
2. Utility expenses incurred but not paid prior to January 31 totaled HK$2,500.
3. Purchased dental equipment on January 1 for HK$900,000, paying HK$250,000 in cash and signing a HK$650,000 3-year note payable. The equipment depreciates HK$5,000 per month. Interest is HK$5,500 per month.
4. Purchased a 1-year malpractice insurance policy on January 1 for HK$150,000.
5. Purchased HK$17,000 of dental supplies. On January 31, determined that HK$3,000 of supplies were on hand.

Instructions

Prepare the adjusting entries on January 31. Account titles are Accumulated Depreciation—Equipment, Depreciation Expense, Service Revenue, Accounts Receivable, Insurance Expense, Interest Expense, Interest Payable, Prepaid Insurance, Supplies, Supplies Expense, Utilities Expense, and Utilities Payable.

Solution

1.	Jan. 31	Accounts Receivable	7,850	
		Service Revenue		7,850

31	Utilities Expense	2,500	
	Accounts Payable		2,500
31	Depreciation Expense	5,000	
	Accumulated Depreciation—Equipment		5,000
31	Interest Expense	5,500	
	Interest Payable		5,500
31	Insurance Expense (HK$150,000 ÷ 12)	12,500	
	Prepaid Insurance		12,500
31	Supplies Expense (HK$17,000 − HK$3,000)	14,000	
	Supplies		14,000

2. The income statement of Zhou Ltd. for the month of July shows net income of NT$140,000 based on Service Revenue NT$550,000, Salaries and Wages Expense NT$230,000, Supplies Expense NT$120,000, and Utilities Expense NT$60,000. In reviewing the statement, you discover the following.

Prepare correct income statement.

(LO 2, 3, 4, 5, 6)

1. Insurance expired during July of NT$45,000 was omitted.
2. Supplies expense includes NT$30,000 of supplies that are still on hand at July 31.
3. Depreciation on equipment of NT$18,000 was omitted.
4. Accrued but unpaid salaries and wages at July 31 of NT$40,000 were not included.
5. Services performed but unrecorded totaled NT$60,000.

Instructions

Prepare a correct income statement for July 2017.

Solution

2.

ZHOU LTD.
Income Statement
For the Month Ended July 31, 2017

Revenues		
Service revenue (NT$550,000 + NT$60,000)		NT$610,000
Expenses		
Salaries and wages expense (NT$230,000 + NT$40,000)	NT$270,000	
Supplies expense (NT$120,000 − NT$30,000)	90,000	
Utilities expense	60,000	
Insurance expense	45,000	
Depreciation expense	18,000	
Total expenses		483,000
Net income		NT$127,000

PRACTICE PROBLEM

The Green Thumb Lawn Care Ltd. began on April 1. At April 30, the trial balance shows the following balances for selected accounts. (Amounts are in Chinese yuan.)

Prepare adjusting entries.

(LO 4, 5, 6)

Prepaid Insurance	¥ 36,000
Equipment	280,000
Notes Payable	200,000
Unearned Service Revenue	42,000
Service Revenue	18,000

Analysis reveals the following additional data.

1. Prepaid insurance is the cost of a 2-year insurance policy, effective April 1.
2. Depreciation on the equipment is ¥5,000 per month.
3. The note payable is dated April 1. It is a 6-month, 12% note.

4. Seven customers paid for the company's 6-month lawn service package of ¥6,000 beginning in April. The company performed services for these customers in April.
5. Lawn services performed for other customers but not recorded at April 30 totaled ¥15,000.

Instructions

Prepare the adjusting entries for the month of April. Show computations.

Solution

GENERAL JOURNAL J1

Date	Account Titles and Explanation	Ref.	Debit	Credit
	Adjusting Entries			
Apr. 30	Insurance Expense		1,500	
	Prepaid Insurance			1,500
	(To record insurance expired: ¥36,000 ÷ 24 = ¥1,500 per month)			
30	Depreciation Expense		5,000	
	Accumulated Depreciation—Equipment			5,000
	(To record monthly depreciation)			
30	Interest Expense		2,000	
	Interest Payable			2,000
	(To record interest on notes payable: ¥200,000 × 12% × 1/12 = ¥2,000)			
30	Unearned Service Revenue		7,000	
	Service Revenue			7,000
	(To record revenue for services performed: ¥6,000 ÷ 6 = ¥1,000; ¥1,000 per month × 7 = ¥7,000)			
30	Accounts Receivable		15,000	
	Service Revenue			15,000
	(To record revenue for services performed)			

WileyPLUS Brief Exercises, DO IT! Review, Exercises, and Problems, and many additional resources are available for practice in WileyPLUS.

NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendices to the chapter.

QUESTIONS

1. (a) How does the time period assumption affect an accountant's analysis of business transactions?
   (b) Explain the terms fiscal year, calendar year, and interim periods.
2. Define two IFRS principles that relate to adjusting the accounts.
3. Gabe Corts, a lawyer, accepts a legal engagement in March, performs the work in April, and is paid in May. If Corts' law firm prepares monthly financial statements, when should it recognize revenue from this engagement? Why?
4. Why do accrual-basis financial statements provide more useful information than cash-basis statements?
5. In completing the engagement in Question 3, Corts pays no costs in March, £2,200 in April, and £2,500 in May (incurred in April). How much expense should the firm deduct from revenues in the month when it recognizes the revenue? Why?
6. "Adjusting entries are required by the historical cost principle of accounting." Do you agree? Explain.
7. Why may a trial balance not contain up-to-date and complete financial information?
8. Distinguish between the two categories of adjusting entries, and identify the types of adjustments applicable to each category.
9. What is the debit/credit effect of a prepaid expense adjusting entry?
10. "Depreciation is a valuation process that results in the reporting of the fair value of the asset." Do you agree? Explain.
11. Explain the differences between depreciation expense and accumulated depreciation.
12. Jain Company purchased equipment for Rs18,000,000. By the current statement of financial position date, Rs7,000,000 had been depreciated. Indicate the statement of financial position presentation of the data.
13. What is the debit/credit effect of an unearned revenue adjusting entry?
14. A company fails to recognize revenue for services performed but not yet received in cash or recorded.

Which of the following accounts are involved in the adjusting entry: (a) asset, (b) liability, (c) revenue, or (d) expense? For the accounts selected, indicate whether they would be debited or credited in the entry.

15. A company fails to recognize an expense incurred but not paid. Indicate which of the following accounts is debited and which is credited in the adjusting entry: (a) asset, (b) liability, (c) revenue, or (d) expense.

16. A company makes an accrued revenue adjusting entry for NT$27,000 and an accrued expense adjusting entry for NT$21,000. How much was net income understated prior to these entries? Explain.

17. On January 9, a company pays €6,000 for salaries and wages, of which €2,000 was reported as Salaries and Wages Payable on December 31. Give the entry to record the payment.

18. For each of the following items before adjustment, indicate the type of adjusting entry (prepaid expense, unearned revenue, accrued revenue, or accrued expense) that is needed to correct the misstatement. If an item could result in more than one type of adjusting entry, indicate each of the types.
    (a) Assets are understated.
    (b) Liabilities are overstated.
    (c) Liabilities are understated.
    (d) Expenses are understated.
    (e) Assets are overstated.
    (f) Revenue is understated.

19. One-half of the adjusting entry is given below. Indicate the account title for the other half of the entry.
    (a) Salaries and Wages Expense is debited.
    (b) Depreciation Expense is debited.
    (c) Interest Payable is credited.
    (d) Supplies is credited.
    (e) Accounts Receivable is debited.
    (f) Unearned Service Revenue is debited.

20. "An adjusting entry may affect more than one statement of financial position or income statement account." Do you agree? Why or why not?

21. Why is it possible to prepare financial statements directly from an adjusted trial balance?

*22. L. Thomas Company debits Supplies Expense for all purchases of supplies and credits Rent Revenue for all advanced rentals. For each type of adjustment, give the adjusting entry.

*23. (a) What is the primary objective of financial reporting?
    (b) Identify the characteristics of useful accounting information.

*24. Dan Fineman, the president of King Company, is pleased. King substantially increased its net income in 2017 while keeping its unit inventory relatively the same. Howard Gross, chief accountant, cautions Dan, however. Gross says that since King changed its method of inventory valuation, there is a consistency problem and it is difficult to determine whether King is better off. Is Gross correct? Why or why not?

*25. What is the distinction between comparability and consistency?

*26. Describe the constraint inherent in the presentation of accounting information.

*27. Laurie Belk is president of Better Books. She has no accounting background. Belk cannot understand why fair value is not used as the basis for all accounting measurement and reporting. Discuss.

*28. What is the economic entity assumption? Give an example of its violation.

BRIEF EXERCISES

Indicate why adjusting entries are needed. (LO 3)

BE3-1 The ledger of Bacalao Company SLU includes the following accounts. Explain why each account may require adjustment.

(a) Prepaid Insurance.
(b) Depreciation Expense.
(c) Unearned Service Revenue.
(d) Interest Payable.

Identify the major types of adjusting entries. (LO 4, 5, 6)

BE3-2 Lucci Company SpA accumulates the following adjustment data at December 31. Indicate (a) the type of adjustment (prepaid expense, accrued revenue, and so on), and (b) the status of accounts before adjustment (overstated or understated).

1. Supplies of €100 are on hand.
2. Services performed but not recorded total €870.
3. Interest of €200 has accumulated on a note payable.
4. Rent collected in advance totaling €560 has been recognized.

Prepare adjusting entry for supplies. (LO 5)

BE3-3 Wow Advertising Company's trial balance at December 31 shows Supplies £6,700 and Supplies Expense £0. On December 31, there are £1,300 of supplies on hand. Prepare the adjusting entry at December 31 and, using T-accounts, enter the balances in the accounts, post the adjusting entry, and indicate the adjusted balance in each account.

Prepare adjusting entry for depreciation. (LO 5)

BE3-4 At the end of its first year, the trial balance of Zovde Company OAO shows Equipment €32,000 and zero balances in Accumulated Depreciation—Equipment and Depreciation Expense. Depreciation for the year is estimated to be €6,000. Prepare the adjusting entry for depreciation at December 31, post the adjustments to T-accounts, and indicate the statement of financial position presentation of the equipment at December 31.

Prepare adjusting entry for prepaid expense.
(LO 5)

BE3-5 On July 1, 2017, Pizner Co. Ltd. pays £13,200 to Orlow Insurance Ltd. for a 3-year insurance contract. Both companies have fiscal years ending December 31. For Pizner Co. Ltd., journalize and post the entry on July 1 and the adjusting entry on December 31.

Prepare adjusting entry for unearned revenue.
(LO 5)

BE3-6 Using the data in BE3-5, journalize and post the entry on July 1 and the adjusting entry on December 31 for Orlow Insurance Ltd. Orlow uses the accounts Unearned Service Revenue and Service Revenue.

Prepare adjusting entries for accruals.
(LO 6)

BE3-7 The bookkeeper for Malboeuf Company SA asks you to prepare the following accrued adjusting entries at December 31.

1. Interest on notes payable of €320 is accrued.
2. Services performed but not recorded total €1,750.
3. Salaries earned by employees of €900 have not been recorded.

Use the following account titles: Service Revenue, Accounts Receivable, Interest Expense, Interest Payable, Salaries and Wages Expense, and Salaries and Wages Payable.

Analyze accounts in an unadjusted trial balance.
(LO 4, 5, 6)

BE3-8 The trial balance of Tiwari Ltd. includes the following statement of financial position accounts, which may require adjustment. For each account that requires adjustment, indicate (a) the type of adjusting entry (prepaid expense, unearned revenue, accrued revenue, or accrued expense) and (b) the related account in the adjusting entry.

Accounts Receivable	Interest Payable
Prepaid Insurance	Unearned Service Revenue
Accumulated Depreciation—Equipment	

Prepare an income statement from an adjusted trial balance.
(LO 7)

BE3-9 The adjusted trial balance of Kwun Company at December 31, 2017, includes the following accounts (in thousands): Share Capital—Ordinary ₩15,600, Dividends ₩6,000, Service Revenue ₩38,400, Salaries and Wages Expense ₩16,000, Insurance Expense ₩2,000, Rent Expense ₩4,400, Supplies Expense ₩1,500, and Depreciation Expense ₩1,300. Prepare an income statement for the year.

Prepare a retained earnings statement from an adjusted trial balance.
(LO 7)

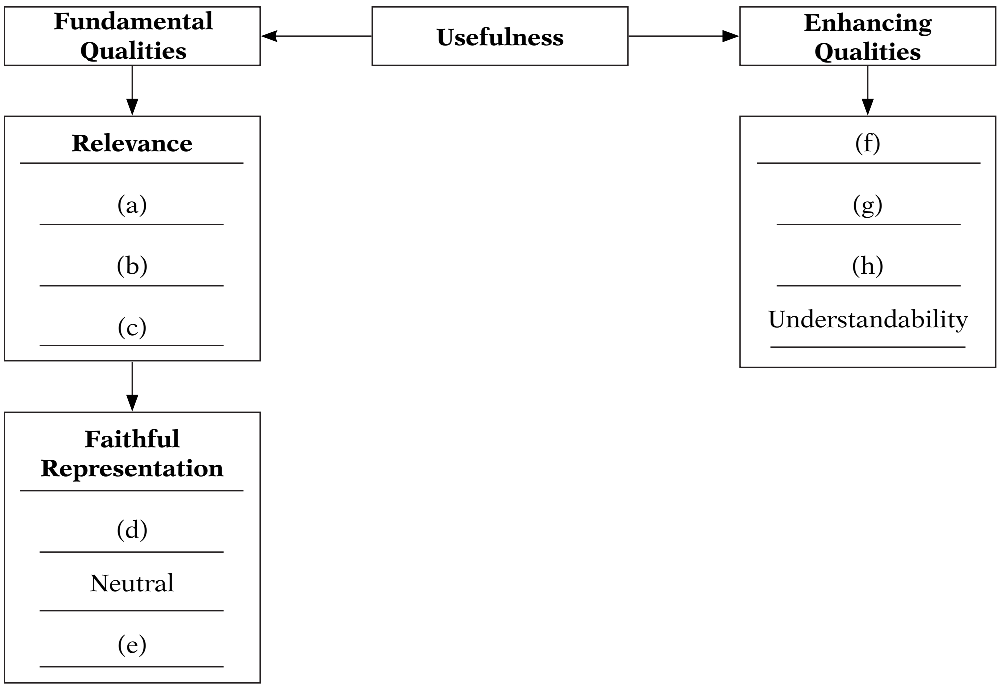
BE3-10 Partial adjusted trial balance data for Kwun Company is presented in BE3-9. Prepare a retained earnings statement for the year assuming net income is ₩13,200 for the year and Retained Earnings is ₩7,240 on January 1. (Amounts are in thousands.)

Prepare adjusting entries under alternative treatment of deferrals.
(LO 8)

***BE3-11** Lim Company records all prepayments in income statement accounts. At April 30, the trial balance shows Supplies Expense HK$28,000, Service Revenue HK$92,000, and zero balances in related statement of financial position accounts. Prepare the adjusting entries at April 30 assuming (a) HK$11,000 of supplies on hand and (b) HK$20,000 of service revenue should be reported as unearned.

Identify characteristics of useful information.
(LO 9)

***BE3-12** The accompanying chart shows the qualitative characteristics of useful accounting information. Fill in the blanks.



***BE3-13** Given the characteristics of useful accounting information, complete each of the following statements.

Identify characteristics of useful information.
(LO 9)

(a) For information to be _____, it should have predictive value, confirmatory value, and be material.
(b) _____ is the quality of information that gives assurance that the information accurately depicts what really happened.
(c) _____ means using the same accounting principles and methods from year to year within a company.

***BE3-14** Here are some qualitative characteristics of useful accounting information:

Identify characteristics of useful information.
(LO 9)

1. Predictive value
2. Neutral
3. Verifiable
4. Timely

Match each qualitative characteristic to one of the following statements.

________ (a) The quality of information that occurs when independent observers, using the same methods, obtain similar results.
________ (b) Accounting information must be available to decision-makers before it loses its capacity to influence their decisions.
________ (c) Accounting information should help provide accurate expectations about future events.
________ (d) Accounting information cannot be selected, prepared, or presented to favor one set of interested users over another.

***BE3-15** Select the response that completes the following statement correctly. The full disclosure principle dictates that:

Define full disclosure principle.
(LO 9)

(a) financial statements should disclose all assets at their cost.
(b) financial statements should disclose only those events that can be measured in currency.
(c) financial statements should disclose all events and circumstances that would matter to users of financial statements.
(d) financial statements should not be relied on unless an auditor has expressed an unqualified opinion on them.

> DO IT! REVIEW

DO IT! 3-1 Several timing concepts are discussed on pages 102–103. A list of concepts is provided below in the left column, with descriptions of the concepts in the right column. There are more descriptions provided than concepts. Match the description to the concept.

Identify timing concepts.
(LO 1, 2)

1. ______ Cash-basis accounting.
2. ______ Fiscal year.
3. ______ Revenue recognition principle.
4. ______ Expense recognition principle.

(a) Monthly and quarterly time periods.
(b) Accountants divide the economic life of a business into artificial time periods.
(c) Efforts (expenses) should be matched with accomplishments (revenues).
(d) Companies record revenues when they receive cash and record expenses when they pay out cash.
(e) An accounting time period that is 1 year in length.
(f) An accounting time period that starts on January 1 and ends on December 31.
(g) Companies record transactions in the period in which the events occur.
(h) Recognize revenue in the accounting period in which a performance obligation is satisfied.

Prepare adjusting entries for deferrals.
(LO 5)

DO IT! 3-2 The ledger of Lafayette, SA on March 31, 2017, includes the following selected accounts before adjusting entries.

	Debit	Credit
Prepaid Insurance	2,400	
Supplies	2,500	
Equipment	30,000	
Unearned Service Revenue		9,000

An analysis of the accounts shows the following.

1. Insurance expires at the rate of CHF300 per month.
2. Supplies on hand total CHF1,400.
3. The equipment depreciates CHF200 per month.
4. During March, services were performed for two-fifths of the unearned service revenue.

Prepare the adjusting entries for the month of March.

Prepare adjusting entries for accruals.
(LO 6)

DO IT! 3-3 Pegasus Computer Services SpA began operations in July 2017. At the end of the month, the company prepares monthly financial statements. Pegasus has the following information for the month.

1. At July 31, Pegasus owed employees €1,300 in salaries that the company will pay in August.
2. On July 1, Pegasus borrowed €18,000 from a local bank on a 10-year note. The annual interest rate is 7%.
3. Service revenue unrecorded in July totaled €2,400.

Prepare the adjusting entries needed at July 31, 2017.

Calculate amounts from trial balance.
(LO 7)

DO IT! 3-4 Natal Co. was organized on April 1, 2017. The company prepares quarterly financial statements. The adjusted trial balance amounts at June 30 are shown below.

	Debit		Credit
Cash	R$ 5,190	Accumulated Depreciation—Equipment	R$ 700
Accounts Receivable	480	Notes Payable	4,000
Prepaid Rent	720	Accounts Payable	790
Supplies	920	Salaries and Wages Payable	300
Equipment	12,000	Interest Payable	40
Dividends	500	Unearned Rent Revenue	400
Salaries and Wages Expense	7,400	Share Capital—Ordinary	11,200
Rent Expense	1,200	Service Revenue	11,360
Depreciation Expense	700	Rent Revenue	900
Supplies Expense	160		R$29,690
Utilities Expense	380		
Interest Expense	40		
	R$29,690		

(a) Determine the net income for the quarter April 1 to June 30.
(b) Determine the total assets and total liabilities at June 30, 2017, for Natal Co.
(c) Determine the amount that appears for Retained Earnings at June 30, 2017.

EXERCISES

Explain the time period assumption.
(LO 1)

E3-1 Nish Patel has prepared the following list of statements about the time period assumption.

1. Adjusting entries would not be necessary if a company's life were not divided into artificial time periods.
2. The tax authorities require companies to file annual tax returns.

3. Accountants divide the economic life of a business into artificial time periods, but each transaction affects only one of these periods.
4. Accounting time periods are generally a month, a quarter, or a year.
5. A time period lasting one year is called an interim period.
6. All fiscal years are calendar years, but not all calendar years are fiscal years.

Instructions
Identify each statement as true or false. If false, indicate how to correct the statement.

E3-2 On numerous occasions, proposals have surfaced to put the national governments on the accrual basis of accounting. This is no small issue. If this basis were used, it would mean that billions in unrecorded liabilities would have to be booked, and any deficits would increase substantially.

Distinguish between cash and accrual basis of accounting.
(LO 2)

Instructions
(a) What is the difference between accrual-basis accounting and cash-basis accounting?
(b) Why would politicians prefer the cash basis over the accrual basis?
(c) Write a letter to your government official explaining why the government should adopt the accrual basis of accounting.

E3-3 Concordia Industries Ltd. collected £112,000 from customers in 2017. Of the amount collected, £30,000 was from revenue accrued from services performed in 2016. In addition, Concordia recorded £44,000 of revenue in 2017, which will not be collected until 2018.

Compute cash and accrual accounting income.
(LO 2)

Concordia Industries also paid £72,000 for expenses in 2017. Of the amount paid, £27,000 was for expenses incurred on account in 2016. In addition, Concordia incurred £37,000 of expenses in 2017, which will not be paid until 2018.

Instructions
(a) Compute 2017 cash-basis net income.
(b) Compute 2017 accrual-basis net income.

E3-4 Yilmaz A.Ş. encounters the following situations:

Identify the type of adjusting entry needed.
(LO 4)

1. Yilmaz collects ₺1,750 from a customer in 2017 for services to be performed in 2018.
2. Yilmaz incurs utility expense which is not yet paid in cash or recorded.
3. Yilmaz employees worked 3 days in 2017 but will not be paid until 2018.
4. Yilmaz performs services for a customer but has not yet received cash or recorded the transaction.
5. Yilmaz paid ₺2,400 rent on December 1 for the 4 months starting December 1.
6. Yilmaz received cash for future services and recorded a liability until the service was performed.
7. Yilmaz performed consulting services for a client in December 2017. On December 31, it had not billed the client ₺1,200 for these services.
8. Yilmaz paid cash for an expense and recorded an asset until the item was used up.
9. Yilmaz purchased ₺750 of supplies in 2017; at year-end, ₺400 of supplies remain unused.
10. Yilmaz purchased equipment on January 1, 2017; the equipment will be used for 5 years.
11. Yilmaz borrowed ₺10,000 on October 1, 2017, signing an 8%, 1-year note payable.

Instructions
Identify what type of adjusting entry (prepaid expense, unearned revenue, accrued expense, or accrued revenue) is needed in each situation at December 31, 2017.

E3-5 Hwang Ltd. has the following balances in selected accounts on December 31, 2017.

Prepare adjusting entries from selected data.
(LO 5, 6)

Accounts Receivable	NT$ –0–
Accumulated Depreciation—Equipment	–0–
Equipment	210,000
Interest Payable	–0–
Notes Payable	240,000
Prepaid Insurance	63,100
Salaries and Wages Payable	–0–
Supplies	73,500
Unearned Service Revenue	900,000

All the accounts have normal balances. The information below has been gathered at December 31, 2017.

1. Hwang borrowed NT$240,000 by signing a 6%, 1-year note on October 1, 2017.
2. A count of supplies on December 31, 2017, indicates that supplies of NT$23,400 are on hand.
3. Depreciation on the equipment for 2017 is NT$30,000.
4. Hwang paid NT$63,000 for 12 months of insurance coverage on June 1, 2017.
5. On December 1, 2017, Hwang collected NT$900,000 for consulting services to be performed from December 1, 2017, through March 31, 2018.
6. Hwang performed consulting services for a client in December 2017. The client will be billed NT$117,000.
7. Hwang pays its employees total salaries of NT$270,000 every Monday for the preceding 5-day week (Monday through Friday). On Monday, December 29, employees were paid for the week ending December 26. All employees worked the last 3 days of 2017.

Instructions

Prepare annual adjusting entries for the seven items described above.

Identify types of adjustments and account relationships.

(LO 4, 5, 6)

E3-6 Orwell Company Ltd. accumulates the following adjustment data at December 31.

1. Services performed but not recorded total €1,420.
2. Supplies of €300 have been used.
3. Utility expenses of €225 are unpaid.
4. Services related to unearned service revenue of €260 were performed.
5. Salaries of €800 are unpaid.
6. Prepaid insurance totaling €380 has expired.

Instructions

For each of the above items indicate the following.

(a) The type of adjustment (prepaid expense, unearned revenue, accrued revenue, or accrued expense).

(b) The status of accounts before adjustment (overstatement or understatement).

Prepare adjusting entries from selected account data.

(LO 5, 6)

E3-7 The ledger of Villa Rental Agency SpA on March 31 of the current year includes the selected accounts, shown below, before adjusting entries have been prepared.

	Debit	Credit
Prepaid Insurance	€ 3,600	
Supplies	2,800	
Equipment	25,000	
Accumulated Depreciation—Equipment		€ 8,400
Notes Payable		20,000
Unearned Rent Revenue		9,900
Rent Revenue		60,000
Interest Expense	–0–	
Salaries and Wages Expense	14,000	

An analysis of the accounts shows the following.

1. The equipment depreciates €320 per month.
2. One-third of the unearned rent revenue was earned during the quarter.
3. Interest totaling €500 is accrued on the notes payable for the quarter.
4. Supplies on hand total €840.
5. Insurance expires at the rate of €200 per month.

Instructions

Prepare the adjusting entries at March 31, assuming that adjusting entries are made **quarterly**. Additional accounts are Depreciation Expense, Insurance Expense, Interest Payable, and Supplies Expense.

Prepare adjusting entries.

(LO 5, 6)

E3-8 Kaya Abbas, D.D.S. A.Ş., opened a dental practice on January 1, 2017. During the first month of operations, the following transactions occurred.

1. Performed services for patients who had dental plan insurance. At January 31, ₺875 of such services were performed but not yet recorded.
2. Utility expenses incurred but not paid prior to January 31 totaled ₺520.

3. Purchased dental equipment on January 1 for ₺80,000, paying ₺20,000 in cash and signing a ₺60,000, 3-year note payable. The equipment depreciates ₺400 per month. Interest is ₺500 per month.
4. Purchased a six-month malpractice insurance policy on January 1 for ₺18,000.
5. Purchased ₺1,600 of dental supplies. On January 31, determined that ₺700 of supplies were on hand.

Instructions

Prepare the adjusting entries on January 31. Account titles are Accumulated Depreciation—Equipment, Depreciation Expense, Service Revenue, Accounts Receivable, Insurance Expense, Interest Expense, Interest Payable, Prepaid Insurance, Supplies, Supplies Expense, Utilities Expense, and Utilities Payable.

Prepare adjusting entries.
(LO 5, 6)

E3-9 The trial balance for Yazici Advertising A.Ş. is shown in Illustration 3-3 (page 105). Instead of the adjusting entries shown in the text at October 31, assume the following adjustment data.

1. Supplies on hand at October 31 total ₺800.
2. Expired insurance for the month is ₺100.
3. Depreciation for the month is ₺50.
4. Services related to unearned service revenue in October worth ₺650 were performed.
5. Services performed but not billed at October 31 are ₺320.
6. Interest accrued at October 31 is ₺70.
7. Accrued salaries at October 31 are ₺1,200.

Instructions

Prepare the adjusting entries for the items above.

Prepare correct income statement.
(LO 2, 5, 6, 7)

E3-10 The income statement of Bjorn ASA for the month of July shows net income of €1,500 based on Service Revenue €5,500, Salaries and Wages Expense €2,300, Supplies Expense €1,200, and Utilities Expense €500. In reviewing the statement, you discover the following.

1. Insurance expired during July of €400 was omitted.
2. Supplies expense includes €300 of supplies that are still on hand at July 31.
3. Depreciation on equipment of €150 was omitted.
4. Accrued but unpaid salaries and wages at July 31 of €280 were not included.
5. Services performed but unrecorded totaled €920.

Instructions

Prepare a correct statement for July 2017.

Analyze adjusted data.
(LO 4, 5, 6, 7)

E3-11 A partial adjusted trial balance of Rooney Company Ltd. at January 31, 2017, shows the following.

ROONEY COMPANY LTD.
Adjusted Trial Balance
January 31, 2017

	Debit	Credit
Supplies	£ 850	
Prepaid Insurance	2,400	
Salaries and Wages Payable		£ 800
Unearned Service Revenue		750
Supplies Expense	950	
Insurance Expense	400	
Salaries and Wages Expense	2,500	
Service Revenue		2,000

Instructions

Answer the following questions, assuming the year begins January 1.

(a) If the amount in Supplies Expense is the January 31 adjusting entry, and £710 of supplies was purchased in January, what was the balance in Supplies on January 1?
(b) If the amount in Insurance Expense is the January 31 adjusting entry, and the original insurance premium was for 1 year, what was the total premium and when was the policy purchased?

(c) If £3,100 of salaries was paid in January, what was the balance in Salaries and Wages Payable at December 31, 2016?

Journalize basic transactions and adjusting entries.
(LO 5, 6, 7)

E3-12 Selected accounts of Al-Kazaz SJSC are shown below.

Supplies Expense

7/31	800		

Supplies

7/1 Bal.	1,100	7/31	800
7/10	200		

Salaries and Wages Payable

		7/31	1,200

Accounts Receivable

7/31	620		

Unearned Service Revenue

7/31	900	7/1 Bal.	1,500
		7/20	750

Salaries and Wages Expense

7/15	1,200		
7/31	1,200		

Service Revenue

		7/14	2,000
		7/31	900
		7/31	620

Instructions

After analyzing the accounts, journalize (a) the July transactions and (b) the adjusting entries that were made on July 31. (*Hint:* July transactions were for cash.)

Prepare adjusting entries from analysis of trial balances.
(LO 5, 6, 7)

E3-13 The trial balances before and after adjustment for Matusiak Company OAO at the end of its fiscal year are presented below.

MATUSIAK COMPANY OAO
Trial Balance
August 31, 2017

	Before Adjustment		After Adjustment	
	Dr.	**Cr.**	**Dr.**	**Cr.**
Cash	€10,400		€10,400	
Accounts Receivable	8,800		10,000	
Supplies	2,300		700	
Prepaid Insurance	4,000		2,500	
Equipment	14,000		14,000	
Accumulated Depreciation—Equipment		€ 3,600		€ 4,900
Accounts Payable		5,800		5,800
Salaries and Wages Payable		–0–		1,100
Unearned Rent Revenue		1,500		800
Share Capital—Ordinary		12,000		12,000
Retained Earnings		3,600		3,600
Service Revenue		34,000		35,200
Rent Revenue		11,000		11,700
Salaries and Wages Expense	17,000		18,100	
Supplies Expense	–0–		1,600	
Rent Expense	15,000		15,000	
Insurance Expense	–0–		1,500	
Depreciation Expense	–0–		1,300	
	€71,500	€71,500	€75,100	€75,100

Instructions

Prepare the adjusting entries that were made.

Prepare financial statements from adjusted trial balance.
(LO 7)

E3-14 The adjusted trial balance for Matusiak Company OAO is given in E3-13.

Instructions

Prepare the income and retained earnings statements for the year and the statement of financial position at August 31.

E3-15 The following data are taken from the comparative statements of financial position of Newman Billiards Club Ltd., which prepares its financial statements using the accrual basis of accounting.

Record transactions on accrual basis; convert revenue to cash receipts.

(LO 5, 6)

December 31	2017	2016
Accounts receivable from members	£12,000	£10,000
Unearned service revenue	14,000	20,000

Members are billed based upon their use of the club's facilities. Unearned service revenues arise from the sale of gift certificates, which members can apply to their future use of club facilities. The 2017 income statement for the club showed that service revenue of £153,000 was recorded during the year.

Instructions
(*Hint:* You will probably find it helpful to use T-accounts to analyze these data.)

(a) Prepare journal entries for each of the following events that took place during 2017.
  (1) Accounts receivable from 2016 were all collected.
  (2) Gift certificates outstanding at the end of 2016 were all redeemed.
  (3) An additional £35,000 worth of gift certificates were sold during 2017. A portion of these was used by the recipients during the year; the remainder was still outstanding at the end of 2017.
  (4) Services performed for 2017 were billed to members.
  (5) Accounts receivable for 2017 (i.e., those billed in item [4] above) were partially collected.
(b) Determine the amount of cash received by the club, with respect to member services, during 2017.

E3-16 In its first year of operations, Kumar Company Ltd. recognized Rs30,000 in service revenue, Rs4,800 of which was on account and still outstanding at year-end. The remaining Rs25,200 was received in cash from customers.

Compute cash flow from operations and net income.

(LO 2)

The company incurred operating expenses of Rs17,000. Of these expenses Rs12,000 was paid in cash; Rs5,000 was still owed on account at year-end. In addition, Kumar prepaid Rs2,600 for insurance coverage that would not be used until the second year of operations.

Instructions
(a) Compute Kumar's first-year cash flow from operations.
(b) Compute Kumar's first-year net income under accrual-basis accounting.
(c) Which basis of accounting (cash or accrual) provides more useful information for decision-makers?

***E3-17** Visser Company NV has the following balances in selected accounts on December 31, 2017.

Journalize adjusting entries.

(LO 8)

Service Revenue	€40,700
Insurance Expense	2,880
Supplies Expense	2,240

All the accounts have normal balances. Visser debits prepayments to expense accounts when paid, and credits unearned revenues to revenue accounts when received. The following information below has been gathered at December 31, 2017.

1. Visser paid €2,880 for 12 months of insurance coverage on April 1, 2017.
2. On December 1, 2017, Visser collected €40,700 for consulting services to be performed from December 1, 2017, through March 31, 2018.
3. A count of supplies on December 31, 2017, indicates that supplies of €420 are on hand.

Instructions
Prepare the adjusting entries needed at December 31, 2017.

***E3-18** At Moretti Company SpA, prepayments are debited to expense when paid, and unearned revenues are credited to revenue when cash is received. During January of the current year, the following transactions occurred.

Journalize transactions and adjusting entries.

(LO 8)

Jan. 2 Paid €2,640 for fire insurance protection for the year.
10 Paid €1,700 for supplies.
15 Received €6,400 for services to be performed in the future.

On January 31, it is determined that €2,500 of the services were performed and that there are €650 of supplies on hand.

Instructions

(a) Journalize and post the January transactions. (Use T-accounts.)
(b) Journalize and post the adjusting entries at January 31.
(c) Determine the ending balance in each of the accounts.

Identify accounting assumptions and principles.
(LO 9)

***E3-19** Presented below are the assumptions and principles discussed in Appendix 3B.

1. Full disclosure principle.
2. Going concern assumption.
3. Monetary unit assumption.
4. Time period assumption.
5. Historical cost principle.
6. Economic entity assumption.

Instructions

Identify by number the accounting assumption or principle that is described below. Do not use a number more than once.

_______ (a) Is the rationale for why plant assets are not reported at liquidation value. (*Note:* Do not use the historical cost principle.)
_______ (b) Indicates that personal and business record-keeping should be separately maintained.
_______ (c) Assumes that the monetary unit is the "measuring stick" used to report on financial performance.
_______ (d) Separates financial information into time periods for reporting purposes.
_______ (e) Measurement basis used when a reliable estimate of fair value is not available.
_______ (f) Dictates that companies should disclose all circumstances and events that make a difference to financial statement users.

Identify the assumption or principle that has been violated.
(LO 9)

***E3-20** Rosman Co. had three major business transactions during 2017.

(a) Reported at its fair value of £260,000 merchandise inventory with a cost of £208,000.
(b) The president of Rosman Co., Jay Rosman, purchased a truck for personal use and charged it to the company's Salaries and Wages Expense account.
(c) Rosman Co. wanted to make its 2017 income look better, so it added 2 more weeks to its fiscal year (a 54-week year). Previous fiscal years were 52 weeks.

Instructions

In each situation, identify the assumption or principle that has been violated, if any, and discuss what the company should have done.

Identity financial accounting concepts and principles.
(LO 9)

***E3-21** The following characteristics, assumptions, principles, or constraint guide the IASB when it creates accounting standards.

Relevance	Expense recognition principle
Faithful representation	Time period assumption
Comparability	Going concern assumption
Consistency	Historical cost principle
Monetary unit assumption	Full disclosure principle
Economic entity assumption	Materiality

Match each item above with a description below.

1. ________ Ability to easily evaluate one company's results relative to another's.
2. ________ Belief that a company will continue to operate for the foreseeable future.
3. ________ The judgment concerning whether an item's size is large enough to matter to decision-makers.
4. ________ The reporting of all information that would make a difference to financial statement users.
5. ________ The practice of preparing financial statements at regular intervals.
6. ________ The quality of information that indicates the information makes a difference in a decision.
7. ________ A belief that items should be reported on the statement of financial position at the price that was paid to acquire the item.
8. ________ A company's use of the same accounting principles and methods from year to year.
9. ________ Tracing accounting events to particular companies.
10. ________ The desire to minimize bias in financial statements.
11. ________ Reporting only those things that can be measured in monetary units.
12. ________ Dictates that efforts (expenses) be matched with results (revenues).

***E3-22** Net Nanny Software International Ltd., headquartered in Vancouver, specializes in Internet safety and computer security products for both the home and commercial markets. In a recent statement of financial position, it reported a deficit (negative retained earnings) of US$5,678,288. It has reported only net losses since its inception. In spite of these losses, Net Nanny's ordinary shares have traded anywhere from a high of $3.70 to a low of $0.32 on the Canadian Venture Exchange.

Comment on the objectives and qualitative characteristics of accounting information
(LO 9)

Net Nanny's financial statements have historically been prepared in Canadian dollars. Recently, the company adopted the U.S. dollar as its reporting currency.

Instructions

(a) What is the objective of financial reporting? How does this objective meet or not meet Net Nanny's investors' needs?
(b) Why would investors want to buy Net Nanny's shares if the company has consistently reported losses over the last few years? Include in your answer an assessment of the relevance of the information reported on Net Nanny's financial statements.
(c) Comment on how the change in reporting information from Canadian dollars to U.S. dollars likely affected the readers of Net Nanny's financial statements. Include in your answer an assessment of the comparability of the information.

***E3-23** A friend of yours, Ana Gehrig, recently completed an undergraduate degree in science and has just started working with a biotechnology company. Ana tells you that the owners of the business are trying to secure new sources of financing which are needed in order for the company to proceed with development of a new healthcare product. Ana said that her boss told her that the company must put together a report to present to potential investors.

Comment on the objectives and qualitative characteristics of financial reporting.
(LO 9)

Ana thought that the company should include in this package the detailed scientific findings related to the Phase I clinical trials for this product. She said, "I know that the biotech industry sometimes has only a 10% success rate with new products, but if we report all the scientific findings, everyone will see what a sure success this is going to be! The president was talking about the importance of following some set of accounting principles. Why do we need to look at some accounting rules? What they need to realize is that we have scientific results that are quite encouraging, some of the most talented employees around, and the start of some really great customer relationships. We haven't made any sales yet, but we will. We just need the funds to get through all the clinical testing and get government approval for our product. Then these investors will be quite happy that they bought in to our company early!"

Instructions

(a) What is accounting information?
(b) Comment on how Ana's suggestions for what should be reported to prospective investors conforms to the qualitative characteristics of accounting information. Do you think that the things that Ana wants to include in the information for investors will conform to financial reporting guidelines?

PROBLEMS: SET A

P3-1A Joey Cuono started his own consulting firm, Cuono Company SpA on June 1, 2017. The trial balance at June 30 is shown below.

Prepare adjusting entries, post to ledger accounts, and prepare adjusted trial balance.
(LO 5, 6, 7)

CUONO COMPANY SpA
Trial Balance
June 30, 2017

Account Number		Debit	Credit
101	Cash	€ 6,200	
112	Accounts Receivable	6,000	
126	Supplies	1,600	
130	Prepaid Insurance	3,000	
157	Equipment	14,400	
201	Accounts Payable		€ 4,700
209	Unearned Service Revenue		4,000
311	Share Capital—Ordinary		20,000
400	Service Revenue		7,900
726	Salaries and Wages Expense	4,400	
729	Rent Expense	1,000	
		€36,600	€36,600

In addition to those accounts listed on the trial balance, the chart of accounts for Cuono Company SpA also contains the following accounts and account numbers: No. 158 Accumulated Depreciation—Equipment, No. 212 Salaries and Wages Payable, No. 631 Supplies Expense, No. 711 Depreciation Expense, No. 722 Insurance Expense, and No. 732 Utilities Expense.

Other data:

1. Supplies on hand at June 30 are €340.
2. A utility bill for €185 has not been recorded and will not be paid until next month.
3. The insurance policy is for a year.
4. €2,500 of unearned service revenue is recorded for services performed at the end of the month.
5. Salaries of €1,600 are accrued at June 30.
6. The equipment has a 4-year life with no residual value. It is being depreciated at €300 per month for 48 months.
7. Invoices representing €2,400 of services performed during the month have not been recorded as of June 30.

Instructions

(a) Prepare the adjusting entries for the month of June. Use J3 as the page number for your journal.

(b) Enter the totals from the trial balance as beginning account balances and place a check mark in the posting reference column. Post the adjusting entries to the ledger accounts.

(c) Prepare an adjusted trial balance at June 30, 2017.

(c) Adj. trial balance €41,085

Prepare adjusting entries, post, and prepare adjusted trial balance and financial statements.

(LO 5, 6, 7)

P3-2A Lazy River Resort Ltd. opened for business on June 1, 2017. Its trial balance before adjustment on August 31 is as follows.

LAZY RIVER RESORT LTD.
Trial Balance
August 31, 2017

Account Number		Debit	Credit
101	Cash	€ 19,600	
126	Supplies	3,300	
130	Prepaid Insurance	6,000	
140	Land	25,000	
143	Buildings	125,000	
157	Equipment	26,000	
201	Accounts Payable		€ 6,500
208	Unearned Rent Revenue		7,400
275	Mortgage Payable		80,000
311	Share Capital—Ordinary		100,000
332	Dividends	5,000	
429	Rent Revenue		80,000
622	Maintenance and Repairs Expense	3,600	
726	Salaries and Wages Expense	51,000	
732	Utilities Expense	9,400	
		€273,900	€273,900

In addition to those accounts listed on the trial balance, the chart of accounts for Lazy River Resort Ltd. also contains the following accounts and account numbers: No. 112 Accounts Receivable, No. 144 Accumulated Depreciation—Buildings, No. 158 Accumulated Depreciation—Equipment, No. 212 Salaries and Wages Payable, No. 230 Interest Payable, No. 631 Supplies Expense, No. 711 Depreciation Expense, No. 718 Interest Expense, and No. 722 Insurance Expense.

Other data:

1. Insurance expires at the rate of €400 per month.
2. A count on August 31 shows €900 of supplies on hand.
3. Annual depreciation is €4,500 on buildings and €2,400 on equipment.
4. Unearned rent revenue of €4,100 should be recorded as rent revenue prior to August 31.
5. Salaries of €400 were unpaid at August 31.

6. Rentals of €3,700 were due from tenants at August 31. (Use Accounts Receivable.)
7. The mortgage interest rate is 9% per year. (The mortgage was taken out on August 1.)

Instructions

(a) Journalize the adjusting entries on August 31 for the 3-month period June 1–August 31.
(b) Prepare a ledger using the three-column form of account. Enter the trial balance amounts and post the adjusting entries. (Use J1 as the posting reference.)
(c) Prepare an adjusted trial balance on August 31.
(d) Prepare an income statement and a retained earnings statement for the 3 months ending August 31 and a statement of financial position as of August 31.

(c) Adj. trial balance €280,325
(d) Net income €17,475
Ending retained earnings €12,475
Total assets €203,275

P3-3A Costello Advertising SpA was founded by Pat Costello in January 2016. Presented below are both the adjusted and unadjusted trial balances as of December 31, 2017.

Prepare adjusting entries and financial statements.

(LO 5, 6, 7)

COSTELLO ADVERTISING SpA
Trial Balance
December 31, 2017

	Unadjusted		Adjusted	
	Dr.	**Cr.**	**Dr.**	**Cr.**
Cash	€ 11,000		€ 11,000	
Accounts Receivable	18,000		23,500	
Supplies	8,600		5,000	
Prepaid Insurance	3,350		2,500	
Equipment	60,000		60,000	
Accumulated Depreciation—Equipment		€ 26,000		€ 33,000
Accounts Payable		5,000		5,000
Interest Payable		–0–		150
Notes Payable		5,000		5,000
Unearned Service Revenue		7,200		5,600
Salaries and Wages Payable		–0–		1,300
Share Capital—Ordinary		20,000		20,000
Retained Earnings		5,500		5,500
Dividends	12,000		12,000	
Service Revenue		58,600		65,700
Salaries and Wages Expense	10,000		11,300	
Insurance Expense			850	
Interest Expense	350		500	
Depreciation Expense			7,000	
Supplies Expense			3,600	
Rent Expense	4,000		4,000	
	€127,300	€127,300	€141,250	€141,250

Instructions

(a) Journalize the annual adjusting entries that were made.
(b) Prepare an income statement and a retained earnings statement for the year ending December 31, 2017, and a statement of financial position at December 31.
(c) Answer the following questions.
  (1) If the note has been outstanding 6 months, what is the annual interest rate on that note?
  (2) If the company paid €14,500 in salaries in 2017, what was the balance in Salaries and Wages Payable on December 31, 2016?

(b) Net income €38,450
Ending retained earnings €31,950
Total assets €69,000
(c) (1) 6%
(2) €4,500

P3-4A A review of the ledger of Bellingham Company Ltd. at December 31, 2017, produces the following data pertaining to the preparation of annual adjusting entries.

Preparing adjusting entries.

(LO 5, 6)

1. Salaries and Wages Payable £0. There are eight salaried employees. Salaries are paid every Friday for the current week. Five employees receive a salary of £800 each per week, and three employees earn £500 each per week. Assume December 31 is a Tuesday. Employees do not work weekends. All employees worked the last 2 days of December.
2. Unearned Rent Revenue £324,000. The company began subleasing office space in its new building on November 1. At December 31, the company had the following rental contracts that are paid in full for the entire term of the lease.

1. Salaries and wages expense £2,200
2. Rent revenue £74,000

Date	Term (in months)	Monthly Rent	Number of Leases
Nov. 1	6	£4,000	5
Dec. 1	6	£8,500	4

3. Advertising expense £5,200

3. Prepaid Advertising £15,600. This balance consists of payments on two advertising contracts. The contracts provide for monthly advertising in two trade magazines. The terms of the contracts are as follows.

Contract	Date	Amount	Number of Magazine Issues
A650	May 1	£6,000	12
B974	Oct. 1	£9,600	24

The first advertisement runs in the month in which the contract is signed.

4. Interest expense £5,250

4. Notes Payable £100,000. This balance consists of a note for 1 year at an annual interest rate of 9%, dated June 1.

Instructions

Prepare the adjusting entries at December 31, 2017. (Show all computations.)

Journalize transactions and follow through accounting cycle to preparation of financial statements.

(LO 5, 6, 7)

P3-5A On September 1, 2017, the account balances of Beck Equipment Repair, Ltd. were as follows.

No.		Debit	No.		Credit
101	Cash	£ 5,020	158	Accumulated Depreciation—Equipment	£ 2,240
112	Accounts Receivable	3,520	201	Accounts Payable	3,400
126	Supplies	2,000	209	Unearned Service Revenue	1,400
157	Equipment	18,000	212	Salaries and Wages Payable	500
			311	Share Capital—Ordinary	10,000
			320	Retained Earnings	11,000
		£28,540			£28,540

During September, the following summary transactions were completed.

Sept. 8 Paid £1,700 for salaries due employees, of which £1,200 is for September salaries.
10 Received £1,200 cash from customers on account.
12 Received £3,400 cash for services performed in September.
15 Purchased store equipment on account £3,000.
17 Purchased supplies on account £1,900.
20 Paid creditors £4,500 on account.
22 Paid September rent £500.
25 Paid salaries £1,360.
27 Performed services on account and billed customers £1,600 for those services.
29 Received £750 from customers for future service.

Adjustment data consist of:

1. Supplies on hand £1,700.
2. Accrued salaries payable £400.
3. Depreciation is £140 per month.
4. Services related to unearned service revenue of £1,450 were performed.

Instructions

(a) Enter the September 1 balances in the ledger accounts.
(b) Journalize the September transactions.
(c) Post to the ledger accounts. Use J1 for the posting reference. Use the following additional accounts: No. 400 Service Revenue, No. 631 Supplies Expense, No. 711 Depreciation Expense, No. 726 Salaries and Wages Expense, and No. 729 Rent Expense.
(d) Prepare a trial balance at September 30.
(e) Journalize and post adjusting entries.
(f) Prepare an adjusted trial balance.
(g) Prepare an income statement and a retained earnings statement for September and a statement of financial position at September 30.

(d) Trial balance £34,190
(f) Adj. trial balance £34,730
(g) Net income £650
Ending retained earnings £11,650
Total assets £26,550

***P3-6A** Alpha Graphics Company SA was organized on January 1, 2017. At the end of the first 6 months of operations, the trial balance contained the accounts shown below.

Prepare adjusting entries, adjusted trial balance, and financial statements using appendix.

(LO 5, 6, 7, 8)

	Debit		Credit
Cash	€ 8,400	Notes Payable	€ 20,000
Accounts Receivable	14,000	Accounts Payable	9,000
Equipment	45,000	Share Capital—Ordinary	22,000
Insurance Expense	2,880	Service Revenue	58,280
Salaries and Wages Expense	30,000		
Supplies Expense	3,900		
Advertising Expense	1,900		
Rent Expense	1,500		
Utilities Expense	1,700		
	€109,280		€109,280

Analysis reveals the following additional data.

1. The €3,900 balance in Supplies Expense represents supplies purchased in January. At June 30, €680 of supplies are on hand.
2. The note payable was issued on February 1. It is a 9%, 6-month note.
3. The balance in Insurance Expense is the premium on a 1-year policy, dated March 1, 2017.
4. Service revenues are credited to revenue when received. At June 30, service revenue of €1,100 is still not performed for the customer.
5. Depreciation is €2,250 per year.

Instructions

(a) Journalize the adjusting entries at June 30. (Assume adjustments are recorded every 6 months.)

(b) Prepare an adjusted trial balance.

(c) Prepare an income statement and a retained earnings statement for the 6 months ended June 30 and a statement of financial position at June 30.

(b) Adj. trial balance €111,155

(c) Net income €16,025
Ending retained earnings €16,025
Total assets €68,875

PROBLEMS: SET B

P3-1B Lira Lopez started her own consulting firm, Lira Consulting, SA on May 1, 2017. The trial balance at May 31 is as follows.

Prepare adjusting entries, post to ledger accounts, and prepare an adjusted trial balance.

(LO 5, 6, 7)

LIRA CONSULTING, SA
Trial Balance
May 31, 2017

Account Number		Debit	Credit
101	Cash	R$ 7,700	
112	Accounts Receivable	4,000	
126	Supplies	1,500	
130	Prepaid Insurance	2,880	
157	Equipment	12,000	
201	Accounts Payable		R$ 4,700
209	Unearned Service Revenue		2,600
311	Share Capital—Ordinary		16,000
400	Service Revenue		8,780
726	Salaries and Wages Expense	3,000	
729	Rent Expense	1,000	
		R$32,080	R$32,080

In addition to those accounts listed on the trial balance, the chart of accounts for Lira Consulting also contains the following accounts and account numbers: No. 158 Accumulated Depreciation—Equipment, No. 212 Salaries and Wages Payable, No. 631 Supplies Expense, No. 711 Depreciation Expense, No. 722 Insurance Expense, and No. 732 Utilities Expense.

Other data:

1. R$500 of supplies have been used during the month.
2. Utilities expense incurred but not paid on May 31, 2017, R$200.
3. The insurance policy is for 2 years.
4. R$1,000 of the balance in the Unearned Service Revenue account remains unearned at the end of the month.
5. May 31 is a Tuesday, and employees are paid on Fridays. Lira Consulting has two employees, who are paid R$500 each for a 5-day work week.
6. The equipment has a 5-year life with no residual value. It is being depreciated at R$200 per month for 60 months.
7. Invoices representing R$1,100 of services performed during the month have not been recorded as of May 31.

Instructions

(a) Prepare the adjusting entries for the month of May. Use J4 as the page number for your journal.

(b) Enter the totals from the trial balance as beginning account balances and place a check mark in the posting reference column. Post the adjusting entries to the ledger accounts.

(c) Prepare an adjusted trial balance at May 31, 2017.

(c) Adj. trial balance R$33,980

Prepare adjusting entries, post, and prepare adjusted trial balance and financial statements.

(LO 5, 6, 7)

P3-2B Badger Motel, Ltd. opened for business on May 1, 2017. Its trial balance before adjustment on May 31 is as follows.

BADGER MOTEL, LTD.
Trial Balance
May 31, 2017

Account Number		Debit	Credit
101	Cash	£ 2,500	
126	Supplies	1,520	
130	Prepaid Insurance	2,400	
140	Land	14,000	
141	Buildings	58,000	
157	Equipment	15,000	
201	Accounts Payable		£ 4,800
208	Unearned Rent Revenue		3,300
275	Mortgage Payable		38,000
311	Share Capital—Ordinary		40,000
429	Rent Revenue		12,300
610	Advertising Expense	780	
726	Salaries and Wages Expense	3,300	
732	Utilities Expense	900	
		£98,400	£98,400

In addition to those accounts listed on the trial balance, the chart of accounts for Badger Motel, Ltd. also contains the following accounts and account numbers: No. 142 Accumulated Depreciation—Buildings, No. 158 Accumulated Depreciation—Equipment, No. 212 Salaries and Wages Payable, No. 230 Interest Payable, No. 631 Supplies Expense, No. 711 Depreciation Expense, No. 718 Interest Expense, and No. 722 Insurance Expense.

Other data:

1. Prepaid insurance is a 1-year policy starting May 1, 2014.
2. A count of supplies shows £350 of unused supplies on May 31.
3. Annual depreciation is £2,640 on the buildings and £1,500 on equipment.
4. The mortgage interest rate is 12%. (The mortgage was taken out on May 1.)
5. Two-thirds of the unearned rent revenue should be recognized as rent revenue prior to May 31.
6. Salaries of £750 are accrued and unpaid at May 31.

Instructions

(a) Journalize the adjusting entries on May 31.

(b) Prepare a ledger using the three-column form of account. Enter the trial balance amounts and post the adjusting entries. (Use J1 as the posting reference.)

(c) Prepare an adjusted trial balance on May 31.
(d) Prepare an income statement and a retained earnings statement for the month of May and a statement of financial position at May 31.

(c) Adj. trial balance £99,875
(d) Net income £6,675
Ending retained earnings £6,675
Total assets £91,705

P3-3B Lausanne Co., AG was organized on July 1, 2017. Quarterly financial statements are prepared. The unadjusted and adjusted trial balances as of September 30 are shown below.

Prepare adjusting entries and financial statements.

(LO 5, 6, 7)

LAUSANNE CO., AG
Trial Balance
September 30, 2017

	Unadjusted		Adjusted	
	Dr.	**Cr.**	**Dr.**	**Cr.**
Cash	CHF 8,700		CHF 8,700	
Accounts Receivable	10,400		11,500	
Supplies	1,900		650	
Prepaid Rent	2,200		1,200	
Equipment	20,000		20,000	
Accumulated Depreciation—Equipment		CHF –0–		CHF 1,200
Notes Payable		10,000		10,000
Accounts Payable		3,200		3,200
Salaries and Wages Payable		–0–		725
Interest Payable		–0–		100
Unearned Rent Revenue		1,900		850
Share Capital—Ordinary		22,000		22,000
Dividends	1,000		1,000	
Service Revenue		16,800		17,900
Rent Revenue		1,710		2,760
Salaries and Wages Expense	8,000		8,725	
Rent Expense	1,900		2,900	
Depreciation Expense			1,200	
Supplies Expense			1,250	
Utilities Expense	1,510		1,510	
Interest Expense			100	
	CHF55,610	CHF55,610	CHF58,735	CHF58,735

Instructions

(a) Journalize the adjusting entries that were made.
(b) Prepare an income statement and a retained earnings statement for the 3 months ending September 30 and a statement of financial position at September 30.
(c) If the note bears interest at 12%, how many months has it been outstanding?

(b) Net income CHF4,975
Ending retained earnings CHF3,975
Total assets CHF40,850

P3-4B A review of the ledger of Khan Company at December 31, 2017, produces the following data pertaining to the preparation of annual adjusting entries.

Prepare adjusting entries

(LO 5, 6)

1. Prepaid Insurance €9,300. The company has separate insurance policies on its buildings and its motor vehicles. Policy B4564 on the building was purchased on April 1, 2016, for €6,000. The policy has a term of 3 years. Policy A2958 on the vehicles was purchased on January 1, 2017, for €4,800. This policy has a term of 2 years.

1. Insurance expense €4,400

2. Unearned Rent Revenue €429,000. The company began subleasing office space in its new building on November 1. At December 31, the company had the following rental contracts that are paid in full for the entire term of the lease.

2. Rent revenue €84,000

Date	Term (in months)	Monthly Rent	Number of Leases
Nov. 1	9	€5,000	5
Dec. 1	6	8,500	4

3. Notes Payable €120,000. This balance consists of a note for 9 months at an annual interest rate of 9%, dated November 1.

3. Interest expense €1,800

4. Salaries and wages expense €2,820

4. Salaries and Wages Payable €0. There are eight salaried employees. Salaries are paid every Friday for the current week. Five employees receive a salary of €640 each per week, and three employees earn €500 each per week. Assume December 31 is a Wednesday. Employees do not work weekends. All employees worked the last 3 days of December.

Instructions

Prepare the adjusting entries at December 31, 2017.

Journalize transactions and follow through accounting cycle to preparation of financial statements.

(LO 5, 6, 7)

P3-5B On November 1, 2017, the account balances of Samone Equipment Repair, Ltd. were as follows.

No.		Debit	No.		Credit
101	Cash	HK$ 24,000	158	Accumulated Depreciation—Equipment	HK$ 20,000
112	Accounts Receivable	44,500	201	Accounts Payable	26,000
126	Supplies	18,000	209	Unearned Service Revenue	13,600
157	Equipment	160,000	212	Salaries and Wages Payable	7,000
			311	Share Capital—Ordinary	100,000
			320	Retained Earnings	79,900
		HK$246,500			HK$246,500

During November, the following summary transactions were completed.

Nov. 8 Paid HK$15,000 for salaries due employees, of which HK$7,000 is for October salaries.
10 Received HK$34,200 cash from customers on account.
12 Received HK$31,000 cash for services performed in November.
15 Purchased equipment on account HK$20,000.
17 Purchased supplies on account HK$7,000.
20 Paid creditors on account HK$27,000.
22 Paid November rent HK$6,200.
25 Paid salaries HK$15,000.
27 Performed services on account and billed customers HK$19,000 for those services.
29 Received HK$3,600 from customers for future service.

Adjustment data consist of:

1. Supplies on hand HK$14,000.
2. Accrued salaries payable HK$3,700.
3. Depreciation for the month is HK$2,000.
4. Unearned service revenue of HK$13,800 is recognized for services performed.

(d) Trial balance HK$293,100
(f) Adj. trial balance HK$298,800
(g) Net income HK$17,900
Ending retained earnings HK$97,800
Total assets HK$230,900

Instructions

(a) Enter the November 1 balances in the ledger accounts.
(b) Journalize the November transactions.
(c) Post to the ledger accounts. Use J1 for the posting reference. Use the following additional accounts: No. 400 Service Revenue, No. 631 Supplies Expense, No. 711 Depreciation Expense, No. 726 Salaries and Wages Expense, and No. 729 Rent Expense.
(d) Prepare a trial balance at November 30.
(e) Journalize and post adjusting entries.
(f) Prepare an adjusted trial balance.
(g) Prepare a statement of comprehensive income and a retained earnings statement for November and a statement of financial position at November 30.

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–2.)

MC3 It is the end of November and Mei-ling has been in touch with her grandmother. Her grandmother asked Mei-ling how well things went in her first month of business. Mei-ling, too, would like to know if the company has been profitable or not during November. Mei-ling realizes that in order to determine Matcha Creations' income, she must first make adjustments to the accounts.

Mei-ling puts together the following additional information.

1. A count reveals that NT$35 of baking supplies were used during November.
2. Mei-ling estimates that all of her baking equipment will have a useful life of 5 years or 60 months. (Assume Mei-ling decides to record a full month's worth of depreciation, regardless of when the equipment was obtained by the business.)
3. Mei-ling's grandmother has decided to charge interest of 6% on the note payable extended on November 16. The loan plus interest is to be repaid in 24 months. (Assume that half a month of interest accrued during November.)
4. On November 30, a friend of Mei-ling asks her to teach a class at the neighborhood school. Mei-ling agrees and teaches a group of 35 first-grade students how to make holiday cookies. The next day, Mei-ling prepares an invoice for NT$300 and leaves it with the school principal. The principal says that he will pass the invoice along to the head office, and it will be paid sometime in December.
5. Mei-ling receives a utilities bill for NT$45. The bill is for utilities consumed by Mei-ling's business during November and is due December 15.

Instructions

Using the information that you have gathered through Chapter 2, and based on the new information above, do the following.

(a) Prepare and post the adjusting journal entries.
(b) Prepare an adjusted trial balance.
(c) Using the adjusted trial balance, calculate Matcha Creations' net income or net loss for the month of November. Do not prepare an income statement.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP3-1 The financial statements of TSMC are presented in Appendix A at the end of this textbook. The company's complete annual report, including the notes to the financial statements, is available in the Investors section of the company's website, *www.tsmc.com*.

Instructions

(a) Using the consolidated financial statements and related information, identify items that may result in adjusting entries for prepayments.
(b) Using the consolidated financial statements and related information, identify items that may result in adjusting entries for accruals.

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP3-2 Nestlé's financial statements are presented in Appendix B. Financial statements for Petra Foods are presented in Appendix C.

Instructions

Based on information contained in these financial statements, determine the following for each company.

(a) Net increase (decrease) in property, plant, and equipment (net) for the most recent fiscal year shown.
(b) Increase (decrease) in marketing and administration expenses (Nestlé) and increase (decrease) in selling, distribution, and administrative expenses (Petra Foods) for the most recent fiscal year shown.
(c) Increase (decrease) in non-current liabilities for the most recent fiscal year shown.
(d) Increase (decrease) in profit for the most recent fiscal year shown.
(e) Increase (decrease) in cash and cash equivalents for the most recent fiscal year shown.

Critical Thinking

Decision-Making Across the Organization

BYP3-3 Happy Trails Park, Ltd. was organized on April 1, 2016, by Alicia Henry. Alicia is a good manager but a poor accountant. From the trial balance prepared by a part-time bookkeeper, Alicia prepared the following income statement for the quarter that ended March 31, 2017.

HAPPY TRAILS PARK, LTD.
Income Statement
For the Quarter Ended March 31, 2017

Revenues		
Rent revenue		£88,000
Operating expenses		
Advertising	£ 5,200	
Salaries and wages	28,800	
Utilities	750	
Depreciation	800	
Maintenance and repairs	4,000	
Total operating expenses		39,550
Net income		£48,450

Alicia thought that something was wrong with the statement because net income had never exceeded £20,000 in any one quarter. Knowing that you are an experienced accountant, she asks you to review the income statement and other data.

You first look at the trial balance. In addition to the account balances reported above in the income statement, the ledger contains the following additional selected balances at March 31, 2017.

Supplies	£ 6,200
Prepaid Insurance	7,500
Notes Payable	12,000

You then make inquiries and discover the following.

1. Rent revenue includes advanced rentals for summer occupancy £14,000.
2. There were £1,450 of supplies on hand at March 31.
3. Prepaid insurance resulted from the payment of a 1-year policy on January 1, 2017.
4. The mail on April 1, 2017, brought the following bills: advertising for week of March 24, £130; repairs made March 10, £260; and utilities, £120.
5. There are four employees, who receive wages totaling £300 per day. At March 31, 2 days' salaries and wages have been incurred but not paid.
6. The note payable is a 3-month, 10% note dated January 1, 2017.

Instructions

With the class divided into groups, answer the following.

(a) Prepare a correct income statement for the quarter ended March 31, 2017.
(b) Explain to Alicia the IFRSs that she did not recognize in preparing her income statement and their effect on her results.

Communication Activity

BYP3-4 In reviewing the accounts of Maribeth Ltd. at the end of the year, you discover that adjusting entries have not been made.

Instructions

Write a memo to Maribeth Danon, the owner of Maribeth Ltd., that explains the following: the nature and purpose of adjusting entries, why adjusting entries are needed, and the types of adjusting entries that may be made.

Ethics Case

BYP3-5 Watkin Company Ltd. is a pesticide manufacturer. Its sales declined greatly this year due to the passage of legislation outlawing the sale of several of Watkin's chemical pesticides. In the coming year, Watkin will have environmentally safe and competitive chemicals to replace these discontinued products. Sales in the next year are expected to greatly exceed any prior year's. The decline in sales and profits appears to be a 1-year aberration. But even so, the company's president fears a large dip in the current year's profits. He believes that such a dip could cause a significant drop in the market price of Watkin's ordinary shares and make the company a takeover target.

To avoid this possibility, the company's president calls in Diane Leno, controller, to discuss this period's year-end adjusting entries. He urges her to accrue every possible revenue and to defer as many expenses as possible. He says to Diane, "We need the revenues this year, and next year can easily absorb expenses deferred from this year. We can't let our share price be hammered down!" Diane didn't get around to recording the adjusting entries until January 17, but she dated the entries December 31 as if they were recorded then. Diane also made every effort to comply with the president's request.

Instructions

(a) Who are the stakeholders in this situation?
(b) What are the ethical considerations of (1) the president's request and (2) Diane's dating the adjusting entries December 31?
(c) Can Diane accrue revenues and defer expenses and still be ethical?

Answers to Insight and Accounting Across the Organization Questions

p. 104 Cooking the Books? Q: What motivates sales executives and finance and accounting executives to participate in activities that result in inaccurate reporting of revenues? **A:** Sales executives typically receive bonuses based on their ability to meet quarterly sales targets. In addition, they often face the possibility of losing their jobs if they miss those targets. Executives in accounting and finance are very aware of the earnings targets of financial analysts and investors. If they fail to meet these targets, the company's share price will fall. As a result of these pressures, executives sometimes knowingly engage in unethical efforts to misstate revenues.

p. 112 Turning Gift Cards into Revenue Q: Suppose that Robert Jones purchases a €100 gift card at Carrefour (FRA) on December 24, 2016, and gives it to his wife, Mary Jones, on December 25, 2016. On January 3, 2017, Mary uses the card to purchase €100 worth of CDs. When do you think Carrefour should recognize revenue and why? **A:** According to the revenue recognition principle, companies should recognize revenue when the performance obligation is satisfied. In this case, revenue is not recognized until Carrefour provides the goods. Thus, when Carrefour receives cash in exchange for the gift card on December 24, 2016, it should recognize a liability, Unearned Revenue, for €100. On January 3, 2017, when Mary Jones exchanges the card for merchandise, Carrefour should recognize revenue and eliminate €100 from the balance in the Unearned Revenue account.

p. 118 Got Junk? Q: What accounting issue might this cause for companies? **A:** The statement of financial position should provide a fair representation of what a company owns and what it owes. If significant obligations of the company are not reported on the statement of financial position, the company's net worth (its equity) will be overstated. While it is true that it is not possible to estimate the *exact* amount of future environmental cleanup costs, it is becoming clear that companies will be held accountable. Therefore, it seems reasonable to accrue for environmental costs. Recognition of these liabilities provides a more accurate picture of the company's financial position. It also has the potential to improve the environment. As companies are forced to report these amounts on their financial statements, they will start to look for more effective and efficient means to reduce toxic waste and therefore lower their costs.

A Look at U.S. GAAP

All companies struggle to determine the proper revenues and expenses to use in measuring net income, so timing is everything. Both the IASB and FASB are working on a joint project to develop a common conceptual framework that will enable companies to better use the same principles to record transactions consistently over time. The objective of the conceptual framework project is to lead to standards that are more principles-based and internally consistent, which will in turn lead to the most useful financial reporting information.

Learning Objective 10

Compare the procedures for adjusting entries under IFRS and U.S. GAAP.

Key Points

- As indicated above, both the IASB and FASB are working together on a common conceptual framework. Some of the major issues that are being addressed are:
  - What are the qualitative characteristics that make accounting information useful?
  - What is the primary objective of financial reporting?
  - What basis should be used to measure and report, that is, should a historical cost or fair value approach be used?
  - What criteria should be used to determine when revenue should be recognized and when expenses have been incurred?
  - What guidelines should be established for disclosing financial information?

Similarities

- Like IFRS, companies applying GAAP use accrual-basis accounting to ensure that they record transactions that change a company's financial statements in the period in which events occur.
- Similar to IFRS, cash-basis accounting is not in accordance with GAAP.
- GAAP also divides the economic life of companies into artificial time periods. Under both GAAP and IFRS, this is referred to as the *time period assumption*. GAAP requires that companies present a complete set of financial statements, including comparative information annually.
- The form and content of financial statements are very similar under GAAP and IFRS. Any significant differences will be discussed in those chapters that address specific financial statements.
- Revenue recognition fraud is a major issue in U.S. financial reporting. The same situation exists for most other countries as well.

Differences

- Prior to the issuance of a new joint revenue recognition standard by the IASB and the FASB, GAAP had more than 100 rules dealing with revenue recognition. Many of these rules were industry-specific. Revenue recognition under IFRS was determined primarily by a single standard, *IAS 18*. Despite this large disparity in the detailed guidance devoted to revenue recognition, the **general** revenue recognition principles required by IFRS were similar to those under GAAP.
- Internal controls are a system of checks and balances designed to detect and prevent fraud and errors. The Sarbanes-Oxley Act requires U.S. companies to enhance their systems of internal control. However, many foreign companies do not have this requirement.
- Under IFRS, revaluation to fair value of items such as land and buildings is permitted. This is not permitted under GAAP.
- Under IFRS, the term "income" includes *both* revenues, which arise during the normal course of operating activities, and gains, which arise from activities outside of the normal sales of goods and services. The term income is not used this way under GAAP. Instead, under GAAP income refers to the net difference between revenues and expenses. Expenses under IFRS include both those costs incurred in the normal course of operations, as well as losses that are not part of normal operations. This is in contrast to GAAP, which defines each separately.

Looking to the Future

In May 2014, the IASB and FASB completed a joint project on revenue recognition. The purpose of this project was to develop comprehensive guidance on when to recognize revenue. This approach focuses on changes in assets and liabilities as the basis for revenue recognition. It is hoped that this approach will lead to more consistent accounting in this area.

GAAP Practice

GAAP Self-Test Questions

1. GAAP:
   (a) provides the same type of guidance as IFRS for revenue recognition.
   (b) provides only general guidance on revenue recognition, compared to the detailed guidance provided by IFRS.
   (c) allows revenue to be recognized when a customer makes an order.
   (d) requires that revenue not be recognized until cash is received.
2. Which of the following statements is **false**?
   (a) GAAP employs the time period assumption.
   (b) GAAP employs accrual accounting.
   (c) GAAP requires that revenues and costs must be capable of being measured reliably.
   (d) GAAP uses the cash basis of accounting.
3. As a result of the revenue recognition project by the FASB and IASB:
   (a) revenue recognition places more emphasis on when the performance obligation is satisfied.
   (b) revenue recognition places more emphasis on when revenue is realized.
   (c) revenue recognition places more emphasis on when changes occur in related expenses.
   (d) revenue is no longer recorded unless cash has been received.
4. Which of the following is **false**?
   (a) Under IFRS, the term *income* describes both revenues and gains.
   (b) Under IFRS, the term *expenses* includes losses.
   (c) Under IFRS, firms do not engage in the closing process.
   (d) Previously, IFRS had fewer standards than GAAP that addressed revenue recognition.
5. Accrual-basis accounting:
   (a) is optional under GAAP.
   (b) results in companies recording transactions that change a company's financial statements in the period in which events occur.
   (c) has been eliminated as a result of the IASB/FASB joint project on revenue recognition.
   (d) is not consistent with the GAAP conceptual framework.

GAAP Exercises

GAAP3-1 Why might IFRS revalue land and buildings whereas under GAAP this practice is not permissible?

GAAP3-2 Under GAAP, do the definitions of revenues and expenses include gains and losses? Explain.

GAAP Financial Reporting Problem: Apple Inc.

GAAP3-3 The financial statements of Apple are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions

Visit Apple's corporate website and answer the following questions from Apple's 2013 annual report.

(a) Using the financial statements and related information, identify items that may result in adjusting entries for prepayments.

(b) Using the financial statements and related information, identify items that may result in adjusting entries for accruals.

Answers to GAAP Self-Test Questions

1. a **2.** d **3.** a **4.** c **5.** b

✔ The Navigator

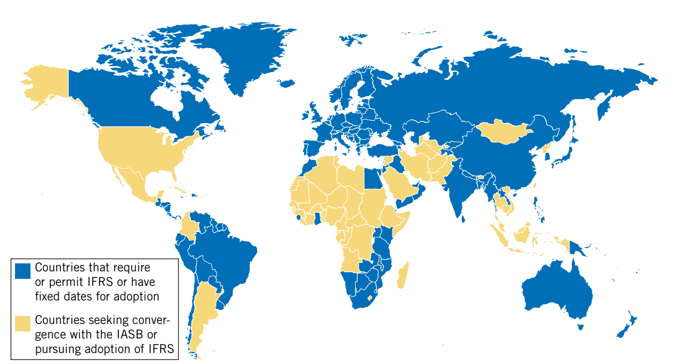
✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER 4

Completing the Accounting Cycle

FEATURE STORY Speaking the Same Language

Recent events in the global capital markets underscore the importance of financial disclosure and transparency in markets around the world. As a result, many countries are examining their accounting and financial disclosure rules. As indicated in the graphic on this page, financial regulators in over 120 countries now use the IFRSs issued by the International Accounting Standards Board (IASB).



Source: http://www.pwc.com/us/en/issues/ifrs-reporting/country-adoption/index.jhtml.

What are the potential benefits of having countries use similar standards to prepare their financial statements? One benefit is that investors can compare the results of competing companies from different countries. A second benefit is it enhances efforts to finance growth. Companies (particularly in developing and emerging nations) need to raise funds from outside their borders. Companies that use IFRS gain credibility in the marketplace, which reduces financing costs.

The IASB's stated objectives are as follows:

- To develop a single set of high quality, understandable, enforceable and globally accepted international financial reporting standards (IFRSs) through its standard-setting body, the IASB;
- To promote the use and rigorous application of those standards;
- To take account of the financial reporting needs of emerging economies and small- and medium-sized entities (SMEs); and
- To bring about convergence of national accounting standards and IFRSs to high-quality solutions.

Accounting standards may never be absolutely identical around the world. However, financial statement users have already benefitted from the increased comparability that has resulted from efforts to minimize differences in accounting standards. ■

✔ The Navigator

- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 186–194
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Prepare a worksheet.
2. Explain the process of closing the books.
3. Describe the content and purpose of a post-closing trial balance.
4. State the required steps in the accounting cycle.
5. Explain the approaches to preparing correcting entries.
6. Identify the sections of a classified statement of financial position.

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Oliver Burston/Ikon Images/Getty Images, Inc.

PREVIEW OF CHAPTER 4

Financial statements help employees understand what is happening in the business. In Chapter 3, we prepared financial statements directly from the adjusted trial balance. However, with so many details involved in the end-of-period accounting procedures, it is easy to make errors. One way to minimize errors in the records and to simplify the end-of-period procedures is to use a worksheet.

In this chapter, we will explain the role of the worksheet in accounting. We also will study the remaining steps in the accounting cycle, especially the closing process, again using Yazici Advertising A.Ş. as an example. Then we will consider correcting entries and classified statements of financial position. The content and organization of Chapter 4 are as follows.

COMPLETING THE ACCOUNTING CYCLE

Using a Worksheet	Closing the Books	Summary of Accounting Cycle	Classified Statement of Financial Position
• Steps in preparation • Preparing financial statements • Preparing adjusting entries	• Preparing closing entries • Posting closing entries • Preparing a post-closing trial balance	• Reversing entries—An optional step • Correcting entries—An avoidable step	• Intangible assets • Property, plant, and equipment • Long-term investments • Current assets • Equity • Non-current liabilities • Current liabilities

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Using a Worksheet

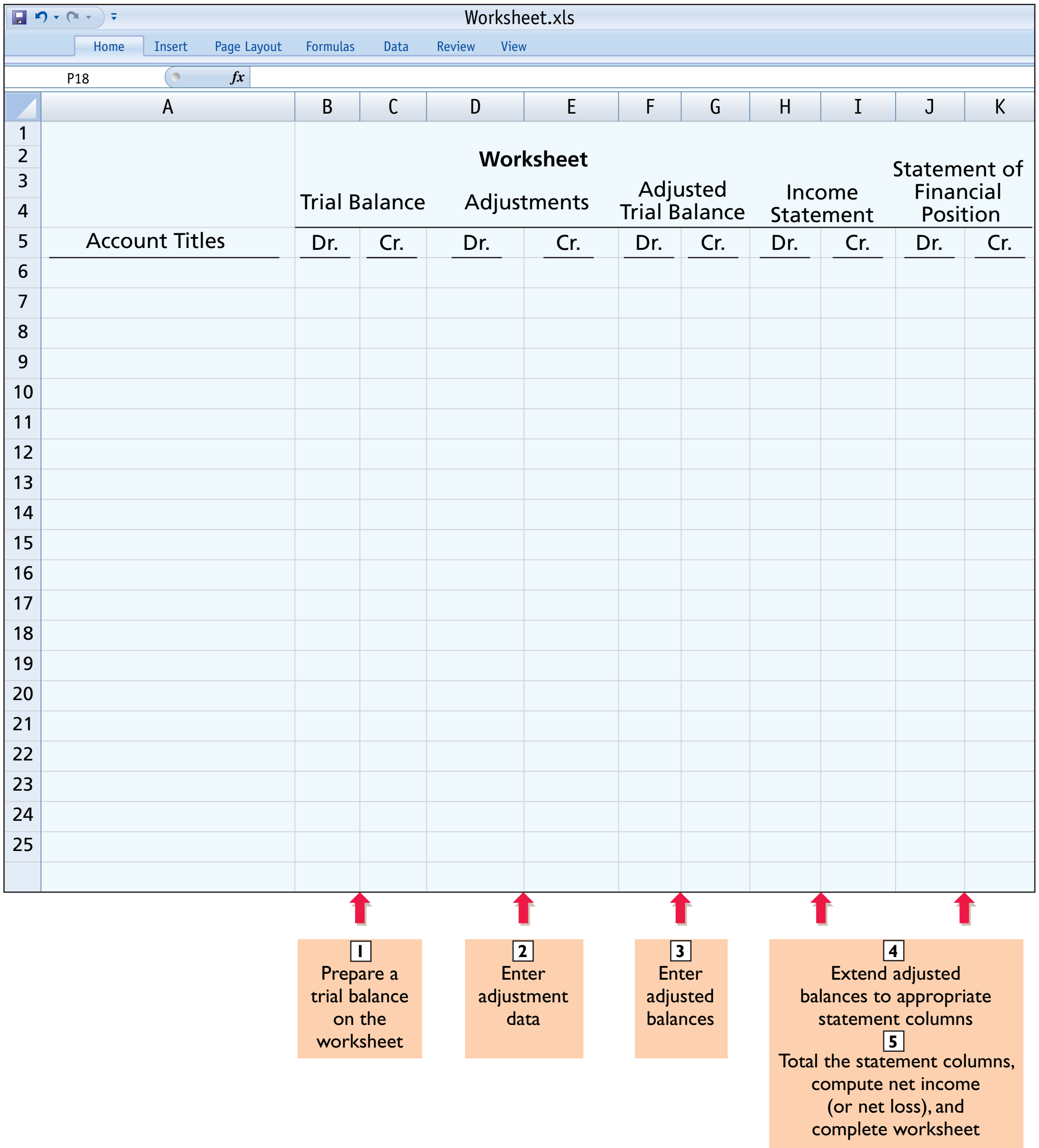
Learning Objective 1

Prepare a worksheet.

A **worksheet** is a multiple-column form used in the adjustment process and in preparing financial statements. As its name suggests, the worksheet is a working tool. **It is not a permanent accounting record.** It is neither a journal nor a part of the general ledger. The worksheet is merely a device used in preparing adjusting entries and the financial statements. Companies generally computerize worksheets using an electronic spreadsheet program such as Excel.

Illustration 4-1 shows the basic form of a worksheet and the five steps for preparing it. Each step is performed in sequence. **The use of a worksheet is optional.** When a company chooses to use one, it prepares financial statements directly from the worksheet. It enters the adjustments in the worksheet columns and then journalizes and posts the adjustments after it has prepared the financial statements. Thus, worksheets make it possible to provide the financial statements to management and other interested parties at an earlier date.

Illustration 4-1
Form and procedure for a worksheet



Steps in Preparing a Worksheet

We will use the October 31 trial balance and adjustment data of Yazici Advertising A.Ş. from Chapter 3 to illustrate how to prepare a worksheet. We describe each step of the process and demonstrate these steps in Illustration 4-2 (page 164).

STEP 1. PREPARE A TRIAL BALANCE ON THE WORKSHEET

Enter all ledger accounts with balances in the account titles column. Enter debit and credit amounts from the ledger in the trial balance columns. Illustration 4-2 shows the worksheet trial balance for Yazici Advertising A.Ş. This trial balance is the same one that appears in Illustration 2-32 (page 73) and Illustration 3-3 (page 105).

STEP 2. ENTER THE ADJUSTMENTS IN THE ADJUSTMENTS COLUMNS

When using a worksheet, enter all adjustments in the adjustments columns. In entering the adjustments, use applicable trial balance accounts. If additional accounts are needed, insert them on the lines immediately below the trial balance totals. A different letter identifies the debit and credit for each adjusting entry. The term used to describe this process is **keying. Companies do not journalize the adjustments until after they complete the worksheet and prepare the financial statements.**

The adjustments for Yazici Advertising A.Ş. are the same as the adjustments in Illustration 3-23 (page 119). They are keyed in the adjustments columns of the worksheet as follows.

(a) Yazici debits an additional account, Supplies Expense, ₺1,500 for the cost of supplies used, and credits Supplies ₺1,500.
(b) Yazici debits an additional account, Insurance Expense, ₺50 for the insurance that has expired, and credits Prepaid Insurance ₺50.
(c) The company needs two additional depreciation accounts. It debits Depreciation Expense ₺40 for the month's depreciation, and credits Accumulated Depreciation—Equipment ₺40.
(d) Yazici debits Unearned Service Revenue ₺400 for services performed, and credits Service Revenue ₺400.
(e) Yazici debits an additional account, Accounts Receivable, ₺200 for services performed but not billed, and credits Service Revenue ₺200.
(f) The company needs two additional accounts relating to interest. It debits Interest Expense ₺50 for accrued interest, and credits Interest Payable ₺50.
(g) Yazici debits Salaries and Wages Expense ₺1,200 for accrued salaries, and credits an additional account, Salaries and Wages Payable, ₺1,200.

After Yazici has entered all the adjustments, the adjustments columns are totaled to prove their equality.

STEP 3. ENTER ADJUSTED BALANCES IN THE ADJUSTED TRIAL BALANCE COLUMNS

Yazici determines the adjusted balance of an account by combining the amounts entered in the first four columns of the worksheet for each account. For example, the Prepaid Insurance account in the trial balance columns has a ₺600 debit balance and a ₺50 credit in the adjustments columns. The result is a ₺550 debit balance recorded in the adjusted trial balance columns. **For each account, the amount in the adjusted trial balance columns is the balance that will appear in the ledger after journalizing and posting the adjusting entries.** The balances in these columns are the same as those in the adjusted trial balance in Illustration 3-25 (page 121).

After Yazici has entered all account balances in the adjusted trial balance columns, the columns are totaled to prove their equality. If the column totals do

Illustration 4-2
Preparing a worksheet

Yazici Advertising.xls

Home Insert Page Layout Formulas Data Review View

P18 fx

YAZICI ADVERTISING A.Ş.
Worksheet
For the Month Ended October 31, 2017

	A	B	C	D	E	F	G	H	I	J	K
		Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Statement of Financial Position	
7	Account Titles	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
8	Cash	15,200				15,200				15,200	
9	Supplies	2,500			(a) 1,500	1,000				1,000	
10	Prepaid Insurance	600			(b) 50	550				550	
11	Equipment	5,000				5,000				5,000	
12	Notes Payable		5,000				5,000				5,000
13	Accounts Payable		2,500				2,500				2,500
14	Unearned Service Revenue		1,200	(d) 400			800				800
15	Share Capital—Ordinary		10,000				10,000				10,000
16	Dividends	500				500				500	
17	Service Revenue		10,000		(d) 400		10,600		10,600		
18					(e) 200						
19	Salaries and Wages Expense	4,000		(g) 1,200		5,200		5,200			
20	Rent Expense	900				900		900			
21	Totals	28,700	28,700								
22											
23											
24	Supplies Expense			(a) 1,500		1,500		1,500			
25	Insurance Expense			(b) 50		50		50			
26	Accum. Depreciation—										
27	Equipment				(c) 40		40				40
28	Depreciation Expense			(c) 40		40		40			
29	Accounts Receivable			(e) 200		200				200	
30	Interest Expense			(f) 50		50		50			
31	Interest Payable				(f) 50		50				50
32	Salaries and Wages Payable				(g) 1,200		1,200				1,200
33	Totals			3,440	3,440	30,190	30,190	7,740	10,600	22,450	19,590
34											
35	Net Income							2,860			2,860
36	Totals							10,600	10,600	22,450	22,450

Add additional accounts as needed to complete the adjustments:
(a) Supplies Used.
(b) Insurance Expired.
(c) Depreciation Expensed.
(d) Service Revenue Recognized.
(e) Service Revenue Accrued.
(f) Interest Accrued.
(g) Salaries Accrued.

The difference between the totals of the two income statement columns determines net income or net loss.

Net income is extended to the credit column of the statement of financial position columns. (Net loss would be extended to the debit column.)

not agree, the financial statement columns will not balance and the financial statements will be incorrect.

STEP 4. EXTEND ADJUSTED TRIAL BALANCE AMOUNTS TO APPROPRIATE FINANCIAL STATEMENT COLUMNS

The fourth step is to extend adjusted trial balance amounts to the income statement and statement of financial position columns of the worksheet. Yazici enters statement of financial position accounts in the appropriate statement of financial position debit and credit columns. For instance, it enters Cash in the statement of financial position debit column, and Notes Payable in the credit column. Yazici extends Accumulated Depreciation—Equipment to the statement of financial position credit column. The reason is that accumulated depreciation is a contra asset account with a credit balance.

• HELPFUL HINT
Every adjusted trial balance amount must be extended to one of the four statement columns.

Because the worksheet does not have columns for the retained earnings statement, Yazici extends the balance in Share Capital—Ordinary and Retained Earnings, if any, to the statement of financial position credit column. In addition, it extends the balance in Dividends to the statement of financial position debit column because it is an equity account with a debit balance.

The company enters the expense and revenue accounts such as Salaries and Wages Expense and Service Revenue in the appropriate income statement columns.

STEP 5. TOTAL THE STATEMENT COLUMNS, COMPUTE THE NET INCOME (OR NET LOSS), AND COMPLETE THE WORKSHEET

The company now must total each of the financial statement columns. The net income or loss for the period is the difference between the totals of the two income statement columns. If total credits exceed total debits, the result is net income. In such a case, as shown in Illustration 4-2, the company inserts the words "Net Income" in the account titles space. It then enters the amount in the income statement debit column and the statement of financial position credit column. **The debit amount balances the income statement columns; the credit amount balances the statement of financial position columns.** In addition, the credit in the statement of financial position column indicates the increase in equity resulting from net income.

What if total debits exceed total credits in the income statement columns? In that case, the company has a net loss. It enters the amount of the net loss in the income statement credit column and the statement of financial position debit column.

After entering the net income or net loss, the company determines new column totals. The totals shown in the debit and credit income statement columns will match. The totals shown in the debit and credit statement of financial position columns will also match. If either the income statement columns or the statement of financial position columns are not equal after the net income or net loss has been entered, there is an error in the worksheet.

Preparing Financial Statements from a Worksheet

After a company has completed a worksheet, it has at hand all the data required for preparation of financial statements. The income statement is prepared from the income statement columns. The statement of financial position and retained earnings statement are prepared from the statement of financial position columns. Illustration 4-3 (page 166) shows the financial statements prepared from Yazici's worksheet. At this point, the company has not journalized or posted adjusting entries. Therefore, ledger balances for some accounts are not the same as the financial statement amounts.

Illustration 4-3
Financial statements from a worksheet

YAZICI ADVERTISING A.Ş.
Income Statement
For the Month Ended October 31, 2017

Revenues		
Service revenue		₺10,600
Expenses		
Salaries and wages expense	₺5,200	
Supplies expense	1,500	
Rent expense	900	
Insurance expense	50	
Interest expense	50	
Depreciation expense	40	
Total expenses		7,740
Net income		₺ 2,860

YAZICI ADVERTISING A.Ş.
Retained Earnings Statement
For the Month Ended October 31, 2017

Retained earnings, October 1	₺ –0–
Add: Net income	2,860
	2,860
Less: Dividends	500
Retained earnings, October 31	₺2,360

YAZICI ADVERTISING A.Ş.
Statement of Financial Position
October 31, 2017

Assets		
Equipment	₺ 5,000	
Less: Accumulated depreciation—equipment	40	₺ 4,960
Prepaid insurance		550
Supplies		1,000
Accounts receivable		200
Cash		15,200
Total assets		₺21,910
Equity and Liabilities		
Equity		
Share capital—ordinary	₺10,000	
Retained earnings	2,360	₺12,360
Liabilities		
Notes payable	5,000	
Accounts payable	2,500	
Interest payable	50	
Unearned service revenue	800	
Salaries and wages payable	1,200	9,550
Total equity and liabilities		₺21,910

The amount shown for Share Capital—Ordinary on the worksheet does not change from the beginning to the end of the period unless the company issues additional ordinary shares during the period. Because there was no balance in Yazici's Retained Earnings, the account is not listed on the worksheet. Only after dividends and net income (or loss) are posted to retained earnings does this account have a balance at the end of the first year of the business.

Using a worksheet, companies can prepare financial statements before they journalize and post adjusting entries. **However, the completed worksheet is not a substitute for formal financial statements.** The format of the data in the financial statement columns of the worksheet is not the same as the format of the financial statements. **A worksheet is essentially a working tool of the accountant**; companies do not distribute it to management and other parties.

Preparing Adjusting Entries from a Worksheet

A worksheet is not a journal, and it cannot be used as a basis for posting to ledger accounts. To adjust the accounts, the company must journalize the adjustments and post them to the ledger. **The adjusting entries are prepared from the adjustments columns of the worksheet.** The reference letters in the adjustments columns and the explanations of the adjustments at the bottom of the worksheet help identify the adjusting entries. The journalizing and posting of adjusting entries **follow** the preparation of financial statements when a worksheet is used. The adjusting entries on October 31 for Yazici Advertising A.Ş. are the same as those shown in Illustration 3-23 (page 119).

• HELPFUL HINT
Note that writing the explanation of the adjustment at the bottom of the worksheet is not required.

> DO IT!

Worksheet

Action Plan

✔ Statement of financial position: Extend assets to debit column. Extend liabilities to credit column. Extend contra assets to credit column. Extend Dividends account to debit column.

✔ Income statement: Extend expenses to debit column. Extend revenues to credit column.

Susan Elbe is preparing a worksheet. Explain to Susan how she should extend the following adjusted trial balance accounts to the financial statement columns of the worksheet.

Cash	Dividends
Accumulated Depreciation	Service Revenue
Accounts Payable	Salaries and Wages Expense

Solution

Income statement debit column—Salaries and Wages Expense
Income statement credit column—Service Revenue
Statement of financial position debit column—Cash; Dividends
Statement of financial position credit column—Accumulated Depreciation; Accounts Payable

Related exercise material: **BE4-1, BE4-2, BE4-3, E4-1, E4-2, E4-5, E4-6, and DO IT! 4-1.**

✔ The Navigator

Closing the Books

Learning Objective 2
Explain the process of closing the books.

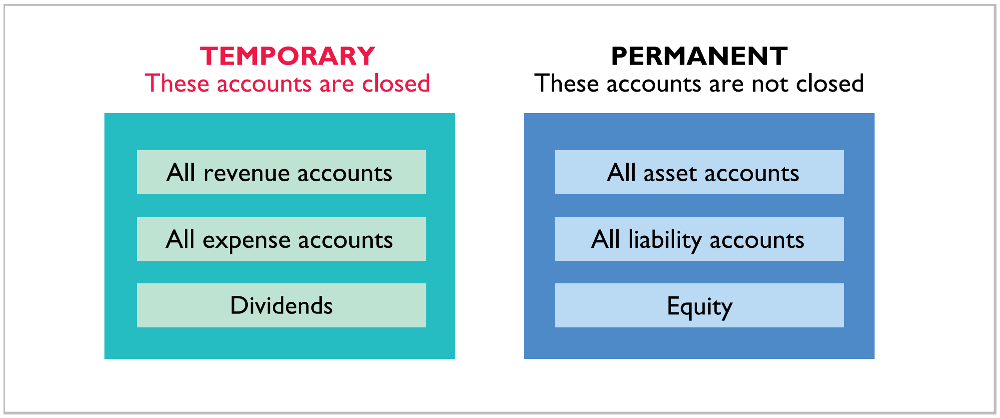
At the end of the accounting period, the company makes the accounts ready for the next period. This is called **closing the books**. In closing the books, the company distinguishes between temporary and permanent accounts.

Temporary accounts relate only to a given accounting period. They include all income statement accounts and the Dividends account. **The company closes all temporary accounts at the end of the period.**

• Alternative Terminology
Temporary accounts are sometimes called *nominal accounts*, and permanent accounts are sometimes called *real accounts*.

In contrast, **permanent accounts** relate to one or more future accounting periods. They consist of all statement of financial position accounts, including equity accounts. **Permanent accounts are not closed from period to period.** Instead, the company carries forward the balances of permanent accounts into the next accounting period. Illustration 4-4 identifies the accounts in each category.

Illustration 4-4
Temporary versus permanent accounts



• HELPFUL HINT
A contra asset account, such as Accumulated Depreciation, is a permanent account.

Preparing Closing Entries

At the end of the accounting period, the company transfers temporary account balances to the permanent equity account, Retained Earnings, by means of closing entries.

Closing entries formally recognize in the ledger the transfer of net income (or net loss) and Dividends to Retained Earnings. The retained earnings statement shows the results of these entries. **Closing entries also produce a zero balance in each temporary account.** The temporary accounts are then ready to accumulate data in the next accounting period separate from the data of prior periods. Permanent accounts are not closed.

Journalizing and posting closing entries is a required step in the accounting cycle. (See Illustration 4-11 on page 175.) The company performs this step after it has prepared financial statements. In contrast to the steps in the cycle that you have already studied, companies generally journalize and post closing entries **only at the end of the annual accounting period**. Thus, all temporary accounts will contain data for the entire year.

In preparing closing entries, companies could close each income statement account directly to Retained Earnings. However, to do so would result in excessive detail in the permanent Retained Earnings account. Instead, companies close the revenue and expense accounts to another temporary account, **Income Summary**, and they transfer the resulting net income or net loss from this account to Retained Earnings.

Companies **record closing entries in the general journal**. A center caption, Closing Entries, inserted in the journal between the last adjusting entry and the first closing entry, identifies these entries. Then the company posts the closing entries to the ledger accounts.

Companies generally prepare closing entries directly from the adjusted balances in the ledger. They could prepare separate closing entries for each nominal account, but the following four entries accomplish the desired result more efficiently:

1. Debit each revenue account for its balance, and credit Income Summary for total revenues.
2. Debit Income Summary for total expenses, and credit each expense account for its balance.

3. Debit Income Summary and credit Retained Earnings for the amount of net income.
4. Debit Retained Earnings for the balance in the Dividends account, and credit Dividends for the same amount.

Illustration 4-5 presents a diagram of the closing process. In it, the boxed numbers refer to the four entries required in the closing process.

• HELPFUL HINT
The Dividends account is closed directly to Retained Earnings and *not* to Income Summary because dividends are not an expense.

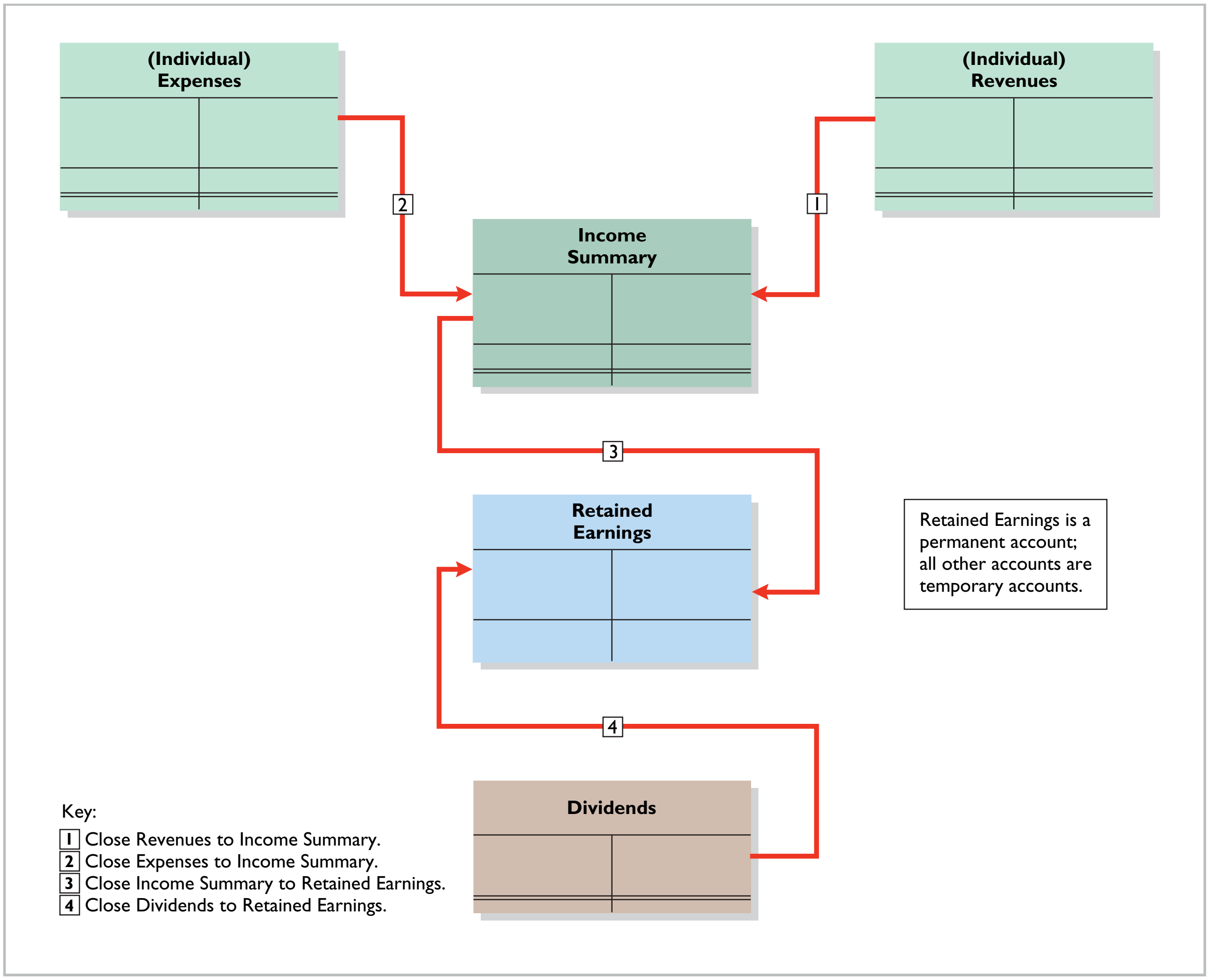


Illustration 4-5
Diagram of closing process—corporation

If there were a net loss (because expenses exceeded revenues), entry 3 in Illustration 4-5 would be reversed: There would be a credit to Income Summary and a debit to Retained Earnings.

CLOSING ENTRIES ILLUSTRATED

In practice, companies generally prepare closing entries only at the end of the annual accounting period. However, to illustrate the journalizing and posting of closing entries, we will assume that Yazici Advertising A.Ş. closes its books monthly. Illustration 4-6 (page 170) shows the closing entries at October 31. (The numbers in parentheses before each entry correspond to the four entries diagrammed in Illustration 4-5.)

Illustration 4-6
Closing entries journalized

GENERAL JOURNAL				J3
Date	**Account Titles and Explanation**	**Ref.**	**Debit**	**Credit**
	Closing Entries			
2017	(1)			
Oct. 31	Service Revenue	400	10,600	
	Income Summary	350		10,600
	(To close revenue account)			
	(2)			
31	Income Summary	350	7,740	
	Supplies Expense	631		1,500
	Depreciation Expense	711		40
	Insurance Expense	722		50
	Salaries and Wages Expense	726		5,200
	Rent Expense	729		900
	Interest Expense	905		50
	(To close expense accounts)			
	(3)			
31	Income Summary (10,600 − 7,740)	350	2,860	
	Retained Earnings	320		2,860
	(To close net income to retained earnings)			
	(4)			
31	Retained Earnings	320	500	
	Dividends	332		500
	(To close dividends to retained earnings)			

Note that the amounts for Income Summary in entries (1) and (2) are the totals of the income statement credit and debit columns, respectively, in the worksheet.

A couple of cautions in preparing closing entries. (1) Avoid unintentionally doubling the revenue and expense balances rather than zeroing them. (2) Do not close Dividends through the Income Summary account. **Dividends are not an expense, and they are not a factor in determining net income.**

Posting Closing Entries

Illustration 4-7 shows the posting of the closing entries and the underlining (ruling) of the accounts. Note that all temporary accounts have zero balances after posting the closing entries. In addition, you should realize that the balance in Retained Earnings represents the accumulated undistributed earnings of the corporation at the end of the accounting period. This balance is shown on the statement of financial position and is the ending amount reported on the retained earnings statement, as shown in Illustration 4-3. Yazici uses the Income Summary account only in closing. It does not journalize and post entries to this account during the year.

As part of the closing process, Yazici totals, balances, and double-underlines its temporary accounts—revenues, expenses, and Dividends, as shown in T-account form in Illustration 4-7. It does not close its permanent accounts—assets, liabilities, and equity (Share Capital—Ordinary and Retained Earnings). Instead, Yazici draws a single underline beneath the current-period entries for the permanent accounts. The account balance is then entered below the single rule and is carried forward to the next period (for example, see Retained Earnings).

• HELPFUL HINT
The balance in Income Summary before it is closed must equal the net income or net loss for the period.

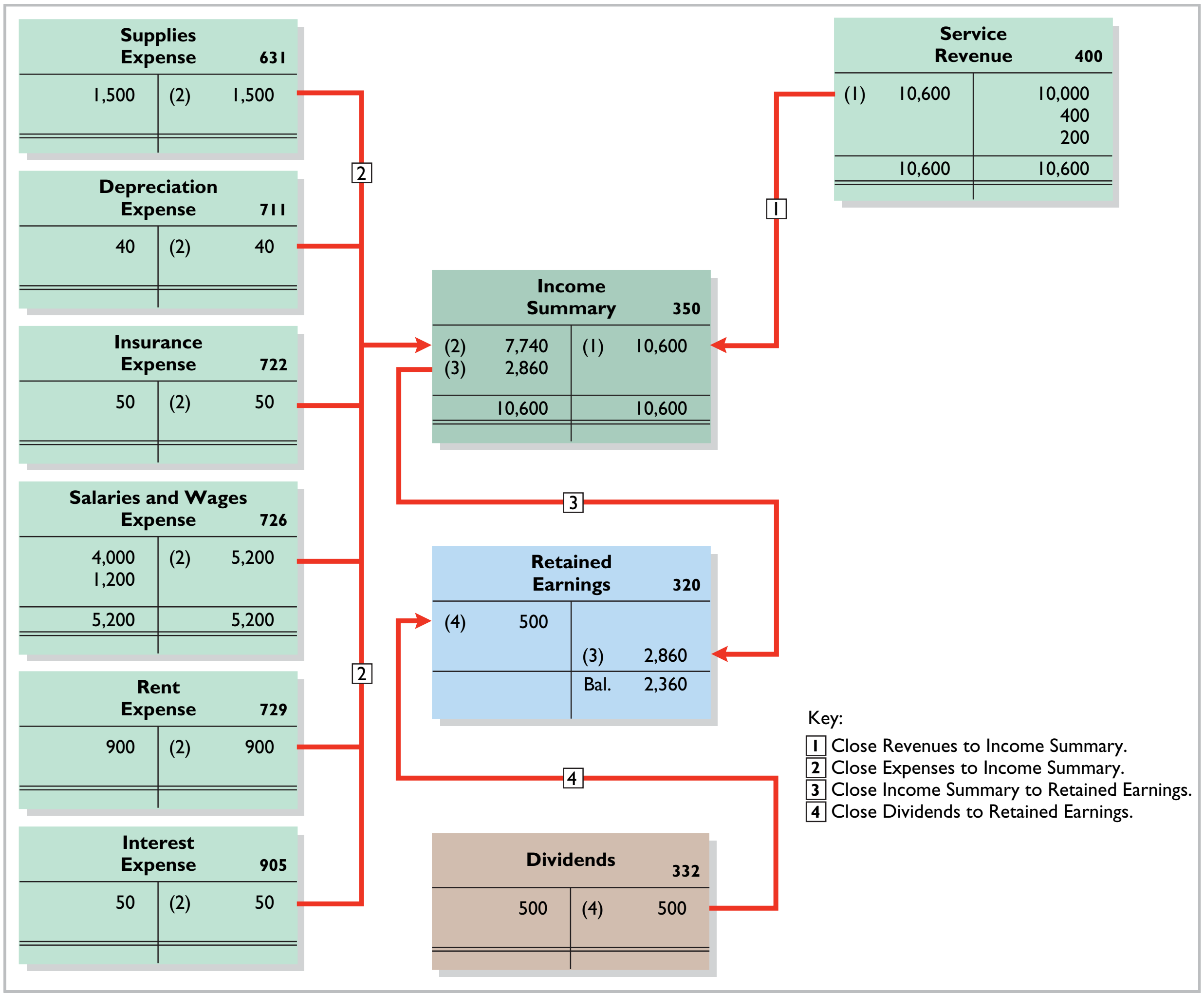


Illustration 4-7
Posting of closing entries

Accounting Across the Organization **Performing the Virtual Close**

Steve Cole/iStockphoto

Technology has dramatically shortened the closing process. Recent surveys have reported that the average company now takes only six to seven days to close, rather than 20 days. But a few companies do much better. Some companies can perform a "virtual close"—closing within 24 hours on any day in the quarter. One company even improved its closing time by 85%. Not very long ago, it took 14 to 16 days. Managers at these companies emphasize that this increased speed has not reduced the accuracy and completeness of the data.

This is not just showing off. Knowing exactly where you are financially all of the time allows the company to respond faster than competitors. It also means that the hundreds of people who used to spend 10 to 20 days a quarter tracking transactions can now be more usefully employed on things such as mining data for business intelligence to find new business opportunities.

Source: "Reporting Practices: Few Do It All," *Financial Executive* (November 2003), p. 11.

Q Who else benefits from a shorter closing process? (See page 214.)

DO IT!

Closing Entries

The worksheet for Hancock Company shows the following in the financial statement columns:

Dividends €15,000
Share capital—ordinary €42,000
Net income €18,000

Prepare the closing entries at December 31 that affect equity.

Action Plan

✔ Close Income Summary to Retained Earnings.

✔ Close Dividends to Retained Earnings.

Solution

Dec. 31	Income Summary	18,000	
	Retained Earnings		18,000
	(To close net income to retained earnings)		
31	Retained Earnings	15,000	
	Dividends		15,000
	(To close dividends to retained earnings)		

Related exercise material: **BE4-4, BE4-5, BE4-6, E4-4, E4-7, E4-8, E4-11, and DO IT! 4-2.**

✔ The Navigator

Preparing a Post-Closing Trial Balance

Learning Objective 3

Describe the content and purpose of a post-closing trial balance.

After Yazici has journalized and posted all closing entries, it prepares another trial balance, called a **post-closing trial balance**, from the ledger. The post-closing trial balance lists permanent accounts and their balances after the journalizing and posting of closing entries. The purpose of the post-closing trial balance is **to prove the equality of the permanent account balances carried forward into the next accounting period**. Since all temporary accounts will have zero balances, **the post-closing trial balance will contain only permanent—statement of financial position—accounts**.

Illustration 4-8 shows the post-closing trial balance for Yazici Advertising A.Ş.

Illustration 4-8
Post-closing trial balance

YAZICI ADVERTISING A.Ş.
Post-Closing Trial Balance
October 31, 2017

	Debit	Credit
Cash	₺15,200	
Accounts Receivable	200	
Supplies	1,000	
Prepaid Insurance	550	
Equipment	5,000	
Accumulated Depreciation—Equipment		₺ 40
Notes Payable		5,000
Accounts Payable		2,500
Unearned Service Revenue		800
Salaries and Wages Payable		1,200
Interest Payable		50
Share Capital—Ordinary		10,000
Retained Earnings		2,360
	₺21,950	**₺21,950**

Yazici prepares the post-closing trial balance from the permanent accounts in the ledger. Illustration 4-9 shows the permanent accounts in Yazici's general ledger.

Illustration 4-9
General ledger, permanent accounts

(Permanent Accounts Only)

GENERAL LEDGER

Cash No. 101

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1	10,000		10,000
2		J1	1,200		11,200
3		J1		900	10,300
4		J1		600	9,700
20		J1		500	9,200
26		J1		4,000	5,200
31		J1	10,000		**15,200**

Accounts Receivable No. 112

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	**200**		**200**

Supplies No. 126

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 5		J1	2,500		2,500
31	Adj. entry	J2		**1,500**	**1,000**

Prepaid Insurance No. 130

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 4		J1	600		600
31	Adj. entry	J2		**50**	**550**

Equipment No. 157

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1	5,000		**5,000**

Accumulated Depreciation—Equipment No. 158

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2		**40**	**40**

Notes Payable No. 200

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1		5,000	**5,000**

Accounts Payable No. 201

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 5		J1		2,500	**2,500**

Unearned Service Revenue No. 209

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 2		J1		1,200	1,200
31	Adj. entry	J2	400		**800**

Salaries and Wages Payable No. 212

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2		**1,200**	**1,200**

Interest Payable No. 230

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2		**50**	**50**

Share Capital—Ordinary No. 311

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1		J1		10,000	10,000

Retained Earnings No. 320

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 1					–0–
31	**Closing entry**	**J3**		**2,860**	**2,860**
31	**Closing entry**	**J3**	**500**		**2,360**

Note: The permanent accounts for Yazici Advertising A.Ş. are shown here; the temporary accounts are shown in Illustration 4-10. Both permanent and temporary accounts are part of the general ledger; we segregated them here to aid in learning.

A post-closing trial balance provides evidence that the company has properly journalized and posted the closing entries. It also shows that the accounting equation is in balance at the end of the accounting period. However, like the trial balance, it does not prove that Yazici has recorded all transactions or that the ledger is correct. For example, the post-closing trial balance still will balance even if a transaction is not journalized and posted or if a transaction is journalized and posted twice.

The remaining accounts in the general ledger are temporary accounts, shown in Illustration 4-10. After Yazici correctly posts the closing entries, each temporary account has a zero balance. These accounts are double-underlined to finalize the closing process.

Illustration 4-10
General ledger, temporary accounts

(Temporary Accounts Only)

GENERAL LEDGER

Dividends — **No. 332**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 20		J1	500		500
31	**Closing entry**	**J3**		**500**	**–0–**

Income Summary — **No. 350**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	**Closing entry**	**J3**		**10,600**	**10,600**
31	**Closing entry**	**J3**	**7,740**		**2,860**
31	**Closing entry**	**J3**	**2,860**		**–0–**

Service Revenue — **No. 400**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31		J1		10,000	10,000
31	Adj. entry	J2		400	10,400
31	Adj. entry	J2		200	10,600
31	**Closing entry**	**J3**	**10,600**		**–0–**

Supplies Expense — **No. 631**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	1,500		1,500
31	**Closing entry**	**J3**		**1,500**	**–0–**

Depreciation Expense — **No. 711**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	**40**		40
31	**Closing entry**	**J3**		**40**	**–0–**

Insurance Expense — **No. 722**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	**50**		50
31	**Closing entry**	**J3**		**50**	**–0–**

Salaries and Wages Expense — **No. 726**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 26		J1	4,000		4,000
31	Adj. entry	J2	**1,200**		5,200
31	**Closing entry**	**J3**		**5,200**	**–0–**

Rent Expense — **No. 729**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 3		J1	900		900
31	**Closing entry**	**J3**		**900**	**–0–**

Interest Expense — **No. 905**

Date	Explanation	Ref.	Debit	Credit	Balance
2017					
Oct. 31	Adj. entry	J2	**50**		50
31	**Closing entry**	**J3**		**50**	**–0–**

Note: The temporary accounts for Yazici Advertising A.Ş. are shown here; Illustration 4-9 shows the permanent accounts. Both permanent and temporary accounts are part of the general ledger; they are segregated here to aid in learning.

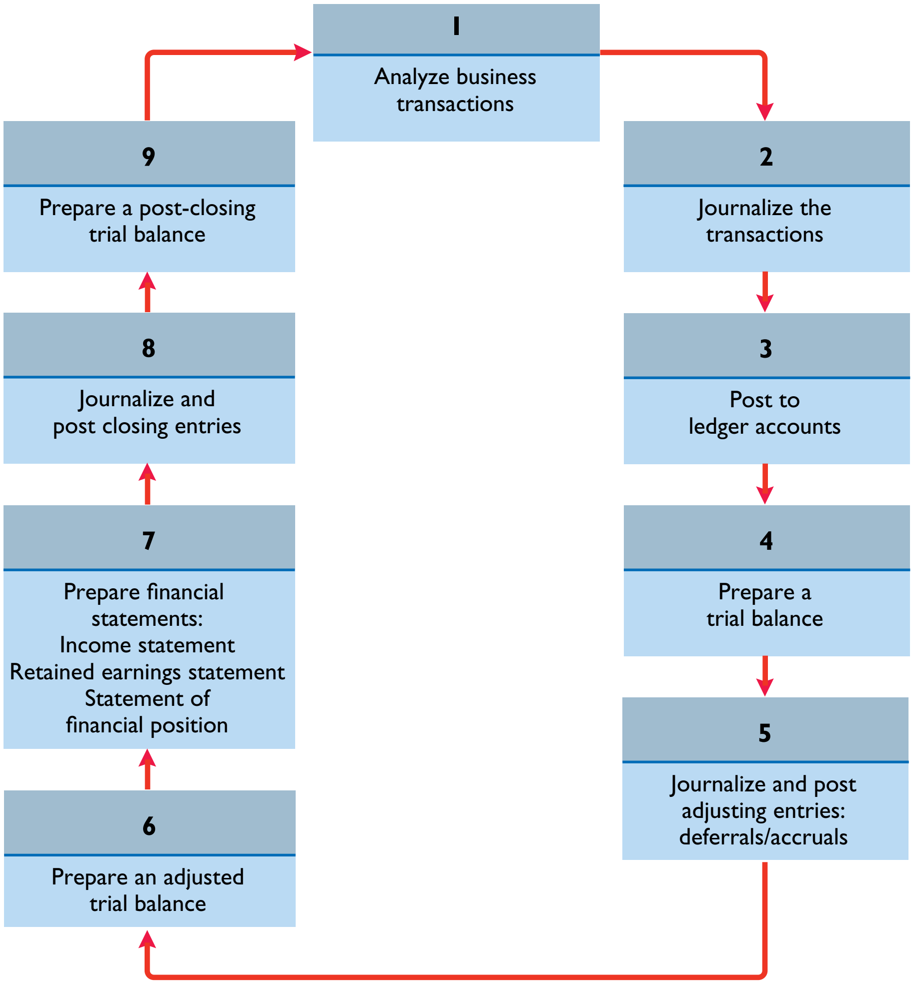
Summary of the Accounting Cycle

Learning Objective 4
State the required steps in the accounting cycle.

Illustration 4-11 summarizes the steps in the accounting cycle. You can see that the cycle begins with the analysis of business transactions and ends with the preparation of a post-closing trial balance.

Steps 1–3 may occur daily during the accounting period. Companies perform Steps 4–7 on a periodic basis, such as monthly, quarterly, or annually. Steps 8 and 9—closing entries, and a post-closing trial balance—usually take place only at the end of a company's **annual** accounting period.

Illustration 4-11
Steps in the accounting cycle



Optional steps: If a worksheet is prepared, Steps 4, 5, and 6 are incorporated in the worksheet. If reversing entries are prepared, they occur between Steps 9 and 1 as discussed below.

There are also two **optional steps** in the accounting cycle. As you have seen, companies may use a worksheet in preparing adjusting entries and financial statements. In addition, they may use reversing entries, as explained below.

Reversing Entries—An Optional Step

Some accountants prefer to reverse certain adjusting entries by making a **reversing entry** at the beginning of the next accounting period. A reversing entry is the exact opposite of the adjusting entry made in the previous period. **Use of reversing entries is an optional bookkeeping procedure; it is not a required step in the accounting cycle.** Accordingly, we have chosen to cover this topic in Appendix 4A at the end of this chapter.

Correcting Entries—An Avoidable Step

Learning Objective 5
Explain the approaches to preparing correcting entries.

Unfortunately, errors may occur in the recording process. Companies should correct errors, **as soon as they discover them**, by journalizing and posting **correcting entries**. If the accounting records are free of errors, no correcting entries are needed.

You should recognize several differences between correcting entries and adjusting entries. First, adjusting entries are an integral part of the accounting cycle. Correcting entries, on the other hand, are unnecessary if the records are error-free. Second, companies journalize and post adjustments **only at the end of an accounting period**. In contrast, companies make correcting entries **whenever they discover an error**. Finally, adjusting entries always affect at least one statement of financial position account and one income statement account. In contrast, correcting entries may involve any combination of accounts in need of correction. **Correcting entries must be posted before closing entries.**

To determine the correcting entry, it is useful to compare the incorrect entry with the correct entry. Doing so helps identify the accounts and amounts that should—and should not—be corrected. After comparison, the accountant makes an entry to correct the accounts. The following two cases for Bai Co. illustrate this approach.

CASE 1

On May 10, Bai Co. journalized and posted a NT$500 cash collection on account from a customer as a debit to Cash NT$500 and a credit to Service Revenue NT$500. The company discovered the error on May 20, when the customer paid the remaining balance in full.

Illustration 4-12
Comparison of entries

Incorrect Entry (May 10)			Correct Entry (May 10)		
Cash	500		Cash	500	
Service Revenue		500	Accounts Receivable		500

Comparison of the incorrect entry with the correct entry reveals that the debit to Cash NT$500 is correct. However, the NT$500 credit to Service Revenue should have been credited to Accounts Receivable. As a result, both Service Revenue and Accounts Receivable are overstated in the ledger. Bai makes the following correcting entry.

Illustration 4-13
Correcting entry

A	=	L	+	E
				−500 Rev
−500				

Cash Flows
no effect

Correcting Entry

May 20	Service Revenue	500	
	Accounts Receivable		500
	(To correct entry of May 10)		

CASE 2

On May 18, Bai purchased on account equipment costing NT$4,500. The transaction was journalized and posted as a debit to Equipment NT$450 and a credit to Accounts Payable NT$450. The error was discovered on June 3, when Bai received the monthly statement for May from the creditor.

Illustration 4-14
Comparison of entries

Incorrect Entry (May 18)			Correct Entry (May 18)		
Equipment	450		Equipment	4,500	
Accounts Payable		450	Accounts Payable		4,500

Comparison of the two entries shows that two accounts are incorrect. Equipment is understated NT$4,050, and Accounts Payable is understated NT$4,050. Bai makes the following correcting entry.

	Correcting Entry		
June 3	Equipment	4,050	
	Accounts Payable		4,050
	(To correct entry of May 18)		

A = L + E
+4,050
+4,050

Cash Flows
no effect

Illustration 4-15
Correcting entry

Instead of preparing a correcting entry, **it is possible to reverse the incorrect entry and then prepare the correct entry**. This approach will result in more entries and postings than a correcting entry, but it will accomplish the desired result.

INVESTOR INSIGHT How Can Accounting Aid African Growth?

Nigerian Stock Exchange (NGA)


© Daniel M Ernst/Shutterstock

The accuracy of a company's financial records is very important to investors, but other issues are also of concern. Recently, the Nigerian Stock Exchange adopted a corporate-goverance system to assess the 190 companies that are listed on the exchange. The rating system requires the companies to answer questions about business ethics, audit procedures, internal controls, disclosure practices, and other matters. Africa's economy is growing rapidly, so it offers many opportunities to investors and companies. But the accounting practices of many African companies lag behind those of companies in other parts of the world. In order to attract more outside investment and therefore lower the cost of financing projects, many African companies have adopted IFRS. One financial advisor said that while trying to help one African company, she found accounts that were commingled and assets that had not been recorded because they had been purchased with cash. She emphasized, however, that "just because they don't have the best accounting records doesn't mean they don't have a good business."

Source: Kimberly S. Johnson, "Africa Makes Strides in Corporate Accounting, Governance," *Wall Street Journal Online* (November 17, 2014).

Q What benefit is likely to result if African companies improve their accounting practices and adopt IFRS? (See page 214.)

> DO IT!

Correcting Entries

Sanchez Company discovered the following errors made in January 2017.

1. A payment of Salaries and Wages Expense of $600 was debited to Supplies and credited to Cash, both for $600.
2. A collection of $3,000 from a client on account was debited to Cash $200 and credited to Service Revenue $200.
3. The purchase of supplies on account for $860 was debited to Supplies $680 and credited to Accounts Payable $680.

Correct the errors without reversing the incorrect entry.

Action Plan

✔ Compare the incorrect entry with correct entry.

✔ After comparison, make an entry to correct the accounts.

Solution

1. Salaries and Wages Expense	600	
Supplies		600
2. Service Revenue	200	
Cash	2,800	
Accounts Receivable		3,000
3. Supplies ($860 − $680)	180	
Accounts Payable		180

Related exercise material: BE4-9, E4-12, E4-13, and DO IT! 4-3.

✔ The Navigator

The Classified Statement of Financial Position

Learning Objective 6

Identify the sections of a classified statement of financial position.

The statement of financial position presents a snapshot of a company's financial position at a point in time. To improve users' understanding of a company's financial position, companies often use a classified statement of financial position. A **classified statement of financial position** groups together similar assets and similar liabilities, using a number of standard classifications and sections. This is useful because items within a group have similar economic characteristics. A classified statement of financial position generally contains the standard classifications listed in Illustration 4-16.

Illustration 4-16
Standard statement of financial position classifications

Assets	Equity and Liabilities
Intangible assets	Equity
Property, plant, and equipment	Non-current liabilities
Long-term investments	Current liabilities
Current assets	

These groupings help financial statement readers determine such things as (1) the claims of long- and short-term creditors on the company's total assets, and (2) whether the company has enough assets to pay its debts as they come due. Many of these groupings can be seen in the statement of financial position of Cheng Ltd. shown in Illustration 4-17. In the sections that follow, we explain each of these groupings.

Intangible Assets

• HELPFUL HINT
Sometimes intangible assets are reported under a broader heading called "Other assets."

Many companies have long-lived assets that do not have physical substance yet often are very valuable. We call these assets **intangible assets**. One significant intangible asset is goodwill. Others include patents, copyright, and trademarks or trade names that give the company **exclusive right** of use for a specified period of time. In Illustration 4-17, Cheng Ltd. reported intangible assets of NT$3,100,000.

Illustration 4-17
Classified statement of financial position

CHENG LTD.
Statement of Financial Position
October 31, 2017
(NT$ in thousands)

Assets			
Intangible assets			
Patents			NT$ 3,100
Property, plant, and equipment			
Land		NT$10,000	
Equipment	NT$24,000		
Less: Accumulated depreciation—equipment	5,000	19,000	29,000
Long-term investments			
Investment in shares of Walters Corp.		5,200	
Investment in real estate		2,000	7,200
Current assets			
Prepaid insurance		400	
Supplies		2,100	
Inventory		3,000	
Notes receivable		1,000	
Accounts receivable		7,000	
Short-term investments		2,000	
Cash		6,600	
Total current assets			22,100
Total assets			NT$61,400
Equity and Liabilities			
Equity			
Share capital—ordinary		NT$20,000	
Retained earnings		14,050	NT$34,050
Non-current liabilities			
Mortgage payable		10,000	
Notes payable		1,300	11,300
Current liabilities			
Notes payable		11,000	
Accounts payable		2,100	
Salaries and wages payable		1,600	
Unearned service revenue		900	
Interest payable		450	
Total current liabilities			16,050
Total equity and liabilities			NT$61,400

• HELPFUL HINT
Recall that the basic accounting equation is Assets = Liabilities + Equity.

Illustration 4-18 shows the intangible assets of Nokia (FIN).

Illustration 4-18
Intangible assets section

Real World

NOKIA
Statement of Financial Position (partial)
(in millions)

Intangible assets	
Capitalized development costs	€ 244
Goodwill	6,257
Other intangible assets	3,913
	€10,414

Property, Plant, and Equipment

Property, plant, and equipment are assets with relatively long useful lives that a company is currently using in operating the business. This category (sometimes called *fixed assets*) includes land, buildings, machinery and equipment, delivery equipment, and furniture. In Illustration 4-17, Cheng Ltd. reported property, plant, and equipment of NT$29,000,000.

Depreciation is the practice of allocating the cost of assets to a number of years. Companies do this by systematically assigning a portion of an asset's cost as an expense each year (rather than expensing the full purchase price in the year of purchase). The assets that the company depreciates are reported on the statement of financial position at cost less accumulated depreciation. The **accumulated depreciation** account shows the total amount of depreciation that the company has expensed thus far in the asset's life. In Illustration 4-17, Cheng Ltd. reported accumulated depreciation of NT$5,000,000.

Illustration 4-19 presents the property, plant, and equipment of the Laclede Group (KOR).

Illustration 4-19
Property, plant, and equipment section

Real World

LACLEDE GROUP
Statement of Financial Position (partial)
(₩ in billions)

Property, plant, and equipment		
Land		₩ 2,604
Buildings	₩ 9,487	
Structures	1,568	
Machinery	36,956	
Vehicles	226	
Other	10,600	58,837
Less: Accumulated depreciation		32,617
		₩28,824

Long-Term Investments

• **Alternative Terminology** Long-term investments are often referred to simply as *investments*.

Long-term investments are generally (1) investments in ordinary shares and bonds of other companies that are normally held for many years, and (2) non-current assets such as land or buildings that a company is not using in its operating activities. In Illustration 4-17, Cheng Ltd. reported total long-term investments of NT$7,200,000 on its statement of financial position.

Weinberger AG (AUT) reported long-term investments in its statement of financial position as shown in Illustration 4-20.

Illustration 4-20
Long-term investments section

Real World

WEINBERGER AG
Statement of Financial Position (partial)
(in thousands)

Long-term investments	
Investment property	€ 26,511
Investments in associates	150,002
Other financial assets	29,253
	€205,766

Current Assets

Current assets are assets that a company expects to convert to cash or use up within one year or its operating cycle, whichever is longer. In Illustration 4-17, Cheng Ltd. had current assets of NT$22,100,000. For most businesses, the cutoff for classification as current assets is one year from the statement of financial position date. For example, accounts receivable are current assets because the company will collect them and convert them to cash within one year. Supplies is a current asset because the company expects to use it up in operations within one year.

Some companies use a period longer than one year to classify assets and liabilities as current because they have an operating cycle longer than one year. The **operating cycle** of a company is the average time that it takes to purchase inventory, sell it on account, and then collect cash from customers. For most businesses, this cycle takes less than a year, so they use a one-year cutoff. But, for some businesses, such as vineyards or airplane manufacturers, this period may be longer than a year. **Except where noted, we will assume that companies use one year to determine whether an asset or liability is current or non-current.**

Common types of current assets are (1) prepaid expenses (insurance and supplies), (2) inventories, (3) receivables (notes receivable, accounts receivable, and interest receivable), (4) short-term investments (such as short-term government securities), and (5) cash. **On the statement of financial position, companies usually list these items in the reverse order in which they expect to convert them into cash.**

Illustration 4-21 presents the current assets of Tesco (GBR).

Illustration 4-21
Current assets section

Real World

TESCO
Statement of Financial Position (partial)
(£ in millions)

Current assets	
Inventories	£2,430
Trade and other receivables	1,311
Derivative financial instruments	97
Current tax assets	6
Short-term investments	360
Cash and cash equivalents	1,788
Total current assets	£5,992

People, Planet, and Profit Insight **Creating Value** Nestlé SA (CHE)


Simon Rawles/Alamy

Appendix B at the end of this textbook contains the financial statements of Nestlé SA (CHE). Those financial statements report on the company's profitability and financial position. In addition to these financial statements, Nestlé, like many other companies today, also reports its achievements with regard to other, non-financial goals. In Nestlé's case, it calls these goals "Creating Shared Value." Nestlé has set objectives to help society in areas most directly related to its particular expertise: nutrition, water and environmental sustainability, and rural development. The company evaluates its progress in each area using objective measures. Examples of measures used are provided below.

Nutrition: Products meeting or exceeding Nutritional Foundation profiling criteria (as percentage of total sales) and products with increase in nutritious ingredients or essential nutrients.

Water and Environmental Sustainability: Quality of water discharged (average mg COD/l) and packaging weight reduction (tonnes).

Rural Development: Farmers trained through capacity-building programs and suppliers audited for food safety, quality, and processing.

To learn more about Nestlé's efforts to create shared value, go to *http://www.nestle.com/csv*.

Q What are some implications of Nestlé's decision to measure its results using objective measures and then publicly report these results? (See page 214.)

Equity

The content of the equity section varies with the form of business organization. In a proprietorship, there is one capital account. In a partnership, there is a capital account for each partner. Corporations divide equity into two accounts—Share Capital—Ordinary and Retained Earnings. Corporations record shareholders' investments in the company by debiting an asset account and crediting the Share Capital—Ordinary account. They record in the Retained Earnings account income retained for use in the business. Corporations combine the Share Capital—Ordinary and Retained Earnings accounts and report them on the statement of financial position as **equity**. (We discuss these corporation accounts in later chapters.) Unilever Group (GBR and NLD) recently reported its equity section as follows.

Illustration 4-22
Equity section

Real World

UNILEVER GROUP
Statement of Financial Position (partial)
(£ in millions)

Equity	
Share capital—ordinary	£ 484
Share premium	121
Other reserves	(6,469)
Retained earnings	15,812
Total equity	£ 9,948

Non-Current Liabilities

Non-current liabilities are obligations that a company expects to pay **after** one year. Liabilities in this category include bonds payable, mortgages payable, long-term notes payable, lease liabilities, and pension liabilities. Many companies report long-term debt maturing after one year as a single amount in the statement of financial position and show the details of the debt in notes that accompany the financial statements. Others list the various types of non-current liabilities. In Illustration 4-17, Cheng Ltd. reported non-current liabilities of NT$11,300,000.

Illustration 4-23 shows the non-current liabilities that Siemens (DEU) reported in its statement of financial position.

Illustration 4-23
Non-current liabilities section

Real World

SIEMENS
Statement of Financial Position (partial)
(in millions)

Non-current liabilities	
Long-term debt	€14,260
Pension plans and similar commitments	4,361
Provisions	2,533
Deferred tax liabilities	726
Other non-current liabilities	2,752
	€24,632

Current Liabilities

Current liabilities generally are obligations that the company is to pay within the coming year or its operating cycle, whichever is longer. Common examples are accounts payable, salaries and wages payable, bank loans payable, interest payable, and taxes payable. Also included as current liabilities are current maturities of long-term obligations—payments to be made within the next year on long-term obligations. In Illustration 4-17, Cheng Ltd. reported five different types of current liabilities, for a total of NT$16,050,000.

Within the current liabilities section, companies usually list notes payable first, followed by accounts payable. Other items then follow in the order of their magnitude. *In your homework, you should present notes payable first, followed by accounts payable.*

Illustration 4-24 shows the current liabilities section adapted from the statement of financial position of Siemens (DEU).

Ethics Note

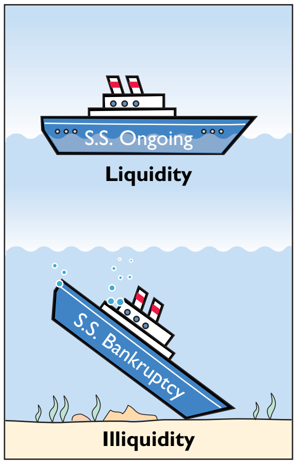
A company that has more current assets than current liabilities can increase the ratio of current assets to current liabilities by using cash to pay off some current liabilities. This gives the appearance of being more liquid. Do you think this move is ethical?

Illustration 4-24
Current liabilities section

Real World

SIEMENS
Statement of Financial Position (partial)
(in millions)

Current liabilities	
Trade payables	€ 8,860
Current provisions	5,165
Other current financial liabilities	2,427
Income taxes payable	1,970
Current maturities of long-term debt	1,819
Other current liabilities	22,210
	€42,451



Users of financial statements look closely at the relationship between current assets and current liabilities. This relationship is important in evaluating a company's **liquidity**—its ability to pay obligations expected to be due within the next year. When current assets exceed current liabilities, the likelihood for paying the liabilities is favorable. When the reverse is true, short-term creditors may not be paid, and the company may ultimately be forced into bankruptcy.

Accounting Across the Organization **Can a Company Be Too Liquid?**


Jorge Salcedo/iStockphoto

There actually is a point where a company can be too liquid—that is, it can have too much working capital (current assets less current liabilities). While it is important to be liquid enough to be able to pay short-term bills as they come due, a company does not want to tie up its cash in extra inventory or receivables that are not earning the company money.

By one estimate, 1,000 large companies had cumulative excess working capital of $764 billion. Based on this figure, these companies could have reduced debt by 36% or increased net income by 9%. Given that managers throughout a company are interested in improving profitability, it is clear that they should have an eye toward managing working capital. They need to aim for a "Goldilocks solution"—not too much, not too little, but just right.

Source: K. Richardson, "Companies Fall Behind in Cash Management," *Wall Street Journal* (June 19, 2007).

Q What can various company managers do to ensure that working capital is managed efficiently to maximize net income? (See page 214.)

> DO IT!

Statement of Financial Position Classifications

The following accounts were taken from the financial statements of Callahan Company.

_____ Salaries and wages payable	_____ Investment in real estate
_____ Service revenue	_____ Equipment
_____ Interest payable	_____ Accumulated depreciation—equipment
_____ Goodwill	_____ Depreciation expense
_____ Short-term investments	_____ Share capital—ordinary
_____ Mortgage payable (due in 3 years)	_____ Unearned service revenue

Match each of the accounts to its proper statement of financial position classification, shown below. If the item would not appear on a statement of financial position, use "NA."

Intangible assets (IA)	Equity (E)
Property, plant, and equipment (PPE)	Non-current liabilities (NCL)
Long-term investments (LTI)	Current liabilities (CL)
Current assets (CA)	

Action Plan

✔ Analyze whether each financial statement item is an asset, liability, or equity.

✔ Determine if asset and liability items are current or non-current.

Solution

__CL__	Salaries and wages payable	__LTI__	Investment in real estate
__NA__	Service revenue	__PPE__	Equipment
__CL__	Interest payable	__PPE__	Accumulated depreciation—equipment
__IA__	Goodwill		
__CA__	Short-term investments	__NA__	Depreciation expense
__NCL__	Mortgage payable (due in 3 years)	__E__	Share capital—ordinary
		__CL__	Unearned service revenue

Related exercise material: **BE4-11, E4-14, E4-15, E4-16, E4-17, and DO IT! 4-4.**

✔ The Navigator

APPENDIX 4A Reversing Entries

Learning Objective *7

Prepare reversing entries.

After preparing the financial statements and closing the books, it is often helpful to reverse some of the adjusting entries before recording the regular transactions of the next period. Such entries are **reversing entries**. Companies make **a reversing entry at the beginning of the next accounting period**. Each reversing entry **is the exact opposite of the adjusting entry made in the previous period**. The recording of reversing entries is an **optional step** in the accounting cycle.

The purpose of reversing entries is to simplify the recording of a subsequent transaction related to an adjusting entry. For example, in Chapter 3 (page 117), the payment of salaries after an adjusting entry resulted in two debits: one to Salaries and Wages Payable and the other to Salaries and Wages Expense. With reversing entries, the company can debit the entire subsequent payment to Salaries and Wages Expense. **The use of reversing entries does not change the amounts reported in the financial statements.** What it does is simplify the recording of subsequent transactions.

Reversing Entries Example

Companies most often use reversing entries to reverse two types of adjusting entries: accrued revenues and accrued expenses. To illustrate the optional use of reversing entries for accrued expenses, we will use the salaries expense transactions for Yazici Advertising A.Ş. as illustrated in Chapters 2, 3, and 4. The transaction and adjustment data are as follows.

1. October 26 (initial salary entry): Yazici pays ₺4,000 of salaries and wages earned between October 15 and October 26.
2. October 31 (adjusting entry): Salaries and wages earned between October 29 and October 31 are ₺1,200. The company will pay these in the November 9 payroll.
3. November 9 (subsequent salary entry): Salaries and wages paid are ₺4,000. Of this amount, ₺1,200 applied to accrued salaries and wages payable and ₺2,800 was earned between November 1 and November 9.

Illustration 4A-1 shows the entries with and without reversing entries.

Illustration 4A-1
Comparative entries—not reversing vs. reversing

Without Reversing Entries (per chapter)				With Reversing Entries (per appendix)			
	Initial Salary Entry				Initial Salary Entry		
Oct. 26	Salaries and Wages Expense	4,000		Oct. 26	(Same entry)		
	Cash		4,000				
	Adjusting Entry				Adjusting Entry		
Oct. 31	Salaries and Wages Expense	1,200		Oct. 31	(Same entry)		
	Salaries and Wages Payable		1,200				
	Closing Entry				Closing Entry		
Oct. 31	Income Summary	5,200		Oct. 31	(Same entry)		
	Salaries and Wages Expense		5,200				
	Reversing Entry				Reversing Entry		
Nov. 1	No reversing entry is made.			Nov. 1	**Salaries and Wages Payable**	**1,200**	
					Salaries and Wages Expense		**1,200**
	Subsequent Salary Entry				Subsequent Salary Entry		
Nov. 9	Salaries and Wages Payable	1,200		Nov. 9	**Salaries and Wages Expense**	**4,000**	
	Salaries and Wages Expense	2,800			**Cash**		**4,000**
	Cash		4,000				

The first three entries are the same whether or not Yazici uses reversing entries. The last two entries are different. The November 1 **reversing entry** eliminates the ₺1,200 balance in Salaries and Wages Payable created by the October 31 adjusting entry. The reversing entry also creates a ₺1,200 credit balance in the Salaries and Wages Expense account. As you know, it is unusual for an expense account to have a credit balance. The balance is correct in this instance, though, because it anticipates that the entire amount of the first salaries and wages payment in the new accounting period will be debited to Salaries and Wages Expense. This debit will eliminate the credit balance. The resulting debit balance in the expense account will equal the salaries and wages expense incurred in the new accounting period (₺2,800 in this example).

If Yazici makes reversing entries, it can debit all cash payments of expenses to the expense account. This means that on November 9 (and every payday) Yazici can debit Salaries and Wages Expense for the amount paid, without regard to any accrued salaries and wages payable. Being able to make the **same entry each time** simplifies the recording process: The company can record subsequent transactions as if the related adjusting entry had never been made.

Illustration 4A-2 shows the posting of the entries with reversing entries.

Salaries and Wages Expense

10/26	Paid	4,000	10/31	Closing	5,200
31	Adjusting	1,200			
		5,200			5,200
11/9	Paid	4,000	**11/1**	**Reversing**	**1,200**

Salaries and Wages Payable

11/1	**Reversing**	**1,200**	10/31	Adjusting	1,200

Illustration 4A-2
Postings with reversing entries

A company can also use reversing entries for accrued revenue adjusting entries. For Yazici Advertising A.Ş., the adjusting entry was Accounts Receivable (Dr.) ₺200 and Service Revenue (Cr.) ₺200. Thus, the reversing entry on November 1 is:

A	=	L	+	E
				−200 Rev
−200				

Cash Flows
no effect

Nov. 1	Service Revenue	200	
	Accounts Receivable		200
	(To reverse October 31 adjusting entry)		

When Yazici collects the accrued service revenue, it debits Cash and credits Service Revenue.

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Prepare a worksheet.** The steps in preparing a worksheet are as follows. (a) Prepare a trial balance on the worksheet. (b) Enter the adjustments in the adjustments columns. (c) Enter adjusted balances in the adjusted trial balance columns. (d) Extend adjusted trial balance amounts to appropriate financial statement columns. (e) Total the statement columns, compute net income (or net loss), and complete the worksheet.

2 **Explain the process of closing the books.** Closing the books occurs at the end of an accounting period. The process is to journalize and post closing entries and then underline and balance all accounts. In closing the books, companies make separate entries to close revenues and expenses to Income Summary, Income Summary to Retained Earnings, and Dividends to Retained Earnings. Only temporary accounts are closed.

3 **Describe the content and purpose of a post-closing trial balance.** A post-closing trial balance contains the balances in permanent accounts that are carried forward to the next accounting period. The purpose of this trial balance is to prove the equality of these balances.

4 **State the required steps in the accounting cycle.** The required steps in the accounting cycle are (1) analyze business transactions, (2) journalize the transactions, (3) post to ledger accounts, (4) prepare a trial balance, (5) journalize and post adjusting entries, (6) prepare an adjusted trial balance, (7) prepare financial statements, (8) journalize and post closing entries, and (9) prepare a post-closing trial balance.

5 **Explain the approaches to preparing correcting entries.** One way to determine the correcting entry is to compare the incorrect entry with the correct entry. After comparison, the company makes a correcting entry to correct the accounts. An alternative to a correcting entry is to reverse the incorrect entry and then prepare the correct entry.

6 **Identify the sections of a classified statement of financial position.** A classified statement of financial position categorizes assets as intangibles; property, plant, and equipment; long-term investments; and current assets. Liabilities are classified as either current or non-current. There is also an equity section, which varies with the form of business organization.

*7 **Prepare reversing entries.** Reversing entries are the opposite of the adjusting entries made in the preceding period. Some companies choose to make reversing entries at the beginning of a new accounting period to simplify the recording of later transactions related to the adjusting entries. In most cases, only accrued adjusting entries are reversed.

GLOSSARY REVIEW

Classified statement of financial position A statement of financial position that contains standard classifications or sections. (p. 178).

Closing entries Entries made at the end of an accounting period to transfer the balances of temporary accounts to a permanent equity account, Retained Earnings. (p. 168).

Correcting entries Entries to correct errors made in recording transactions. (p. 175).

Current assets Assets that a company expects to convert to cash or use up within one year or its operating cycle, whichever is longer. (p. 180).

Current liabilities Obligations that a company expects to pay within the coming year or its operating cycle, whichever is longer. (p. 182).

Equity The combination of Share Capital—Ordinary and Retained Earnings accounts. Often referred to as the ownership claim of shareholders on total assets. It is to a corporation what owner's equity is to a proprietorship. (p. 182).

Income Summary A temporary account used in closing revenue and expense accounts and only used in the closing process. (p. 168).

Intangible assets Non-current assets that do not have physical substance. (p. 178).

Liquidity The ability of a company to pay obligations expected to be due within the next year. (p. 183).

Long-term investments Generally, (1) investments in shares and bonds of other companies that companies normally hold for many years, and (2) non-current assets, such as land and buildings, not currently being used in operations. (p. 180).

Non-current liabilities Obligations that a company expects to pay after one year. (p. 182).

Operating cycle The average time that it takes to purchase inventory, sell it on account, and then collect cash from customers. (p. 181).

Permanent (real) accounts Accounts that relate to one or more accounting periods. Consist of all statement of financial position accounts. Balances are carried forward into the next accounting period. (p. 168).

Post-closing trial balance A list of permanent accounts and their balances after a company has journalized and posted closing entries. (p. 172).

Property, plant, and equipment Assets with relatively long useful lives and currently being used in operations. (p. 180).

Reversing entry An entry, made at the beginning of the next accounting period, that is the exact opposite of the adjusting entry made in the previous period. (p. 175).

Temporary (nominal) accounts Accounts that relate only to a given accounting period. Consist of all income statement accounts and the Dividends account. All temporary accounts are closed at the end of the accounting period. (p. 167).

Worksheet A multiple-column form that may be used in making adjusting entries and in preparing financial statements. (p. 162).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Which of the following statements is **incorrect** concerning the worksheet?
- (a) The worksheet is essentially a working tool of the accountant.
- (b) The worksheet is distributed to management and other interested parties.
- (c) The worksheet cannot be used as a basis for posting to ledger accounts.
- (d) Financial statements can be prepared directly from the worksheet before journalizing and posting the adjusting entries.

(LO 1) **2.** In a worksheet, net income is entered in the following columns:
- (a) income statement (Dr) and statement of financial position (Dr).
- (b) income statement (Cr) and statement of financial position (Dr).
- (c) income statement (Dr) and statement of financial position (Cr).
- (d) income statement (Cr) and statement of financial position (Cr).

3. In the unadjusted trial balance of its worksheet for the year ended December 31, 2017, Taitum Company reported Equipment of £120,000. The year-end adjusting entries require an adjustment of £15,000 for depreciation expense for the equipment. After the adjusted trial balance is completed, what amount should be shown in the financial statement columns? (LO 1)
- (a) A debit of £105,000 for Equipment in the statement of financial position column.
- (b) A credit of £15,000 for Depreciation Expense—Equipment in the income statement column.
- (c) A debit of £120,000 for Equipment in the statement of financial position column.
- (d) A debit of £15,000 for Accumulated Depreciation—Equipment in the statement of financial position column.

(LO 2) **4.** An account that will have a zero balance after closing entries have been journalized and posted is:
(a) Service Revenue.
(b) Supplies.
(c) Prepaid Insurance.
(d) Accumulated Depreciation—Equipment.

(LO 2) **5.** When a net loss has occurred, Income Summary is:
(a) debited and Retained Earnings is credited.
(b) credited and Retained Earnings is debited.
(c) debited and Dividends is credited.
(d) credited and Dividends is debited.

(LO 2) **6.** The closing process involves separate entries to close (1) expenses, (2) dividends, (3) revenues, and (4) income summary. The correct sequencing of the entries is:
(a) (4), (3), (2), (1)
(b) (1), (2), (3), (4)
(c) (3), (1), (4), (2)
(d) (3), (2), (1), (4)

(LO 3) **7.** Which types of accounts will appear in the post-closing trial balance?
(a) Permanent (real) accounts.
(b) Temporary (nominal) accounts.
(c) Accounts shown in the income statement columns of a worksheet.
(d) None of these answer choices is correct.

(LO 4) **8.** All of the following are required steps in the accounting cycle **except**:
(a) journalizing and posting closing entries.
(b) preparing financial statements.
(c) journalizing the transactions.
(d) preparing a worksheet.

(LO 4) **9.** The proper order of the following steps in the accounting cycle is:
(a) prepare unadjusted trial balance, journalize transactions, post to ledger accounts, journalize and post adjusting entries.
(b) journalize transactions, prepare unadjusted trial balance, post to ledger accounts, journalize and post adjusting entries.
(c) journalize transactions, post to ledger accounts, prepare unadjusted trial balance, journalize and post adjusting entries.
(d) prepare unadjusted trial balance, journalize and post adjusting entries, journalize transactions, post to ledger accounts.

(LO 5) **10.** When Alexander Company purchased supplies worth £500, it incorrectly recorded a credit to Supplies for £5,000 and a debit to Cash for £5,000. Before correcting this error:
(a) Cash is overstated and Supplies is overstated.
(b) Cash is understated and Supplies is understated.
(c) Cash is understated and Supplies is overstated.
(d) Cash is overstated and Supplies is understated.

(LO 5) **11.** Cash of NT$3,000 received at the time the service was performed was journalized and posted as a debit to Cash NT$3,000 and a credit to Accounts Receivable NT$3,000. Assuming the incorrect entry is not reversed, the correcting entry is:
(a) debit Service Revenue NT$3,000 and credit Accounts Receivable NT$3,000.
(b) debit Accounts Receivable NT$3,000 and credit Service Revenue NT$3,000.
(c) debit Cash NT$3,000 and credit Service Revenue NT$3,000.
(d) debit Accounts Receivable NT$3,000 and credit Cash NT$3,000.

12. The correct order of presentation in a classified statement of financial position for the following current assets is: (LO 6)
(a) accounts receivable, cash, prepaid insurance, inventories.
(b) cash, inventories, accounts receivable, prepaid insurance.
(c) prepaid insurance, inventories, accounts receivable, cash.
(d) inventories, cash, accounts receivable, prepaid insurance.

13. A company has purchased a tract of land. It expects to build a production plant on the land in approximately 5 years. During the 5 years before construction, the land will be idle. The land should be reported as: (LO 6)
(a) property, plant, and equipment.
(b) land expense.
(c) a long-term investment.
(d) an intangible asset.

14. In a classified statement of financial position, assets are usually classified using the following sequence of categories: (LO 6)
(a) current assets; non-current assets; property, plant, and equipment; intangible assets.
(b) tangible assets; property, plant, and equipment; long-term investments; current assets.
(c) current assets; long-term investments; tangible assets; intangible assets.
(d) intangible assets; property, plant, and equipment; long-term investments; current assets.

15. Current assets are listed: (LO 6)
(a) by the reverse order of their expected conversion to cash.
(b) by importance.
(c) by longevity.
(d) alphabetically.

***16.** On December 31, Frank Voris Company Ltd. correctly made an adjusting entry to recognize €2,000 of accrued salaries payable. On January 8 of the next year, total salaries of €3,400 were paid. Assuming the correct reversing entry was made on January 1, the entry on January 8 will result in a credit to Cash €3,400 and the following debit(s): (LO 7)
(a) Salaries and Wages Payable €1,400 and Salaries and Wages Expense €2,000.
(b) Salaries and Wages Payable €2,000 and Salaries and Wages Expense €1,400.
(c) Salaries and Wages Expense €3,400.
(d) Salaries and Wages Payable €3,400.

Solutions

1. (b) The worksheet is a working tool of the accountant; it is not distributed to management and other interested parties. The other choices are all true statements.

2. (c) Net income is entered in the Dr column of the income statement and the Cr column of the statement of financial position. The other choices are incorrect because net income is entered in the (a) Cr (not Dr) column of the statement of financial position, (b) Dr (not Cr) column of the income statement and in the Cr (not Dr) column of the statement of financial position, and (d) Dr (not Cr) column of the income statement.

3. (c) A debit of £120,000 for Equipment would appear in the statement of financial position column. The other choices are incorrect because (a) Equipment, less accumulated depreciation of £15,000, would total £105,000 under assets on the statement of financial position, not on the worksheet; (b) a debit, not credit, for Depreciation Expense would appear in the income statement column; and (d) a credit, not debit, of £15,000 for Accumulated Depreciation—Equipment would appear in the statement of financial position column.

4. (a) The Service Revenue account will have a zero balance after closing entries have been journalized and posted because it is a temporary account. The other choices are incorrect because (b) Supplies, (c) Prepaid Insurance, and (d) Accumulation Depreciation—Equipment are all permanent accounts and therefore not closed in the closing process.

5. (b) The effect of a net loss is a credit to Income Summary and a debit to Retained Earnings. The other choices are incorrect because (a) Income Summary is credited, not debited, and Retained Earnings is debited, not credited; (c) Income Summary is credited, not debited, and Dividends is not affected; and (d) Retained Earnings, not Dividends, is debited.

6. (c) The correct order is (3) revenues, (1) expenses, (4) income summary and (2) dividends. Therefore, choices (a), (b), and (d) are incorrect.

7. (a) Permanent accounts appear in the post-closing trial balance. The other choices are incorrect because (b) temporary accounts and (c) income statement accounts are closed to a zero balance and are therefore not included in the post-closing trial balance. Choice (d) is wrong as there is only one correct answer for this question.

8. (d) Preparing a worksheet is not a required step in the accounting cycle. The other choices are all required steps in the accounting cycle.

9. (c) The proper order of the steps in the accounting cycle is (1) journalize transactions, (2) post to ledger accounts, (3) prepare unadjusted trial balance, and (4) journalize and post adjusting entries. Therefore, choices (a), (b), and (d) are incorrect.

10. (d) This entry causes Cash to be overstated and Supplies to be understated. Supplies should have been debited (increasing supplies) and Cash should have been credited (decreasing cash). The other choices are incorrect because (a) Supplies is understated, not overstated; (b) Cash is overstated, not understated; and (c) Cash is overstated, not understated, and Supplies is understated, not overstated.

11. (b) The correcting entry is to debit Accounts Receivable NT$3,000 and credit Service Revenue NT$3,000. The other choices are incorrect because (a) Service Revenue should be credited, not debited, and Accounts Receivable should be debited, not credited; (c) Service Revenue should be credited for NT$3,000, and Cash should not be included in the correcting entry as it was recorded properly; and (d) Accounts Receivable should be debited for NT$3,000 and Cash should not be included in the correcting entry as it was recorded properly.

12. (c) Companies list current assets on a classified statement of financial position in the reverse order of liquidity: prepaid insurance, inventories, accounts receivable, and cash. Therefore, choices (a), (b), and (d) are incorrect.

13. (c) Long-term investments include long-term assets such as land that a company is not currently using in its operating activities. The other choices are incorrect because (a) land would be reported as property, plant, and equipment only if it is being currently used in the business; (b) land is an asset, not an expense; and (d) land has physical substance and thus is a tangible property.

14. (d) These are the categories usually used in a classified statement of financial position. The other choices are incorrect because the categories (a) "non-current assets" and (b) and (c) "tangible assets" are generally not used.

15. (a) Current assets are listed in reverse order of their liquidity, not (b) by importance, (c) by longevity, or (d) alphabetically.

***16. (c)** The use of reversing entries simplifies the recording of the first payroll following the end of the year by eliminating the need to make an entry to the Salaries and Wages Payable account. The other choices are incorrect because (a) Salaries and Wages Payable is not part of the payroll entry on January 8, and the debit to Salaries and Wages Expense should be for €3,400, not €2,000; and (b) and (d) the Salaries and Wages Expense account, not the Salaries and Wages Payable account, should be debited.

PRACTICE EXERCISES

Journalize and post closing entries, and prepare a post-closing trial balance.

(LO 2, 3)

1. Arapaho Company AG ended its fiscal year on July 31, 2017. The company's adjusted trial balance as of the end of its fiscal year is as follows.

ARAPAHO COMPANY AG
Adjusted Trial Balance
July 31, 2017

No.	Account Titles	Debit	Credit
101	Cash	€ 15,940	
112	Accounts Receivable	8,580	
157	Equipment	16,900	
158	Accumulated Depreciation—Equipment		€ 7,500
201	Accounts Payable		4,420
208	Unearned Rent Revenue		1,600
311	Share Capital—Ordinary		20,500
320	Retained Earnings		25,000
332	Dividends	14,000	
400	Service Revenue		64,000
429	Rent Revenue		5,500
711	Depreciation Expense	4,500	
726	Salaries and Wages Expense	54,700	
732	Utilities Expense	13,900	
		€128,520	€128,520

Instructions

(a) Prepare the closing entries using page J15 in a general journal.
(b) Post to Retained Earnings and No. 350 Income Summary accounts. (Use the three-column form.)
(c) Prepare a post-closing trial balance at July 31, 2017.

Solution

1. (a)

GENERAL JOURNAL **J15**

Date	Account Titles	Ref.	Debit	Credit
July 31	Service Revenue	400	64,000	
	Rent Revenue	429	5,500	
	Income Summary	350		69,500
	(To close revenue accounts)			
31	Income Summary	350	73,100	
	Depreciation Expense	711		4,500
	Salaries and Wages Expense	726		54,700
	Utilities Expense	732		13,900
	(To close expense accounts)			
31	Retained Earnings	320	3,600	
	Income Summary	350		3,600
	(To close net loss to retained earnings)			
31	Retained Earnings	320	14,000	
	Dividends	332		14,000
	(To close dividends to retained earnings)			

(b)

Retained Earnings **No. 320**

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Balance				25,000
31	Close net loss	J15	3,600		21,400
31	Close dividends	J15	14,000		7,400

Income Summary **No. 350**

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Close revenue	J15		69,500	69,500
31	Close expenses	J15	73,100		(3,600)
31	Close net loss	J15		3,600	0

(c)

ARAPAHO COMPANY AG
Post-Closing Trial Balance
July 31, 2017

	Debit	Credit
Cash	€15,940	
Accounts Receivable	8,580	
Equipment	16,900	
Accumulated Depreciation—Equipment		€ 7,500
Accounts Payable		4,420
Unearned Rent Revenue		1,600
Share Capital—Ordinary		20,500
Retained Earnings		7,400
	€41,420	€41,420

2. The adjusted trial balance for Arapaho Company AG is presented in **Practice Exercise 1**.

Prepare financial statements.
(LO 6)

Instructions

(a) Prepare an income statement and a retained earnings statement for the year ended July 31, 2017.
(b) Prepare a classified statement of financial position at July 31, 2017.

Solution

2. (a)

ARAPAHO COMPANY AG
Income Statement
For the Year Ended July 31, 2017

Revenues		
Service revenue	€64,000	
Rent revenue	5,500	
Total revenues		€69,500
Expenses		
Salaries and wages expense	54,700	
Utilities expense	13,900	
Depreciation expense	4,500	
Total expenses		73,100
Net loss		€ (3,600)

ARAPAHO COMPANY AG
Retained Earnings Statement
For the Year Ended July 31, 2017

Retained earnings, August 1, 2016		€25,000
Less: Net loss	€ 3,600	
Dividends	14,000	17,600
Retained earnings, July 31, 2017		€ 7,400

(b)

ARAPAHO COMPANY AG Statement of Financial Position July 31, 2017		
Assets		
Property, plant, and equipment		
Equipment	€16,900	
Less: Accumulated depreciation—equipment	7,500	€ 9,400
Current assets		
Accounts receivable	8,580	
Cash	15,940	
Total current assets		24,520
Total assets		€33,920
Equity and Liabilities		
Equity		
Share capital—ordinary	€20,500	
Retained earnings	7,400	
Total equity		€27,900
Current liabilities		
Accounts payable	4,420	
Unearned rent revenue	1,600	
Total current liabilities		6,020
Total equity and liabilities		€33,920

PRACTICE PROBLEM

Prepare worksheet and classified statement of financial position, and journalize closing entries.

(LO 1, 2, 6)

At the end of its first month of operations, Pampered Pet Service Ltd. has the following unadjusted trial balance.

PAMPERED PET SERVICE LTD. August 31, 2017 Trial Balance (NT$ in thousands)		
	Debit	**Credit**
Cash	NT$ 5,400	
Accounts Receivable	2,800	
Supplies	1,300	
Prepaid Insurance	2,400	
Equipment	60,000	
Notes Payable		NT$40,000
Accounts Payable		2,400
Share Capital—Ordinary		30,000
Dividends	1,000	
Service Revenue		4,900
Salaries and Wages Expense	3,200	
Utilities Expense	800	
Advertising Expense	400	
	NT$77,300	NT$77,300

Other data:

1. Insurance expires at the rate of NT$200 per month.
2. NT$1,000 of supplies are on hand at August 31.
3. Monthly depreciation on the equipment is NT$900.
4. Interest of NT$500 on the notes payable has accrued during August.

Instructions

(a) Prepare a worksheet.

(b) Prepare a classified statement of financial position assuming NT$35,000 of the notes payable are long-term.

(c) Journalize the closing entries.

Solution

(a)

PAMPERED PET SERVICE LTD.
Worksheet for the Month Ended August 31, 2017
(in thousands)

	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Statement of Financial Position	
Account Titles	**Dr.**	**Cr.**	**Dr.**	**Cr.**	**Dr.**	**Cr.**	**Dr.**	**Cr.**	**Dr.**	**Cr.**
Cash	5,400				5,400				5,400	
Accounts Receivable	2,800				2,800				2,800	
Supplies	1,300			(b) 300	1,000				1,000	
Prepaid Insurance	2,400			(a) 200	2,200				2,200	
Equipment	60,000				60,000				60,000	
Notes Payable		40,000				40,000				40,000
Accounts Payable		2,400				2,400				2,400
Share Capital—Ordinary		30,000				30,000				30,000
Dividends	1,000				1,000				1,000	
Service Revenue		4,900				4,900		4,900		
Salaries and Wages Expense	3,200				3,200		3,200			
Utilities Expense	800				800		800			
Advertising Expense	400				400		400			
Totals	77,300	77,300								
Insurance Expense			(a) 200		200		200			
Supplies Expense			(b) 300		300		300			
Depreciation Expense			(c) 900		900		900			
Accumulated Depreciation—Equipment				(c) 900		900				900
Interest Expense			(d) 500		500		500			
Interest Payable				(d) 500		500				500
Totals			1,900	1,900	78,700	78,700	6,300	4,900	72,400	73,800
Net Loss								1,400	1,400	
Totals							6,300	6,300	73,800	73,800

Explanation: (a) insurance expired, (b) supplies used, (c) depreciation expensed, and (d) interest accrued.

(b)

PAMPERED PET SERVICE LTD.
Statement of Financial Position
August 31, 2017
(NT$ in thousands)

Assets		
Property, plant, and equipment		
Equipment	NT$60,000	
Less: Accumulated depreciation—equipment	900	NT$59,100
Current assets		
Prepaid insurance	2,200	
Supplies	1,000	
Accounts receivable	2,800	
Cash	5,400	
Total current assets		11,400
Total assets		NT$70,500
Equity and Liabilities		
Equity		
Share capital—ordinary	NT$30,000	
Retained earnings	(2,400)*	
Total equity		NT$27,600
Non-current liabilities		
Notes payable		35,000
Current liabilities		
Notes payable	5,000	
Accounts payable	2,400	
Interest payable	500	
Total current liabilities		7,900
Total equity and liabilities		NT$70,500

*Net loss NT$1,400, plus dividends of NT$1,000.

(c)

Aug. 31	Service Revenue	4,900	
	Income Summary		4,900
	(To close revenue account)		
31	Income Summary	6,300	
	Salaries and Wages Expense		3,200
	Depreciation Expense		900
	Utilities Expense		800
	Interest Expense		500
	Advertising Expense		400
	Supplies Expense		300
	Insurance Expense		200
	(To close expense accounts)		
31	Retained Earnings	1,400	
	Income Summary		1,400
	(To close net loss to retained earnings)		
31	Retained Earnings	1,000	
	Dividends		1,000
	(To close dividends to retained earnings)		

NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendix to the chapter.

QUESTIONS

1. "A worksheet is a permanent accounting record and its use is required in the accounting cycle." Do you agree? Explain.
2. Explain the purpose of the worksheet.
3. What is the relationship, if any, between the amount shown in the adjusted trial balance column for an account and that account's ledger balance?
4. If a company's revenues are €125,000 and its expenses are €113,000, in which financial statement columns of the worksheet will the net income of €12,000 appear? When expenses exceed revenues, in which columns will the difference appear?
5. Why is it necessary to prepare formal financial statements if all of the data are in the statement columns of the worksheet?
6. Identify the account(s) debited and credited in each of the four closing entries, assuming the company has net income for the year.
7. Describe the nature of the Income Summary account and identify the types of summary data that may be posted to this account.
8. What are the content and purpose of a post-closing trial balance?
9. Which of the following accounts would not appear in the post-closing trial balance? Interest Payable, Equipment, Depreciation Expense, Dividends, Unearned Service Revenue, Accumulated Depreciation—Equipment, and Service Revenue.
10. Distinguish between a reversing entry and an adjusting entry. Are reversing entries required?
11. Indicate, in the sequence in which they are made, the three required steps in the accounting cycle that involve journalizing.
12. Identify, in the sequence in which they are prepared, the three trial balances that are often used to report financial information about a company.
13. How do correcting entries differ from adjusting entries?
14. What standard classifications are used in preparing a classified statement of financial position?
15. What is meant by the term "operating cycle"?
16. Define current assets. What basis is used for arranging individual items within the current assets section?
17. Distinguish between long-term investments and property, plant, and equipment.
18. Identify the two equity accounts in a corporation and indicate the purpose of each.
19. Using TSMC's annual report, determine its current liabilities at December 31, 2013, and December 31, 2012. Were current liabilities higher or lower than current assets in these two years?

*20. Triumph Company Ltd. prepares reversing entries. If the adjusting entry for interest payable is reversed, what type of an account balance, if any, will there be in Interest Payable and Interest Expense after the reversing entry is posted?

*21. At December 31, accrued salaries payable totaled £3,500. On January 10, total salaries of £9,200 are paid. (a) Assume that reversing entries are made at January 1. Give the January 10 entry, and indicate the Salaries and Wages Expense account balance after the entry is posted. (b) Repeat part (a) assuming reversing entries are not made.

BRIEF EXERCISES

List the steps in preparing a worksheet. (LO 1)

BE4-1 The steps in using a worksheet are presented in random order below. List the steps in the proper order by placing numbers 1–5 in the blank spaces.

(a) _____ Prepare a trial balance on the worksheet.
(b) _____ Enter adjusted balances.
(c) _____ Extend adjusted balances to appropriate statement columns.
(d) _____ Total the statement columns, compute net income (loss), and complete the worksheet.
(e) _____ Enter adjustment data.

Prepare partial worksheet. (LO 1)

BE4-2 The ledger of Van Heiden Company, NV includes the following unadjusted balances: Prepaid Insurance €3,000, Service Revenue €61,000, and Salaries and Wages Expense €25,000. Adjusting entries are required for (a) expired insurance €1,300; (b) services performed €1,100, but unbilled and uncollected; and (c) accrued salaries payable €800. Enter the unadjusted balances and adjustments into a worksheet and complete the worksheet for all accounts. (*Note:* You will need to add the following accounts: Accounts Receivable, Salaries and Wages Payable, and Insurance Expense.)

Identify worksheet columns for selected accounts. (LO 1)

BE4-3 The following selected accounts appear in the adjusted trial balance columns of the worksheet for Cesar Company: Accumulated Depreciation; Depreciation Expense; Share

Capital—Ordinary; Dividends; Service Revenue; Supplies; and Accounts Payable. Indicate the financial statement column (income statement Dr., statement of financial position Cr., etc.) to which each balance should be extended.

Prepare closing entries from ledger balances.
(LO 2)

BE4-4 The ledger of Yilmaz Company contains the following balances: Retained Earnings ₺30,000; Dividends ₺2,000; Service Revenue ₺47,000; Salaries and Wages Expense ₺27,000; and Supplies Expense ₺5,000. Prepare the closing entries at December 31.

Post closing entries; underline and balance T-accounts.
(LO 2)

BE4-5 Using the data in BE4-4, enter the balances in T-accounts, post the closing entries, and underline and balance the accounts.

Journalize and post closing entries using the three-column form of account.
(LO 2)

BE4-6 The income statement for Mosquera Golf Club for the month ending July 31 shows Service Revenue €19,200, Salaries and Wages Expense €8,800, Maintenance and Repairs Expense €2,500, and Net Income €7,900. Prepare the entries to close the revenue and expense accounts. Post the entries to the revenue and expense accounts, and complete the closing process for these accounts using the three-column form of account.

Identify post-closing trial balance accounts.
(LO 3)

BE4-7 Using the data in BE4-3, identify the accounts that would be included in a post-closing trial balance.

List the required steps in the accounting cycle in sequence.
(LO 4)

BE4-8 The steps in the accounting cycle are listed in random order below. List the steps in proper sequence, assuming no worksheet is prepared, by placing numbers 1–9 in the blank spaces.

(a) _____ Prepare a trial balance.
(b) _____ Journalize the transactions.
(c) _____ Journalize and post closing entries.
(d) _____ Prepare financial statements.
(e) _____ Journalize and post adjusting entries.
(f) _____ Post to ledger accounts.
(g) _____ Prepare a post-closing trial balance.
(h) _____ Prepare an adjusted trial balance.
(i) _____ Analyze business transactions.

Prepare correcting entries.
(LO 5)

BE4-9 At Rafeul Company SA, the following errors were discovered after the transactions had been journalized and posted. Prepare the correcting entries.

1. A collection on account from a customer for €1,140 was recorded as a debit to Cash €1,140 and a credit to Service Revenue €1,140.
2. The purchase of store supplies on account for €1,580 was recorded as a debit to Supplies €1,850 and a credit to Accounts Payable €1,850.

Prepare the current assets section of a statement of financial position.
(LO 6)

BE4-10 The statement of financial position debit column of the worksheet for Alvin Company, Ltd. includes the following accounts: Accounts Receivable £12,500; Prepaid Insurance £3,600; Cash £6,700; Supplies £5,200; and Short-Term Investments £4,900. Prepare the current assets section of the statement of financial position, listing the accounts in proper sequence.

Classify accounts on statement of financial position.
(LO 6)

BE4-11 The following are the major statement of financial position classifications:

Intangible assets (IA)	Equity (E)
Property, plant, and equipment (PPE)	Non-current liabilities (NCL)
Long-term investments (LTI)	Current liabilities (CL)
Current assets (CA)	

Match each of the following accounts to its proper statement of financial position classification.

_____ Accounts payable	_____ Income taxes payable
_____ Accounts receivable	_____ Debt investment (long-term)
_____ Accumulated depreciation—buildings	_____ Land
_____ Buildings	_____ Inventory
_____ Cash	_____ Patents
_____ Copyrights	_____ Supplies

Prepare reversing entries.
(LO 7)

***BE4-12** At October 31, Prasad Company Ltd. made an accrued expense adjusting entry of €1,680 for salaries. Prepare the reversing entry on November 1, and indicate the balances in Salaries and Wages Payable and Salaries and Wages Expense after posting the reversing entry.

> DO IT! REVIEW

DO IT! 4-1 Mo Hu is preparing a worksheet. Explain to Mo how she should extend the following adjusted trial balance accounts to the financial statement columns of the worksheet.

Prepare a worksheet. (LO 1)

Service Revenue	Accounts Receivable
Notes Payable	Accumulated Depreciation—Equipment
Share Capital—Ordinary	Utilities Expense

DO IT! 4-2 The worksheet for Olympic Company Ltd. shows the following in the financial statement columns.

Prepare closing entries. (LO 2)

Dividends	£15,000
Share Capital—Ordinary	70,000
Net Income	47,000

Prepare the closing entries at December 31 that affect equity.

DO IT! 4-3 Hanson Company has an inexperienced accountant. During the first months on the job, the accountant made the following errors in journalizing transactions. All entries were posted as made.

Prepare correcting entries. (LO 5)

1. The purchase of supplies for $650 cash was debited to Equipment $210 and credited to Cash $210.
2. A $500 withdrawal of cash for B. Hanson's personal use was debited to Salaries and Wages Expense $900 and credited to Cash $900.
3. A payment on account of $820 to a creditor was debited to Accounts Payable $280 and credited to Cash $280.

Prepare the correcting entries.

DO IT! 4-4 The following accounts were taken from the financial statements of Popovic Company, OAO.

Match accounts to statement of financial position classifications. (LO 6)

______ Interest revenue	______ Share capital—ordinary
______ Utilities payable	______ Accumulated depreciation—equipment
______ Accounts payable	______ Equipment
______ Supplies	______ Salaries and wages expense
______ Bonds payable	______ Investment in real estate
______ Trademarks	______ Unearned rent revenue

Match each of the accounts to its proper statement of financial position classification, as shown below. If the item would not appear on a statement of financial position, use "NA."

Intangible assets (IA)	Equity (E)
Property, plant, and equipment (PPE)	Non-current liabilities (NCL)
Long-term investments (LTI)	Current liabilities (CL)
Current assets (CA)	

EXERCISES

E4-1 The trial balance columns of the worksheet for Lim Company, Ltd. at June 30, 2017, are as follows (in thousands).

Complete the worksheet. (LO 1)

LIM COMPANY, LTD.
Worksheet
For the Month Ended June 30, 2017

	Trial Balance	
Account Titles	**Dr.**	**Cr.**
Cash	4,120	
Accounts Receivable	2,640	
Supplies	1,900	
Accounts Payable		1,120

Account Titles	Trial Balance Dr.	Trial Balance Cr.
Unearned Service Revenue		240
Share Capital—Ordinary		5,000
Service Revenue		3,400
Salaries and Wages Expense	860	
Miscellaneous Expense	240	
	9,760	9,760

Other data:

1. A physical count reveals HK$460,000 of supplies on hand.
2. HK$100,000 of the unearned revenue is still unearned at month-end.
3. Accrued salaries are HK$250,000.

Instructions
Enter the trial balance on a worksheet and complete the worksheet.

Complete the worksheet.
(LO 1)

E4-2 The adjusted trial balance columns of the worksheet for Albanese Company, SpA are as follows.

ALBANESE COMPANY, SpA
Worksheet (partial)
For the Month Ended April 30, 2017

Account Titles	Adjusted Trial Balance Dr.	Adjusted Trial Balance Cr.	Income Statement Dr.	Income Statement Cr.	Statement of Financial Position Dr.	Statement of Financial Position Cr.
Cash	7,442					
Accounts Receivable	7,840					
Prepaid Rent	2,280					
Equipment	23,000					
Accumulated Depreciation—Equip.		4,800				
Notes Payable		5,700				
Accounts Payable		5,672				
Share Capital—Ordinary		22,000				
Retained Earnings		4,000				
Dividends	3,000					
Service Revenue		12,590				
Salaries and Wages Expense	9,840					
Rent Expense	760					
Depreciation Expense	600					
Interest Expense	57					
Interest Payable		57				
Totals	54,819	54,819				

Instructions
Complete the worksheet.

Prepare financial statements from worksheet.
(LO 1, 6)

E4-3 Worksheet data for Albanese Company, SpA are presented in E4-2. No ordinary shares were issued during April.

Instructions
Prepare an income statement, a retained earnings statement, and a classified statement of financial position, using euros as the currency.

Journalize and post closing entries and prepare a post-closing trial balance.
(LO 2, 3)

E4-4 Worksheet data for Albanese Company, SpA are presented in E4-2.

Instructions
(a) Journalize the closing entries at April 30.
(b) Post the closing entries to Income Summary and Retained Earnings. Use T-accounts.
(c) Prepare a post-closing trial balance at April 30, using euros as the currency.

Prepare adjusting entries from a worksheet, and extend balances to worksheet columns.
(LO 1)

E4-5 The adjustments columns of the worksheet for Munoz Company SA are shown on the next page.

Account Titles	Adjustments Debit	Adjustments Credit
Accounts Receivable	1,100	
Prepaid Insurance		400
Accumulated Depreciation—Equipment		900
Salaries and Wages Payable		500
Service Revenue		1,100
Salaries and Wages Expense	500	
Insurance Expense	400	
Depreciation Expense	900	
	2,900	2,900

Instructions

(a) Prepare the adjusting entries.
(b) Assuming the adjusted trial balance amount for each account is normal, indicate the financial statement column to which each balance should be extended.

E4-6 Selected worksheet data for Zugi Company, SJSC are presented below.

Derive adjusting entries from worksheet data.

(LO 1)

Account Titles	Trial Balance Dr.	Trial Balance Cr.	Adjusted Trial Balance Dr.	Adjusted Trial Balance Cr.
Accounts Receivable	?		34,000	
Prepaid Insurance	26,000		18,000	
Supplies	7,000		?	
Accumulated Depreciation—Equipment		12,000		?
Salaries and Wages Payable		?		5,000
Service Revenue		88,000		95,000
Insurance Expense			?	
Depreciation Expense			10,000	
Supplies Expense			4,700	
Salaries and Wages Expense	?		49,000	

Instructions

(a) Fill in the missing amounts.
(b) Prepare the adjusting entries that were made.

E4-7 Lanza Company, SA had the following adjusted trial balance.

Prepare closing entries, and prepare a post-closing trial balance.

(LO 2, 3)

LANZA COMPANY, SA
Adjusted Trial Balance
For the Month Ended June 30, 2017

Account Titles	Adjusted Trial Balance Debit	Adjusted Trial Balance Credit
Cash	R$ 3,712	
Accounts Receivable	2,904	
Supplies	480	
Accounts Payable		R$ 1,056
Unearned Service Revenue		160
Share Capital—Ordinary		3,000
Retained Earnings		1,360
Dividends	300	
Service Revenue		4,300
Salaries and Wages Expense	1,344	
Miscellaneous Expense	180	
Supplies Expense	1,200	
Salaries and Wages Payable		244
	R$10,120	R$10,120

Instructions
(a) Prepare closing entries at June 30, 2017.
(b) Prepare a post-closing trial balance.

Journalize and post closing entries, and prepare a post-closing trial balance.
(LO 2, 3)

E4-8 Windsor Company, Ltd. ended its fiscal year on July 31, 2017. The company's adjusted trial balance as of the end of its fiscal year is shown below.

WINDSOR COMPANY, LTD.
Adjusted Trial Balance
July 31, 2017

No.	Account Titles	Debit	Credit
101	Cash	£ 9,840	
112	Accounts Receivable	8,140	
157	Equipment	15,900	
158	Accumulated Depreciation—Equip.		£ 5,400
201	Accounts Payable		2,220
208	Unearned Rent Revenue		3,800
311	Share Capital—Ordinary		18,000
320	Retained Earnings		20,260
332	Dividends	12,000	
400	Service Revenue		64,000
429	Rent Revenue		6,500
711	Depreciation Expense	3,700	
726	Salaries and Wages Expense	55,700	
732	Utilities Expense	14,900	
		£120,180	£120,180

Instructions
(a) Prepare the closing entries using page J15.
(b) Post to Retained Earnings and No. 350 Income Summary accounts. (Use the three-column form.)
(c) Prepare a post-closing trial balance at July 31.

Prepare financial statements.
(LO 6)

E4-9 The adjusted trial balance for Windsor Company, Ltd. is presented in E4-8.

Instructions
(a) Prepare an income statement and a retained earnings statement for the year.
(b) Prepare a classified statement of financial position at July 31.

Answer questions related to the accounting cycle.
(LO 4)

E4-10 Juan Aquino has prepared the following list of statements about the accounting cycle.

1. "Journalize the transactions" is the first step in the accounting cycle.
2. Reversing entries are a required step in the accounting cycle.
3. Correcting entries do not have to be part of the accounting cycle.
4. If a worksheet is prepared, some steps of the accounting cycle are incorporated into the worksheet.
5. The accounting cycle begins with the analysis of business transactions and ends with the preparation of a post-closing trial balance.
6. All steps of the accounting cycle occur daily during the accounting period.
7. The step of "post to the ledger accounts" occurs before the step of "journalize the transactions."
8. Closing entries must be prepared before financial statements can be prepared.

Instructions
Identify each statement as true or false. If false, indicate how to correct the statement.

Prepare closing entries.
(LO 2)

E4-11 Selected accounts for Michelle's Salon SA are presented as follows. All June 30 postings are from closing entries.

Salaries and Wages Expense

6/10	3,200	6/30	8,800
6/28	5,600		

Service Revenue

6/30	18,100	6/15	9,700
		6/24	8,400

Retained Earnings

6/30	2,200	6/1	12,000
		6/30	5,100
		Bal.	14,900

Supplies Expense

6/12	800	6/30	1,200
6/24	400		

Rent Expense

6/1	3,000	6/30	3,000

Dividends

6/13	1,000	6/30	2,200
6/25	1,200		

Instructions
(a) Prepare the closing entries that were made.
(b) Post the closing entries to Income Summary.

E4-12 Karlsen Company, ASA discovered the following errors made in January 2017.

Prepare correcting entries.
(LO 5)

1. A payment of Salaries and Wages Expense of €700 was debited to Equipment and credited to Cash, both for €700.
2. A collection of €800 from a client on account was debited to Cash €300 and credited to Service Revenue €300.
3. The purchase of equipment on account for €760 was debited to Equipment €670 and credited to Accounts Payable €670.

Instructions
(a) Correct the errors by reversing the incorrect entry and preparing the correct entry.
(b) Correct the errors without reversing the incorrect entry.

E4-13 Souza Company, SA has an inexperienced accountant. During the first 2 weeks on the job, the accountant made the following errors in journalizing transactions. All entries were posted as made.

Prepare correcting entries.
(LO 5)

1. A payment on account of R$840 to a creditor was debited to Accounts Payable R$480 and credited to Cash R$480.
2. The purchase of supplies on account for R$380 was debited to Equipment R$38 and credited to Accounts Payable R$38.
3. A R$620 cash dividend was debited to Salaries and Wages Expense R$620 and credited to Cash R$620.

Instructions
Prepare the correcting entries.

E4-14 The adjusted trial balance for Patel Bowling Alley Ltd. at December 31, 2017, contains the following accounts.

Prepare a classified statement of financial position.
(LO 6)

	Debit		Credit
Buildings	£128,000	Share Capital—Ordinary	£ 80,000
Accounts Receivable	7,540	Retained Earnings	28,000
Prepaid Insurance	4,680	Accumulated Depreciation—Buildings	42,600
Cash	18,040	Accounts Payable	12,300
Equipment	62,400	Notes Payable	95,000
Land	67,000	Accumulated Depreciation—Equipment	18,720
Insurance Expense	780	Interest Payable	2,600
Depreciation Expense	7,360	Service Revenue	19,180
Interest Expense	2,600		£298,400
	£298,400		

Instructions
(a) Prepare a classified statement of financial position; assume that £15,000 of the note payable will be paid in 2018.
(b) Comment on the liquidity of the company.

Classify accounts on statement of financial position.
(LO 6)

E4-15 The following are the major statement of financial position classifications.

Intangible assets (IA)
Property, plant, and equipment (PPE)
Long-term investments (LTI)
Current assets (CA)
Equity (E)
Non-current liabilities (NCL)
Current liabilities (CL)

Instructions
Classify each of the following accounts taken from Geraldo Company's statement of financial position.

______ Accounts payable
______ Accounts receivable
______ Cash
______ Share capital—ordinary
______ Patents
______ Salaries and wages payable
______ Inventory
______ Investments
______ Accumulated depreciation
______ Buildings
______ Land
______ Long-term debt
______ Supplies
______ Equipment
______ Prepaid expenses

Prepare a classified statement of financial position.
(LO 6)

E4-16 The following items were taken from the financial statements of Sexton Company Ltd. (All amounts are in thousands.)

Long-term debt	£ 1,000	Accumulated depreciation—equip.	£ 4,125
Prepaid insurance	680	Accounts payable	1,444
Equipment	11,500	Notes payable (due after 2018)	800
Long-term investments	1,200	Share capital—ordinary	10,000
Short-term investments	3,619	Retained earnings	4,750
Notes payable (due in 2018)	500	Accounts receivable	1,696
Cash	2,668	Inventory	1,256

Instructions
Prepare a classified statement of financial position in good form as of December 31, 2017.

Prepare financial statements.
(LO 1, 6)

E4-17 These financial statement items are for Van Dijk Company NV at year-end, July 31, 2017.

Salaries and wages payable	$ 2,040	Notes payable (long-term)	$ 1,800
Salaries and wages expense	50,700	Cash	14,200
Utilities expense	22,600	Accounts receivable	9,240
Equipment	30,000	Accumulated depreciation—equip.	6,000
Accounts payable	4,100	Dividends	3,000
Service revenue	62,000	Depreciation expense	2,400
Rent revenue	8,500	Retained earnings (beginning of the year)	22,700
Share capital—ordinary	25,000		

Instructions
(a) Prepare an income statement and a retained earnings statement for the year.
(b) Prepare a classified statement of financial position at July 31.

Use reversing entries.
(LO 7)

***E4-18** Ronaldo Company SA pays salaries of R$9,000 every Monday for the preceding 5-day week (Monday through Friday). Assume December 31 falls on a Thursday, so Ronaldo's employees have worked 4 days without being paid.

Instructions
(a) Assume the company does not use reversing entries. Prepare the December 31 adjusting entry and the entry on Monday, January 4, when Ronaldo pays the payroll.
(b) Assume the company does use reversing entries. Prepare the December 31 adjusting entry, the January 1 reversing entry, and the entry on Monday, January 4, when Ronaldo pays the payroll.

Prepare closing and reversing entries.
(LO 2, 4, 7)

***E4-19** On December 31, the adjusted trial balance of Feng Employment Agency, Ltd. shows the following selected data.

Accounts Receivable	NT$720,000	Service Revenue	NT$2,820,000
Interest Expense	249,000	Interest Payable	39,000

Analysis shows that adjusting entries were made to (1) accrue NT$153,000 of service revenue and (2) accrue NT$39,000 interest expense.

Instructions

(a) Prepare the closing entries for the temporary accounts shown above at December 31.
(b) Prepare the reversing entries on January 1.
(c) Post the entries in (a) and (b), excluding the Income Summary account. Underline and balance the accounts. (Use T-accounts.)
(d) Prepare the entries to record (1) the collection of the accrued revenue on January 10 and (2) the payment of all interest due (NT$90,000) on January 15.
(e) Post the entries in (d) to the temporary accounts.

PROBLEMS: SET A

Prepare worksheet, financial statements, and adjusting and closing entries.

(LO 1, 2, 6)

P4-1A Hercules Poirot began operations as a private investigator on January 1, 2017. The trial balance columns of the worksheet for Hercules Poirot, P.I., SA at March 31 are as follows.

HERCULES POIROT, P.I., SA
Worksheet
For the Quarter Ended March 31, 2017

Account Titles	Trial Balance Dr.	Trial Balance Cr.
Cash	11,410	
Accounts Receivable	5,920	
Supplies	1,250	
Prepaid Insurance	2,400	
Equipment	15,000	
Notes Payable		10,000
Accounts Payable		7,350
Share Capital—Ordinary		14,000
Dividends	600	
Service Revenue		10,200
Salaries and Wages Expense	2,240	
Travel Expense	1,300	
Rent Expense	1,200	
Miscellaneous Expense	230	
	41,550	41,550

Other data:

1. Supplies on hand total €500.
2. Depreciation is €680 per quarter.
3. Interest accrued on 6-month note payable, issued January 1, €300.
4. Insurance expires at the rate of €200 per month.
5. Services performed but unbilled at March 31 total €1,080.

Instructions

(a) Enter the trial balance on a worksheet and complete the worksheet.
(b) Prepare an income statement and a retained earnings statement for the quarter and a classified statement of financial position at March 31.
(c) Journalize the adjusting entries from the adjustments columns of the worksheet.
(d) Journalize the closing entries from the financial statement columns of the worksheet.

(a) Adjusted trial balance €43,610
(b) Net income €3,980
Total assets €35,030

Complete worksheet; prepare financial statements, closing entries, and post-closing trial balance.

(LO 1, 2, 3, 6)

P4-2A The adjusted trial balance columns of the worksheet for Watson Company, Ltd. are as follows.

WATSON COMPANY, LTD.
Worksheet
For the Year Ended December 31, 2017

Account No.	Account Titles	Adjusted Trial Balance Dr.	Adjusted Trial Balance Cr.
101	Cash	17,800	
112	Accounts Receivable	14,400	
126	Supplies	2,300	

Account No.	Account Titles	Adjusted Trial Balance Dr.	Cr.
130	Prepaid Insurance	4,400	
157	Equipment	46,000	
158	Accumulated Depreciation—Equipment		18,000
200	Notes Payable		20,000
201	Accounts Payable		8,000
212	Salaries and Wages Payable		2,600
230	Interest Payable		1,000
311	Share Capital—Ordinary		15,000
320	Retained Earnings		9,800
332	Dividends	12,000	
400	Service Revenue		86,200
610	Advertising Expense	10,000	
631	Supplies Expense	3,700	
711	Depreciation Expense	6,000	
722	Insurance Expense	4,000	
726	Salaries and Wages Expense	39,000	
905	Interest Expense	1,000	
	Totals	160,600	160,600

Instructions

(a) Net income £22,500
(b) Current assets £38,900
Current liabilities £16,600
(e) Post-closing trial balance £84,900

(a) Complete the worksheet by extending the balances to the financial statement columns.
(b) Prepare an income statement, a retained earnings statement, and a classified statement of financial position (amounts in British pounds). (*Note:* £5,000 of the notes payable become due in 2018.)
(c) Prepare the closing entries. Use J14 for the journal page.
(d) Post the closing entries. Use the three-column form of account. Income Summary is account No. 350.
(e) Prepare a post-closing trial balance.

Prepare financial statements, closing entries, and post-closing trial balance.

(LO 1, 2, 3, 6)

P4-3A The completed financial statement columns of the worksheet for Rahim Company, Ltd. are as follows.

RAHIM COMPANY, LTD.
Worksheet
For the Year Ended December 31, 2017

Account No.	Account Titles	Income Statement Dr.	Income Statement Cr.	Statement of Financial Position Dr.	Statement of Financial Position Cr.
101	Cash			6,200	
112	Accounts Receivable			7,500	
130	Prepaid Insurance			600	
157	Equipment			33,000	
158	Accumulated Depreciation—Equip.				9,900
201	Accounts Payable				10,700
212	Salaries and Wages Payable				3,000
311	Share Capital—Ordinary				20,000
320	Retained Earnings				9,700
332	Dividends			4,000	
400	Service Revenue		47,000		
622	Maintenance and Repairs Expense	4,100			
711	Depreciation Expense	3,300			
722	Insurance Expense	2,400			
726	Salaries and Wages Expense	35,200			
732	Utilities Expense	4,000			
	Totals	49,000	47,000	51,300	53,300
	Net Loss		2,000	2,000	
		49,000	49,000	53,300	53,300

Instructions

(a) Prepare an income statement, a retained earnings statement, and a classified statement of financial position (amounts in euros).
(b) Prepare the closing entries.
(c) Post the closing entries, and underline and balance the accounts. (Use T-accounts.) Income Summary is account No. 350.
(d) Prepare a post-closing trial balance.

(a) Net loss €2,000
Ending retained earnings €3,700
Total assets €37,400
(d) Post-closing trial balance €47,300

P4-4A Teresina Amusement Park, SA has a fiscal year ending on September 30. Selected data from the September 30 worksheet are as follows.

Complete worksheet; prepare classified statement of financial position, adjusting and closing entries, and post-closing trial balance.

(LO 1, 2, 3, 6)

TERESINA AMUSEMENT PARK, SA
Worksheet
For the Year Ended September 30, 2017

	Trial Balance		Adjusted Trial Balance	
	Dr.	**Cr.**	**Dr.**	**Cr.**
Cash	34,400		34,400	
Supplies	18,600		2,200	
Prepaid Insurance	29,900		10,900	
Land	80,000		80,000	
Equipment	120,000		120,000	
Accumulated Depreciation—Equip.		36,200		42,200
Accounts Payable		14,600		14,600
Unearned Ticket Revenue		3,900		1,000
Mortgage Payable		50,000		50,000
Share Capital—Ordinary		60,000		60,000
Retained Earnings		36,100		36,100
Dividends	14,000		14,000	
Ticket Revenue		277,900		280,800
Salaries and Wages Expense	98,000		98,000	
Maintenance and Repairs Expense	30,500		30,500	
Advertising Expense	9,400		9,400	
Utilities Expense	16,900		16,900	
Property Tax Expense	21,000		24,000	
Interest Expense	6,000		8,000	
Totals	478,700	478,700		
Insurance Expense			19,000	
Supplies Expense			16,400	
Interest Payable				2,000
Depreciation Expense			6,000	
Property Taxes Payable				3,000
Totals			489,700	489,700

Instructions

(a) Prepare a complete worksheet.
(b) Prepare a classified statement of financial position (amounts in Brazilian reais). (*Note:* R$15,000 of the mortgage note payable is due for payment in the next fiscal year.)
(c) Journalize the adjusting entries using the worksheet as a basis.
(d) Journalize the closing entries using the worksheet as a basis.
(e) Prepare a post-closing trial balance.

(a) Net income R$52,600
(b) Total current assets R$47,500
(e) Post-closing trial balance R$247,500

P4-5A Zoe Parker opened Fresh Step Carpet Cleaners, Ltd. on March 1. During March, the following transactions were completed.

Complete all steps in accounting cycle.

(LO 1, 2, 3, 4, 6)

Mar.	1	Shareholders invested £14,000 cash in the business in exchange for ordinary shares.
	1	Purchased used truck for £10,000, paying £3,000 cash and the balance on account.
	3	Purchased cleaning supplies for £1,200 on account.
	5	Paid £1,800 cash on one-year insurance policy effective March 1.
	14	Billed customers £4,500 for cleaning services performed.
	18	Paid £1,500 cash on amount owed on truck and £500 on amount owed on cleaning supplies.

Mar. 20 Paid £1,800 cash for employee salaries.
21 Collected £1,600 cash from customers billed on March 14.
28 Billed customers £2,500 for cleaning services performed.
31 Paid £320 for the monthly gasoline bill for the truck.
31 Declared and paid £800 cash dividends.

The chart of accounts for Fresh Step Carpet Cleaners, Ltd. contains the following accounts: No. 101 Cash, No. 112 Accounts Receivable, No. 126 Supplies, No. 130 Prepaid Insurance, No. 157 Equipment, No. 158 Accumulated Depreciation—Equipment, No. 201 Accounts Payable, No. 212 Salaries and Wages Payable, No. 311 Share Capital—Ordinary, No. 320 Retained Earnings, No. 332 Dividends, No. 350 Income Summary, No. 400 Service Revenue, No. 633 Gasoline Expense, No. 631 Supplies Expense, No. 711 Depreciation Expense, No. 722 Insurance Expense, and No. 726 Salaries and Wages Expense.

Instructions

(a) Journalize and post the March transactions. Use page J1 for the journal and the three-column form of account.

(b) Trial balance £27,200

(b) Prepare a trial balance at March 31 on a worksheet.

(c) Adjusted trial balance £29,190

(c) Enter the following adjustments on the worksheet and complete the worksheet.
   (1) Unbilled revenue for services performed at March 31 was £1,000.
   (2) Depreciation on equipment for the month was £300.
   (3) One-twelfth of the insurance expired.
   (4) An inventory count shows £250 of cleaning supplies on hand at March 31.
   (5) Accrued but unpaid employee salaries were £690.

(d) Net income £3,790
Total assets £23,880

(d) Prepare the income statement and a retained earnings statement for March and a classified statement of financial position at March 31.

(e) Journalize and post adjusting entries. Use page J2 for the journal.

(f) Journalize and post closing entries and complete the closing process. Use page J3 for the journal.

(g) Post-closing trial balance £24,180

(g) Prepare a post-closing trial balance at March 31.

Analyze errors and prepare correcting entries and trial balance.

(LO 5)

P4-6A Sara Yu, CA, was retained by Info Cable, Ltd. to prepare financial statements for April 2017. Yu accumulated all the ledger balances per Info's records and found the following.

INFO CABLE, LTD.
Trial Balance
April 30, 2017

	Debit	Credit
Cash	£ 4,100	
Accounts Receivable	3,200	
Supplies	800	
Equipment	10,600	
Accumulated Depreciation—Equip.		£ 1,250
Accounts Payable		2,100
Salaries and Wages Payable		700
Unearned Service Revenue		890
Share Capital—Ordinary		10,000
Retained Earnings		2,880
Service Revenue		5,450
Salaries and Wages Expense	3,300	
Advertising Expense	480	
Miscellaneous Expense	290	
Depreciation Expense	500	
	£23,270	£23,270

Sara Yu reviewed the records and found the following errors.

1. Cash received from a customer on account was recorded as £950 instead of £590.
2. A payment of £75 for advertising expense was entered as a debit to Miscellaneous Expense £75 and a credit to Cash £75.

3. The first salary payment this month was for £1,850, which included £700 of salaries payable on March 31. The payment was recorded as a debit to Salaries and Wages Expense £1,850 and a credit to Cash £1,850. (No reversing entries were made on April 1.)
4. The purchase on account of a printer costing £310 was recorded as a debit to Supplies and a credit to Accounts Payable for £310.
5. A cash payment of repair expense on equipment for £125 was recorded as a debit to Equipment £152 and a credit to Cash £152.

Instructions

(a) Prepare an analysis of each error showing (1) the incorrect entry, (2) the correct entry, and (3) the correcting entry. Items 4 and 5 occurred on April 30, 2017.
(b) Prepare a correct trial balance.

(b) Trial balance £22,570

PROBLEMS: SET B

Prepare worksheet, financial statements, and adjusting and closing entries.

(LO 1, 2, 6)

P4-1B The trial balance columns of the worksheet for Firmament Roofing, Ltd. at March 31, 2017, are as follows.

FIRMAMENT ROOFING, LTD.
Worksheet
For the Month Ended March 31, 2017

Account Titles	Trial Balance Dr.	Trial Balance Cr.
Cash	2,720	
Accounts Receivable	2,700	
Supplies	1,500	
Equipment	11,000	
Accumulated Depreciation—Equipment		1,250
Accounts Payable		2,500
Unearned Service Revenue		650
Share Capital—Ordinary		10,000
Dividends	1,100	
Service Revenue		6,300
Salaries and Wages Expense	1,300	
Miscellaneous Expense	380	
	20,700	20,700

Other data:

1. A physical count reveals only £550 of roofing supplies on hand.
2. Depreciation for March is £250.
3. Unearned service revenue amounted to £220 at March 31.
4. Accrued salaries are £420.

Instructions

(a) Enter the trial balance on a worksheet and complete the worksheet.
(b) Prepare an income statement and a retained earnings statement for the month of March and a classified statement of financial position at March 31. Ordinary shares were issued in exchange for £10,000 cash at the beginning of March.
(c) Journalize the adjusting entries from the adjustments columns of the worksheet.
(d) Journalize the closing entries from the financial statement columns of the worksheet.

(a) Adjusted trial balance £21,370
(b) Net income £3,430
Total assets £15,470

Complete worksheet; prepare financial statements, closing entries, and post-closing trial balance.

(LO 1, 2, 3, 6)

P4-2B The adjusted trial balance columns of the worksheet for Bleecker Street, Ltd., owned by Raymond Pearson, are as follows.

BLEECKER STREET, LTD.
Worksheet
For the Year Ended December 31, 2017

Account No.	Account Titles	Adjusted Trial Balance Dr.	Adjusted Trial Balance Cr.
101	Cash	5,300	
112	Accounts Receivable	10,800	
126	Supplies	1,500	
130	Prepaid Insurance	2,000	
157	Equipment	27,000	
158	Accumulated Depreciation—Equipment		5,600
200	Notes Payable		15,000
201	Accounts Payable		4,600
212	Salaries and Wages Payable		2,400
230	Interest Payable		600
311	Share Capital—Ordinary		10,000
320	Retained Earnings		4,200
332	Dividends	5,000	
400	Service Revenue		59,000
610	Advertising Expense	8,400	
631	Supplies Expense	4,000	
711	Depreciation Expense	5,600	
722	Insurance Expense	3,200	
726	Salaries and Wages Expense	28,000	
905	Interest Expense	600	
	Totals	101,400	101,400

(a) Net income £9,200
(b) Current assets £19,600; Current liabilities £10,600
(e) Post-closing trial balance £46,600

Instructions

(a) Complete the worksheet by extending the balances to the financial statement columns.
(b) Prepare an income statement, a retained earnings statement, and a classified statement of financial position (amounts in British pounds). (*Note:* £3,000 of the notes payable become due in 2018.)
(c) Prepare the closing entries. Use J14 for the journal page.
(d) Post the closing entries. Use the three-column form of account. Income Summary is No. 350.
(e) Prepare a post-closing trial balance.

Prepare financial statements, closing entries, and post-closing trial balance.

(LO 1, 2, 3, 6)

P4-3B The completed financial statement columns of the worksheet for Yulon Company, Ltd. are as follows.

YULON COMPANY, LTD.
Worksheet
For the Year Ended December 31, 2017

Account No.	Account Titles	Income Statement Dr.	Income Statement Cr.	Statement of Financial Position Dr.	Statement of Financial Position Cr.
101	Cash			267,000	
112	Accounts Receivable			324,000	
130	Prepaid Insurance			84,000	
157	Equipment			840,000	
158	Accumulated Depreciation—Equip.				180,000
201	Accounts Payable				60,000
212	Salaries and Wages Payable				66,000
311	Share Capital—Ordinary				360,000
320	Retained Earnings				430,800
332	Dividends			210,000	
400	Service Revenue		1,680,000		

622	Maintenance and Repairs Expense	48,000			
711	Depreciation Expense	90,000			
722	Insurance Expense	64,800			
726	Salaries and Wages Expense	810,000			
732	Utilities Expense	39,000			
	Totals	1,051,800	1,680,000	1,725,000	1,096,800
	Net Income	628,200			628,200
		1,680,000	1,680,000	1,725,000	1,725,000

Instructions

(a) Prepare an income statement, a retained earnings statement, and a classified statement of financial position (amounts in Taiwan, new dollars).

(b) Prepare the closing entries.

(c) Post the closing entries, and underline and balance the accounts. (Use T-accounts.) Income Summary is account No. 350.

(d) Prepare a post-closing trial balance.

(a) Ending retained earnings NT$849,000; Total current assets NT$675,000

(d) Post-closing trial balance NT$1,515,000

Complete worksheet; prepare classified statement of financial position, adjusting and closing entries, and post-closing trial balance.

(LO 1, 2, 3, 6)

P4-4B Carroll Management Services, Ltd. began business on January 1, 2017, with a capital investment of £120,000. The company manages condominiums for owners (Service Revenue) and rents space in its own office building (Rent Revenue). The trial balance and adjusted trial balance columns of the worksheet at the end of the first year are as follows.

CARROLL MANAGEMENT SERVICES, LTD.
Worksheet
For the Year Ended December 31, 2017

	Trial Balance		Adjusted Trial Balance	
Account Titles	**Dr.**	**Cr.**	**Dr.**	**Cr.**
Cash	13,800		13,800	
Accounts Receivable	26,300		26,300	
Prepaid Insurance	3,600		1,800	
Land	67,000		67,000	
Buildings	127,000		127,000	
Equipment	59,000		59,000	
Accounts Payable		12,500		12,500
Unearned Rent Revenue		8,000		3,500
Mortgage Payable		120,000		120,000
Share Capital—Ordinary		80,000		80,000
Retained Earnings		54,000		54,000
Dividends	16,000		16,000	
Service Revenue		90,700		90,700
Rent Revenue		26,000		30,500
Salaries and Wages Expense	42,000		42,000	
Advertising Expense	17,500		17,500	
Utilities Expense	19,000		19,000	
Totals	391,200	391,200		
Insurance Expense			1,800	
Depreciation Expense			6,600	
Accumulated Depreciation—Buildings				3,000
Accumulated Depreciation—Equipment				3,600
Interest Expense			9,600	
Interest Payable				9,600
Totals			407,400	407,400

Instructions

(a) Prepare a complete worksheet.

(b) Prepare a classified statement of financial position. (*Note:* £25,000 of the mortgage note payable is due for payment next year.)

(c) Journalize the adjusting entries.

(d) Journalize the closing entries.

(e) Prepare a post-closing trial balance.

(a) Net income £24,700

(b) Total current assets £41,900

(e) Post-closing trial balance £294,900

Complete all steps in accounting cycle.

(LO 1, 2, 3, 4, 6)

P4-5B Lori Callebaut opened Callebaut Cleaning Service, AG on July 1, 2017. During July the following transactions were completed.

July 1 Shareholders invested €20,000 cash in the business in exchange for ordinary shares.
1 Purchased used truck for €12,000, paying €4,000 cash and the balance on account.
3 Purchased cleaning supplies for €2,100 on account.
5 Paid €3,600 cash on one-year insurance policy effective July 1.
12 Billed customers €5,900 for cleaning services performed.
18 Paid €1,500 cash on amount owed on truck and €1,400 on amount owed on cleaning supplies.
20 Paid €4,500 cash for employee salaries.
21 Collected €4,400 cash from customers billed on July 12.
25 Billed customers €9,400 for cleaning services performed.
31 Paid €400 for the monthly gasoline bill for the truck.
31 Declared and paid a €1,200 cash dividend.

The chart of accounts for Callebaut Cleaning Service contains the following accounts: No. 101 Cash, No. 112 Accounts Receivable, No. 126 Supplies, No. 130 Prepaid Insurance, No. 157 Equipment, No. 158 Accumulated Depreciation—Equipment, No. 201 Accounts Payable, No. 212 Salaries and Wages Payable, No. 311 Share Capital—Ordinary, No. 320 Retained Earnings, No. 332 Dividends, No. 350 Income Summary, No. 400 Service Revenue, No. 633 Gasoline Expense, No. 631 Supplies Expense, No. 711 Depreciation Expense, No. 722 Insurance Expense, and No. 726 Salaries and Wages Expense.

Instructions

(a) Journalize and post the July transactions. Use page J1 for the journal and the three-column form of account.

(b) Prepare a trial balance at July 31 on a worksheet.

(c) Enter the following adjustments on the worksheet and complete the worksheet.
   (1) Services performed but unbilled and uncollected at July 31 were €3,300.
   (2) Depreciation on equipment for the month was €500.
   (3) One-twelfth of the insurance expired.
   (4) An inventory count shows €560 of cleaning supplies on hand at July 31.
   (5) Accrued but unpaid employee salaries were €2,200.

(d) Prepare the income statement and retained earnings statement for July and a classified statement of financial position at July 31.

(e) Journalize and post adjusting entries. Use page J2 for the journal.

(f) Journalize and post closing entries and complete the closing process. Use page J3 for the journal.

(g) Prepare a post-closing trial balance at July 31.

(b) Trial balance €42,500
(c) Adjusted trial balance €48,500
(d) Net income €9,160; Total assets €37,360
(g) Post-closing trial balance €37,860

COMPREHENSIVE PROBLEM: CHAPTERS 2 TO 4

CP4 Tara Harris opened Tara's Maids Cleaning Service, Ltd. on July 1, 2017. During July, the company completed the following transactions.

July 1 Shareholders invested £15,000 cash in the business in exchange for ordinary shares.
1 Purchased a used truck for £10,000, paying £3,000 cash and the balance on account.
3 Purchased cleaning supplies for £1,700 on account.
5 Paid £1,800 on a one-year insurance policy, effective July 1.
12 Billed customers £4,200 for cleaning services performed.
18 Paid £1,000 of amount owed on truck, and £400 of amount owed on cleaning supplies.
20 Paid £1,900 for employee salaries.
21 Collected £2,400 from customers billed on July 12.
25 Billed customers £2,100 for cleaning services performed.
31 Paid gasoline for the month on the truck, £400.
31 Declared and paid a £500 cash dividend.

The chart of accounts for Tara's Maids Cleaning Service contains the following accounts: No. 101 Cash, No. 112 Accounts Receivable, No. 126 Supplies, No. 130 Prepaid Insurance, No. 157 Equipment, No. 158 Accumulated Depreciation—Equipment, No. 201 Accounts Payable, No. 212 Salaries and Wages Payable, No. 311 Share Capital—Ordinary, No. 320 Retained Earnings, No. 332 Dividends, No. 350 Income Summary, No. 400 Service Revenue, No. 633 Gasoline Expense, No. 631 Supplies Expense, No. 711 Depreciation Expense, No. 722 Insurance Expense, and No. 726 Salaries and Wages Expense.

Instructions

(a) Journalize and post the July transactions. Use page J1 for the journal.
(b) Prepare a trial balance at July 31 on a worksheet.
(c) Enter the following adjustments on the worksheet, and complete the worksheet.
  (1) Unbilled fees for services performed at July 31 were £1,300.
  (2) Depreciation on equipment for the month was £200.
  (3) One-twelfth of the insurance expired.
  (4) An inventory count shows £280 of cleaning supplies on hand at July 31.
  (5) Accrued but unpaid employee salaries were £630.
(d) Prepare the income statement and retained earnings statement for July, and a classified statement of financial position at July 31, 2017.
(e) Journalize and post the adjusting entries. Use page J2 for the journal.
(f) Journalize and post the closing entries, and complete the closing process. Use page J3 for the journal.
(g) Prepare a post-closing trial balance at July 31.

(b) Trial balance totals £28,600

(d) Net income £2,900
Total assets £25,330

(g) Post-closing trial balance £25,530

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–3.)

MC4 Mei-ling had a very busy December. At the end of the month, after journalizing and posting the December transactions and adjusting entries, Mei-ling prepared the following adjusted trial balance.

MATCHA CREATIONS
Adjusted Trial Balance
December 31, 2017

	Debit	Credit
Cash	NT$1,180	
Accounts Receivable	875	
Supplies	350	
Prepaid Insurance	1,210	
Equipment	1,200	
Accumulated Depreciation—Equipment		NT$ 40
Accounts Payable		75
Salaries and Wages Payable		56
Unearned Service Revenue		300
Notes Payable		2,000
Interest Payable		15
Share Capital—Ordinary		800
Dividends	500	
Service Revenue		4,515
Salaries and Wages Expense	1,006	
Utilities Expense	125	
Advertising Expense	165	
Supplies Expense	1,025	
Depreciation Expense	40	
Insurance Expense	110	
Interest Expense	15	
	NT$7,801	NT$7,801

Instructions

Using the information in the adjusted trial balance, do the following.

(a) Prepare an income statement and a retained earnings statement for the 2 months ended December 31, 2017, and a classified statement of financial position at December 31, 2017. The note payable has a stated interest rate of 6%, and the principal and interest are due on November 16, 2019.

(b) Mei-ling has decided that her year-end will be December 31, 2017. Prepare closing entries as of December 31, 2017.

(c) Prepare a post-closing trial balance.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP4-1 The financial statements of TSMC are presented in Appendix A at the end of this textbook. The company's complete annual report, including the notes to the financial statements, is available in the Investors section of the company's website, *www.tsmc.com*.

Instructions

Answer the questions below using the statement of financial position and the notes to consolidated financial statements section.

(a) What were TSMC's total current assets at December 31, 2013, and December 31, 2012?

(b) Are assets that TSMC included under current assets listed in proper order? Explain.

(c) How are TSMC's assets classified?

(d) What are "cash equivalents"?

(e) What were TSMC's total current liabilities at December 31, 2013, and December 31, 2012?

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP4-2 Nestlé's financial statements are presented in Appendix B. Financial statements for Petra Foods are presented in Appendix C.

Instructions

(a) Based on the information contained in these financial statements, determine each of the following for Nestlé and Petra Foods at December 31, 2013.

  (1) Total current assets.

  (2) Net amount of property, plant, and equipment (land, buildings, and equipment).

  (3) Total current liabilities.

  (4) Total equity.

(b) What conclusions concerning the companies' respective financial positions can be drawn from the companies' current assets and current liabilities?

Real-World Focus

BYP4-3 Numerous companies have established home pages on the Internet, e.g., Capt'n Eli Root Beer Company *(www.captneli.com/rootbeer.php)* and Kodak *(www.kodak.com)*.

Instructions

Examine the home pages of any two companies and answer the following questions.

(a) What type of information is available?

(b) Is any accounting-related information presented?

(c) Would you describe the home page as informative, promotional, or both? Why?

Critical Thinking

Decision-Making Across the Organization

BYP4-4 Everclean Janitorial Service, Ltd. was started 2 years ago by Lauren Baird. Because business has been exceptionally good, Lauren decided on July 1, 2017, to expand operations by acquiring an additional truck and hiring two more assistants. To finance the expansion, Lauren obtained on July 1, 2017, a £25,000, 10% bank loan, payable £10,000 on July 1, 2018, and the balance on July 1, 2019. The terms of the loan require the borrower to have £10,000 more current assets than current liabilities at December 31, 2017. If these terms are not met, the bank loan will be refinanced at 15% interest. At December 31, 2017, the accountant for Everclean Janitorial Service prepared the statement of financial position shown below.

Lauren presented the statement of financial position to the bank's loan officer on January 2, 2018, confident that the company had met the terms of the loan. The loan officer was not impressed. She said, "We need financial statements audited by a public accountant." A public accountant was hired and immediately realized that the statement of financial position had been prepared from a trial balance and not from an adjusted trial balance. The adjustment data at the statement of financial position date consisted of the following.

1. Unbilled janitorial services performed were £3,900.
2. Janitorial supplies on hand were £2,100.
3. Prepaid insurance was a 3-year policy dated January 1, 2017.
4. December expenses incurred but unpaid at December 31, £620.
5. Interest on the bank loan was not recorded.
6. The amounts for property, plant, and equipment presented in the statement of financial position were reported net of accumulated depreciation (cost less accumulated depreciation). These amounts were £4,000 for cleaning equipment and £5,000 for delivery trucks as of January 1, 2017. Depreciation for 2017 was £2,000 for cleaning equipment and £5,000 for delivery trucks.

EVERCLEAN JANITORIAL SERVICE, LTD.
Statement of Financial Position
December 31, 2017

Assets		Equity and Liabilities		
Property, plant, and equipment		Equity		
Equipment (net)	£22,000	Share capital—ordinary	£30,000	
Delivery trucks (net)	34,000	Retained earnings	24,000	£54,000
Total property, plant, and equipment	56,000	Non-current liability		
Current assets		Notes payable		15,000
Prepaid insurance	4,800	Current liabilities		
Supplies	5,200	Notes payable	10,000	
Accounts receivable	9,000	Accounts payable	1,500	11,500
Cash	5,500	Total equity and liabilities		£80,500
Total assets	£80,500			

Instructions

With the class divided into groups, answer the following.

(a) Prepare a correct statement of financial position.
(b) Were the terms of the bank loan met? Explain.

Communication Activity

BYP4-5 The accounting cycle is important in understanding the accounting process.

Instructions

Write a memo to your instructor that lists the steps of the accounting cycle in the order they should be completed. End with a paragraph that explains the optional steps in the cycle.

Ethics Case

BYP4-6 As the controller of Take No Prisoners Perfume Company, SA, you discover a misstatement that overstated net income in the prior year's financial statements. The misleading financial statements appear in the company's annual report which was issued to banks and other creditors less than a month ago. After much thought about the consequences of telling the president, Fabien LaRue, about this misstatement, you gather your courage to inform him. Fabien says, "Hey! What they don't know won't hurt them. But, just so we set the record straight, we'll adjust this year's financial statements for last year's misstatement. We can absorb that misstatement better in this year than in last year anyway! Just don't make such a mistake again."

Instructions

(a) Who are the stakeholders in this situation?
(b) What are the ethical issues in this situation?
(c) What would you do as a controller in this situation?

Answers to Insight and Accounting Across the Organization Questions

p. 171 Performing the Virtual Close Q: Who else benefits from a shorter closing process? **A:** Investors benefit from a shorter closing process. The shorter the closing, the sooner the company can report its financial results. This means that the financial information is more timely and therefore more relevant to investors.

p. 177 How Can Accounting Aid African Growth? Q: What benefit is likely to result if African companies improve their accounting practices and adopt IFRS? **A:** African companies need to attract funds from investors in all parts of the world. Investors will have much more confidence in African investments if they are convinced that the financial reports of African companies accurately depict financial results. Since IFRS is widely used around the world, adoption of IFRS can increase investor confidence, thereby reducing the cost of raising funds.

p. 181 Creating Value Q: What are some implications of Nestlé's decision to measure its results using objective measures and then publicly report these results? **A:** By choosing to measure its results using objective measures, Nestlé is better able to set goals and evaluate progress. By publishing these results, Nestlé strengthens the perception to its employees and to the public that it is committed to these goals.

p. 183 Can a Company Be Too Liquid? Q: What can various company managers do to ensure that working capital is managed efficiently to maximize net income? **A:** Marketing and sales managers must understand that by extending generous repayment terms, they are expanding the company's receivables balance and slowing the company's cash flow. Production managers must strive to minimize the amount of excess inventory on hand. Managers must coordinate efforts to speed up the collection of receivables, while also ensuring that the company pays its payables on time but never too early.

A Look at U.S. GAAP

Learning Objective 8

Compare the procedures for the closing process under IFRS and U.S. GAAP.

The classified statement of financial position, although generally required internationally, contains certain variations in format when reporting under GAAP.

Key Points

- In general, GAAP follows the similar guidelines as this textbook for presenting items in the current asset section, except that under GAAP items are listed in order of liquidity, while under IFRS they are often listed in reverse order of liquidity. For example, under GAAP cash is listed first, but under IFRS it is listed last.
- Both GAAP and IFRS are increasing the use of fair value to report assets. However, at this point IFRS has adopted it more broadly. As examples, under IFRS companies can apply fair value to property, plant, and equipment; natural resources; and in some cases intangible assets.

Similarities

- Both IFRS and GAAP require disclosures about (1) accounting policies followed, (2) judgments that management has made in the process of applying the entity's accounting policies, and (3) the key assumptions and estimation uncertainty that could result in a material adjustment to the carrying amounts of assets and liabilities within the next financial year.
- Comparative prior-period information must be presented and financial statements must be prepared annually.

Differences

- IFRS officially uses the term *statement of financial position* in its literature, while in the United States it is often referred to as the *balance sheet*.
- IFRS requires that specific items be reported on the statement of financial position, whereas no such general standard exists in GAAP. However, under GAAP, public companies must follow U.S. Securities and Exchange Commission (SEC) regulations, which require specific line items as well. In addition, specific GAAP standards mandate certain forms of reporting statement of financial position information. The SEC guidelines are more detailed than IFRS.
- While IFRS companies often report non-current assets before current assets in their statements of financial position, this is never seen under GAAP. Also, some IFRS companies report the subtotal "net assets," which equals total assets minus total liabilities. This practice is also not seen under GAAP.
- A key difference in valuation is that under IFRS, companies, under certain conditions, can report property, plant, and equipment at cost or at fair value, whereas under GAAP this practice is not allowed.
- GAAP has many differences in terminology from what are shown in your textbook. For example, in the following sample balance sheet (statement of financial position), notice in the investment category that shares are called stock. Also note that Share Capital—Ordinary is referred to as Common Stock. In addition, the format used for statement of financial position presentation is often different between GAAP and IFRS.

FRANKLIN CORPORATION
Balance Sheet
October 31, 2017

Assets			
Current assets			
Cash		$ 6,600	
Short-term investments		2,000	
Accounts receivable		7,000	
Notes receivable		1,000	
Inventory		3,000	
Supplies		2,100	
Prepaid insurance		400	
Total current assets			$22,100
Long-term investments			
Investment in stock of Walters Corp.		5,200	
Investment in real estate		2,000	7,200
Property, plant, and equipment			
Land		10,000	
Equipment	$24,000		
Less: Accumulated depreciation—equipment	5,000	19,000	29,000
Intangible assets			
Patents			3,100
Total assets			$61,400

Liabilities and Stockholders' Equity

Current liabilities		
Notes payable	$11,000	
Accounts payable	2,100	
Salaries and wages payable	1,600	
Unearned service revenue	900	
Interest payable	450	
Total current liabilities		$16,050
Long-term liabilities		
Mortgage payable	10,000	
Notes payable	1,300	
Total long-term liabilities		11,300
Total liabilities		27,350
Stockholders' equity		
Common stock	20,000	
Retained earnings	14,050	
Total stockholders' equity		34,050
Total liabilities and stockholders' equity		$61,400

Looking to the Future

The IASB and the FASB are working on a project to converge their standards related to financial statement presentation. A key feature of the proposed framework is that each of the statements will be organized in the same format, to separate an entity's financing activities from its operating and investing activities and, further, to separate financing activities into transactions with owners and creditors. Thus, the same classifications used in the statement of financial position would also be used in the income statement and the statement of cash flows.

GAAP Practice

GAAP Self-Test Questions

1. Which of the following statements is **false**?
   (a) Assets equals liabilities plus stockholders' equity.
   (b) Under IFRS, companies sometimes net liabilities against assets to report "net assets."
   (c) The FASB and IASB are working on a joint conceptual framework project.
   (d) Under GAAP, the statement of financial position is usually referred to as the statement of assets and equity.
2. A company has purchased a tract of land and expects to build a production plant on the land in approximately 5 years. During the 5 years before construction, the land will be idle. Under GAAP, the land should be reported as:
   (a) land expense.
   (b) property, plant, and equipment.
   (c) an intangible asset.
   (d) a long-term investment.
3. Current assets under GAAP are listed generally:
   (a) by importance.
   (b) in the reverse order of their expected conversion to cash.
   (c) by order of liquidity.
   (d) alphabetically.
4. Companies that use GAAP:
   (a) may report all their assets on their balance sheets at fair value.
   (b) often offset assets against liabilities and show net assets and net liabilities on their balance sheets, rather than the underlying detailed line items.
   (c) generally report current assets before non-current assets on their balance sheets.
   (d) do not have any guidelines as to what should be reported on their balance sheets.

5. Companies that follow GAAP to prepare a balance sheet generally use the following order of classification:
(a) current assets, long-term assets, current liabilities, long-term liabilities, stockholders' equity.
(b) long-term assets, long-term liabilities, current assets, current liabilities, stockholders' equity.
(c) long-term assets, current assets, stockholders' equity, long-term liabilities, current liabilities.
(d) stockholders' equity, long-term assets, current assets, long-term liabilities, current liabilities.

GAAP Exercises

GAAP4-1 In what ways does the format of a statement of financial of position under IFRS often differ from a balance sheet presented under GAAP?

GAAP4-2 What term is commonly used under GAAP in reference to the statement of financial position?

GAAP4-3 The balance sheet for Diaz Company includes the following accounts: Accounts Receivable $12,500; Prepaid Insurance $3,600; Cash $15,400; Supplies $5,200; and Short-Term Investments $6,700. Prepare the current assets section of the balance sheet, listing the accounts in proper sequence using GAAP.

GAAP4-4 Zurich Company recently received the following information related to the company's December 31, 2017, balance sheet.

Inventories	$ 2,700	Short-term investments	$ 120
Cash	13,100	Accumulated depreciation—equipment	5,700
Equipment	21,700	Accounts receivable	4,300
Investments in stocks (long-term)	6,500		

Prepare the assets section of the company's classified balance sheet using GAAP.

GAAP4-5 The following information is available for Rego Bowling Alley at December 31, 2017.

Buildings	$128,000	Common Stock	$90,000
Accounts Receivable	7,540	Retained Earnings	22,000
Prepaid Insurance	4,680	Accumulated Depreciation—Buildings	42,600
Cash	18,040	Accounts Payable	12,300
Equipment	62,400	Notes Payable	95,000
Land	67,000	Accumulated Depreciation—Equipment	18,720
Insurance Expense	780	Interest Payable	2,600
Depreciation Expense	7,360	Service Revenue	15,180
Interest Expense	2,600		

Prepare a classified balance sheet; assume that $13,900 of the notes payable will be paid in 2018 using GAAP.

GAAP4-6 Brian Hopkins is interested in comparing the liquidity and solvency of a U.S. software company with a Chinese competitor. Is this possible if the two companies report using different currencies?

GAAP Financial Reporting Problem: Apple Inc.

GAAP4-7 The financial statements of Apple are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

(a) What were Apple's total current assets at September 28, 2013, and September 29, 2012?
(b) Are the assets included in current assets listed in the proper order? Explain.
(c) How are Apple's assets classified?
(d) What were Apple's current liabilities at September 28, 2013, and September 29, 2012?

Answers to GAAP Self-Test Questions

1. d **2.** d **3.** c **4.** c **5.** a

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✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER 5 Accounting for Merchandising Operations

FEATURE STORY **Who Doesn't Shop?**

Carrefour, headquartered in France, is the largest retailer in Europe and the second largest retailer in the world. While 40% of its sales are in France, it operates stores under a variety of names in 32 countries in Europe, Asia, and Latin America, such as Carrefour Express, Dity, Ed, Minipreco, and Promocash. Its nearly 10,000 stores employ 471,000 people and generate sales of €112 billion.

Becoming an international titan hasn't always been easy. Carrefour has enjoyed some successful mergers and acquisitions. But, it has also experienced setbacks, including a failed effort to acquire a giant Brazilian retailer. It has had some success in increasing market share in emerging markets. But, by far the largest share of its sales are in Europe, which has experienced low consumer confidence in recent years due to the recession and debt crisis. As a result, Carrefour's increases in emerging markets have only served to offset declines in Europe.

Management has experienced upheaval, with three new chief executive officers during a seven-year period. Investors in recent years have withdrawn support for the company, resulting in a drop in Carrefour's share price of two-thirds in less than five years. At times, the company has struggled strategically. Recently, it decided to quit using temporary price cuts to promote products. Instead, Carrefour sets prices low on certain key items. It also decided to not set its prices as low as those of bargain stores, such as E.Leclerc (FRA). Carrefour's management felt that the additional services the company provides would enable it to charge slightly higher prices than bargain stores without losing customers. However, poor economic conditions made consumers extremely price-conscious. As a result, the company has seen a significant drop in customer traffic.

Nobody said retailing is easy, but at number two in the world, Carrefour has no intention of throwing in the towel. The company recently launched a makeover of 500 superstores in Europe, and it continues to look for expansion opportunities in countries that have good growth opportunities. Recently, the company opened its first store in India. Lars Olofsson, CEO of Carrefour, declared: "The opening of this first store marks Carrefour's entry into the Indian market and will be followed shortly by the opening of other Cash & Carry stores. This first step is essential to allow the Carrefour teams to fully understand the specificities of the Indian market and then build our presence in other formats." ■

✔ The Navigator

- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 248–253
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Identify the differences between service and merchandising companies.
2. Explain the recording of purchases under a perpetual inventory system.
3. Explain the recording of sales revenues under a perpetual inventory system.
4. Explain the steps in the accounting cycle for a merchandising company.
5. Prepare an income statement for a merchandiser.

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Mark Douet/Getty Images

PREVIEW OF CHAPTER 5

Merchandising is one of the largest and most influential industries in the world. It is likely that a number of you will work for a merchandiser. Therefore, understanding the financial statements of merchandising companies is important. In this chapter, you will learn the basics about reporting merchandising transactions. In addition, you will learn how to prepare and analyze a commonly used form of the income statement. The content and organization of the chapter are as follows.

ACCOUNTING FOR MERCHANDISING OPERATIONS

- **Merchandising Operations**
  - Operating cycles
  - Flow of costs—perpetual and periodic inventory systems
- **Recording Purchases of Merchandise**
  - Freight costs
  - Purchase returns and allowances
  - Purchase discounts
  - Summary of purchasing transactions
- **Recording Sales of Merchandise**
  - Sales returns and allowances
  - Sales discounts
- **Completing the Accounting Cycle**
  - Adjusting entries
  - Closing entries
  - Summary of merchandising entries
- **Forms of Financial Statements**
  - Income statement
  - Inventory presentation in the classified statement of financial position

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Merchandising Operations

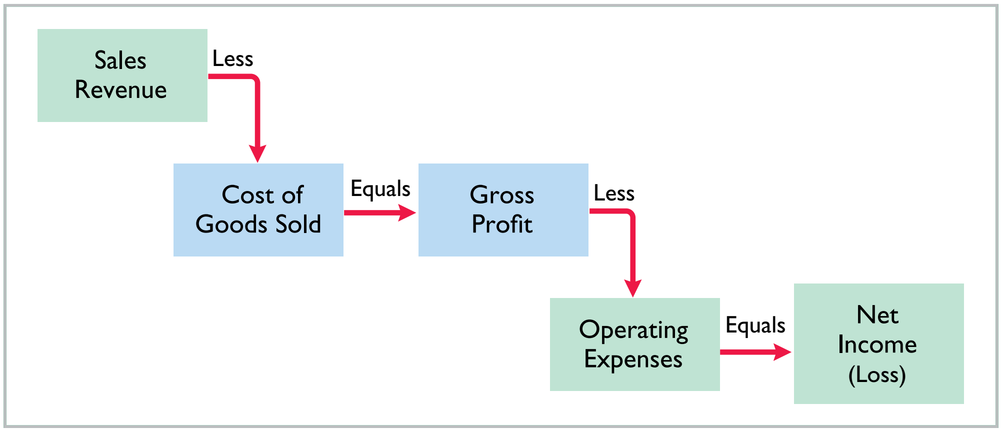
Learning Objective 1

Identify the differences between service and merchandising companies.

Metro (DEU), Carrefour (FRA), and Tesco (GBR) are called merchandising companies because they buy and sell merchandise rather than perform services as their primary source of revenue. Merchandising companies that purchase and sell directly to consumers are called **retailers**. Merchandising companies that sell to retailers are known as **wholesalers**. For example, retailer Walgreens (USA) might buy goods from wholesaler Grupo Casa SA de CV (MEX). Retailer Office Depot (USA) might buy office supplies from wholesaler Corporate Express (NLD). The primary source of revenues for merchandising companies is the sale of merchandise, often referred to simply as **sales revenue** or **sales**. A merchandising company has two categories of expenses: cost of goods sold and operating expenses.

Cost of goods sold is the total cost of merchandise sold during the period. This expense is directly related to the revenue recognized from the sale of goods. Illustration 5-1 shows the income measurement process for a merchandising company. The items in the two blue boxes are unique to a merchandising company; they are not used by a service company.

Illustration 5-1
Income measurement process for a merchandising company



Operating Cycles

The operating cycle of a merchandising company ordinarily is longer than that of a service company. The purchase of merchandise inventory and its eventual sale lengthen the cycle. Illustration 5-2 shows the operating cycle of a service company.

Illustration 5-2
Operating cycle for a service company

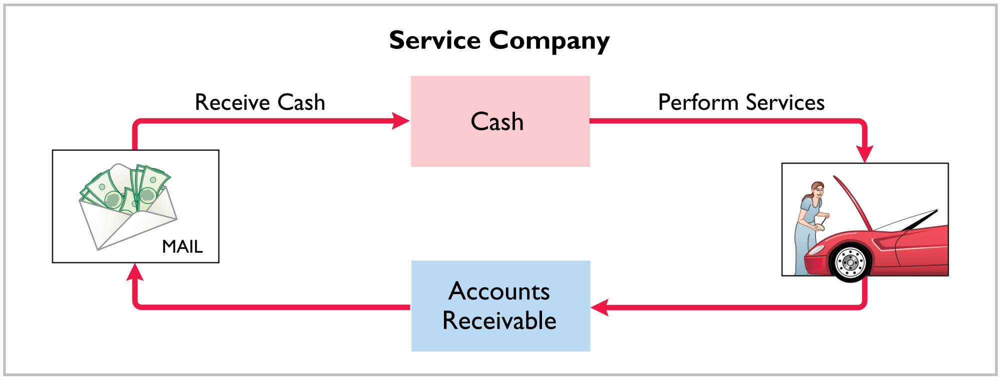


Illustration 5-3 shows the operating cycle of a merchandising company.

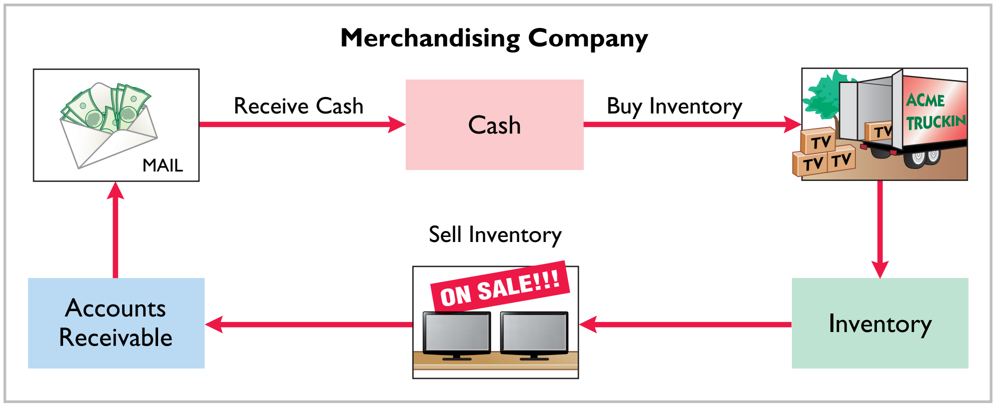


Illustration 5-3
Operating cycle for a merchandising company

Note that the added asset account for a merchandising company is the Inventory account. Companies report inventory as a current asset on the statement of financial position.

Flow of Costs

The flow of costs for a merchandising company is as follows. Beginning inventory plus the cost of goods purchased is the cost of goods available for sale. As goods are sold, they are assigned to cost of goods sold. Those goods that are not sold by the end of the accounting period represent ending inventory. Illustration 5-4 describes these relationships. Companies use one of two systems to account for inventory: a **perpetual inventory system** or a **periodic inventory system**.

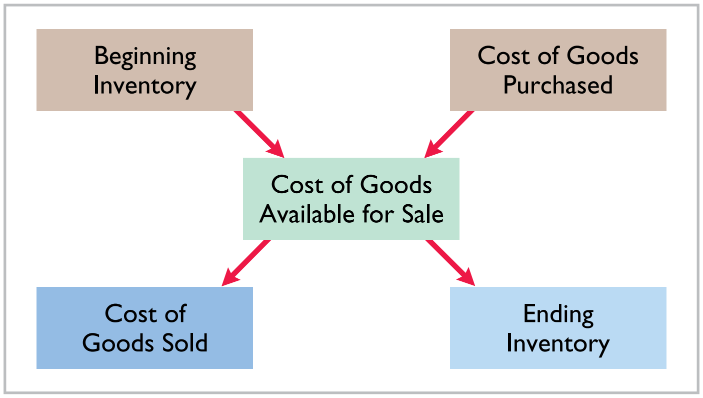


Illustration 5-4
Flow of costs

PERPETUAL SYSTEM

In a **perpetual inventory system**, companies keep detailed records of the cost of each inventory purchase and sale. These records continuously—perpetually—show the inventory that should be on hand for every item. For example, a Toyota (JPN) dealership has separate inventory records for each automobile, truck, and van on its lot and showroom floor. Similarly, a Morrisons (GBR) grocery store uses bar codes and optical scanners to keep a daily running record of every box of cereal and every jar of jelly that it buys and sells. Under a perpetual inventory system, a company determines the cost of goods sold **each time a sale occurs**.

• HELPFUL HINT
For control purposes, companies take a physical inventory count under the perpetual system even though it is not needed to determine cost of goods sold.

PERIODIC SYSTEM

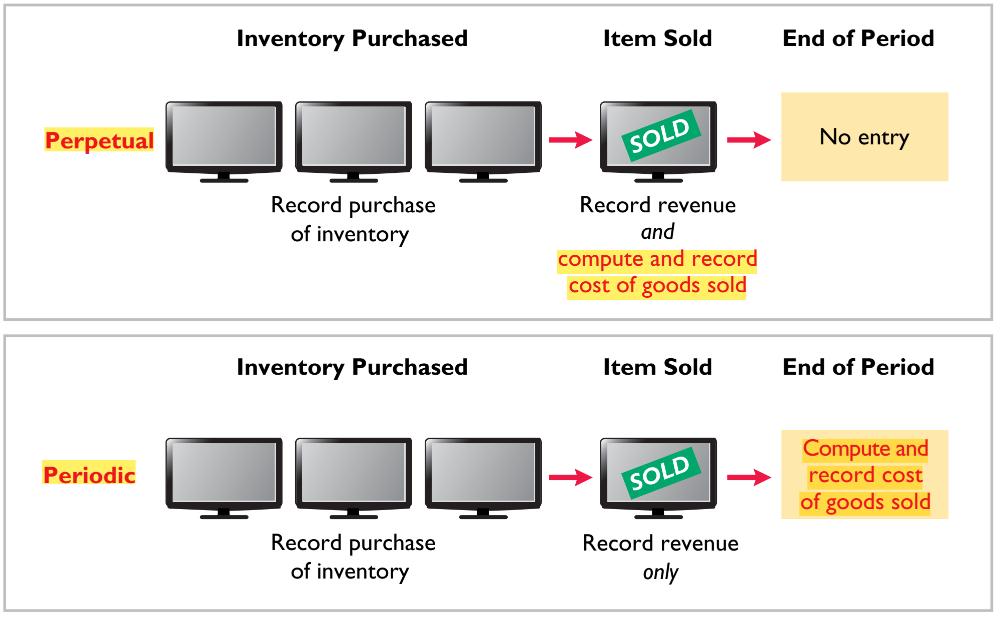
In a **periodic inventory system**, companies do not keep detailed inventory records of the goods on hand throughout the period. Instead, they determine the cost of goods sold **only at the end of the accounting period**—that is, periodically. At that point, the company takes a physical inventory count to determine the cost of goods on hand.

To determine the cost of goods sold under a periodic inventory system, the following steps are necessary:

1. Determine the cost of goods on hand at the beginning of the accounting period.
2. Add to it the cost of goods purchased.
3. Subtract the cost of goods on hand at the end of the accounting period.

Illustration 5-5 graphically compares the sequence of activities and the timing of the cost of goods sold computation under the two inventory systems.

Illustration 5-5
Comparing perpetual and periodic inventory systems



ADVANTAGES OF THE PERPETUAL SYSTEM

Companies that sell merchandise with high unit values, such as automobiles, furniture, and major home appliances, have traditionally used perpetual systems. The growing use of computers and electronic scanners has enabled many more companies to install perpetual inventory systems. The perpetual inventory system is so named because the accounting records continuously—perpetually—show the quantity and cost of the inventory that should be on hand at any time.

A perpetual inventory system provides better control over inventories than a periodic system. Since the inventory records show the quantities that should be on hand, the company can count the goods at any time to see whether the amount of goods actually on hand agrees with the inventory records. If shortages are uncovered, the company can investigate immediately. Although a perpetual inventory system requires both additional clerical work and expense to maintain the subsidiary records, a computerized system can minimize this cost.

Some businesses find it either unnecessary or uneconomical to invest in a computerized perpetual inventory system. Many small merchandising businesses find that basic accounting software provides some of the essential benefits of a perpetual inventory system. Also, managers of some small businesses still find that they can control their merchandise and manage day-to-day operations using a periodic inventory system.

Because of the widespread use of the perpetual inventory system, we illustrate it in this chapter. We discuss and illustrate the periodic system in Appendix 5B.

Investor Insight Snowboard Company Improves Its Share Appeal

© Ben Blankenburg/iStockphoto

Investors are often eager to invest in a company that has a hot new product. However, when a fast-growing snowboard-maker issued ordinary shares to the public for the first time, some investors expressed reluctance to invest in it because of a number of accounting control problems. To reduce investor concerns, the company implemented a perpetual inventory system to improve its control over inventory. In addition, the company stated that it would perform a physical inventory count every quarter until it felt that its perpetual inventory system was reliable.

Q If a perpetual system keeps track of inventory on a daily basis, why do companies ever need to do a physical count? (See page 272.)

> DO IT!

Merchandising Operations and Inventory Systems

Indicate whether the following statements are true or false.

1. The primary source of revenue for a merchandising company results from performing services for customers.
2. The operating cycle of a service company is usually shorter than that of a merchandising company.
3. Sales revenue less cost of goods sold equals gross profit.
4. Ending inventory plus the cost of goods purchased equals cost of goods available for sale.

Action Plan

✔ Review merchandising concepts.

✔ Understand the flow of costs in a merchandising company.

Solution

1. False. The primary source of revenue for a service company results from performing services for customers. 2. True. 3. True. 4. False. Beginning inventory plus the cost of goods purchased equals cost of goods available for sale.

Related exercise material: **BE5-1, E5-1, and DO IT! 5-1.**

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Recording Purchases of Merchandise

Learning Objective 2

Explain the recording of purchases under a perpetual inventory system.

Companies purchase inventory using cash or credit (on account). They normally record purchases when they receive the goods from the seller. Every purchase should be supported by business documents that provide written evidence of the transaction. Each cash purchase should be supported by a canceled check or a cash register receipt indicating the items purchased and amounts paid. Companies record cash purchases by an increase in Inventory and a decrease in Cash.

A **purchase invoice** should support each credit purchase. This invoice indicates the total purchase price and other relevant information. However, the purchaser does not prepare a separate purchase invoice. Instead, the purchaser uses as a purchase invoice a copy of the sales invoice sent by the seller. In Illustration 5-6, for example, Sauk Stereo (the buyer) uses as a purchase invoice the sales invoice prepared by PW Audio Supply, SE (the seller).

Illustration 5-6
Sales invoice used as purchase invoice by Sauk Stereo

INVOICE NO. 731

PW AUDIO SUPPLY, SE
27 CIRCLE DRIVE
AMSTERDAM, THE NETHERLANDS 1081

SOLD TO
Firm Name Sauk Stereo
Attention of James Hoover, Purchasing Agent
Address 125 Main Street
Oslo Norway 283

Date 5/4/17 | Salesperson Malone | Terms 2/10, n/30 | FOB Shipping Point

Catalog No.	Description	Quantity	Price	Amount
X572Y9820	Printed Circuit Board-prototype	1	2,300	€2,300
A2547Z45	Production Model Circuits	5	300	1,500
			TOTAL	€3,800

IMPORTANT: ALL RETURNS MUST BE MADE WITHIN 10 DAYS

• HELPFUL HINT
To better understand the contents of this invoice, identify these items:
1. Seller
2. Invoice date
3. Purchaser
4. Salesperson
5. Credit terms
6. Freight terms
7. Goods sold: catalog number, description, quantity, price per unit
8. Total invoice amount

Sauk Stereo makes the following journal entry to record its purchase from PW Audio Supply. The entry increases (debits) Inventory and increases (credits) Accounts Payable.

May 4	Inventory	3,800	
	Accounts Payable		3,800
	(To record goods purchased on account from PW Audio Supply)		

A = L + E
+3,800
+3,800
Cash Flows
no effect

Under the perpetual inventory system, companies record purchases of merchandise for sale in the Inventory account. Thus, Carrefour would increase (debit) Inventory for clothing, sporting goods, and anything else purchased for resale to customers.

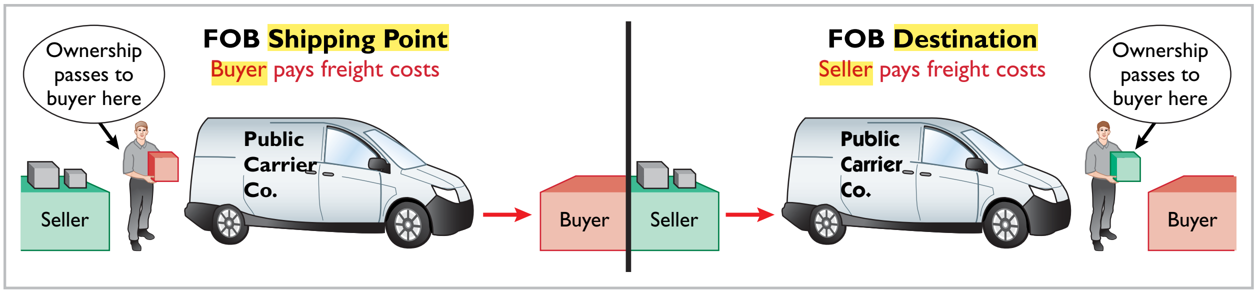
Not all purchases are debited to Inventory, however. Companies record purchases of assets acquired for use and not for resale, such as supplies, equipment, and similar items, as increases to specific asset accounts rather than to Inventory. For example, to record the purchase of materials used to make shelf signs or for cash register receipt paper, Carrefour would increase (debit) Supplies.

Freight Costs

The sales agreement should indicate who—the seller or the buyer—is to pay for transporting the goods to the buyer's place of business. When a common carrier such as a railroad, trucking company, or airline transports the goods, the carrier prepares a freight bill in accord with the sales agreement.

Freight terms are expressed as either FOB shipping point or FOB destination. The letters FOB mean **free on board**. Thus, **FOB shipping point** means that the seller places the goods free on board the carrier, and the buyer pays the freight costs. Conversely, **FOB destination** means that the seller places the goods free on board to the buyer's place of business, and the seller pays the freight. For example, the sales invoice in Illustration 5-6 indicates FOB shipping point. Thus, the buyer (Sauk Stereo) pays the freight charges. Illustration 5-7 illustrates these shipping terms.

Illustration 5-7
Shipping terms



FREIGHT COSTS INCURRED BY THE BUYER

When the buyer incurs the transportation costs, these costs are considered part of the cost of purchasing inventory. Therefore, the buyer debits (increases) the Inventory account. For example, if Sauk Stereo (the buyer) pays Acme Freight Company €150 for freight charges on May 6, the entry on Sauk Stereo's books is:

May 6	Inventory	150	
	Cash		150
	(To record payment of freight on goods purchased)		

A	=	L	+	E
+150				
−150				

Cash Flows
−150

Thus, any freight costs incurred by the buyer are part of the cost of merchandise purchased. The reason: Inventory cost should include all costs to acquire the inventory, including freight necessary to deliver the goods to the buyer. Companies recognize these costs as cost of goods sold when the inventory is sold.

FREIGHT COSTS INCURRED BY THE SELLER

In contrast, **freight costs incurred by the seller on outgoing merchandise are an operating expense to the seller**. These costs increase an expense account titled Freight-Out (sometimes called Delivery Expense). For example, if the freight terms on the invoice in Illustration 5-6 had required PW Audio Supply (the seller) to pay the freight charges, the entry by PW Audio Supply would be:

May 4	Freight-Out (or Delivery Expense)	150	
	Cash		150
	(To record payment of freight on goods sold)		

A	=	L	+	E
				−150 Exp
−150				

Cash Flows
−150

When the seller pays the freight charges, the seller will usually establish a higher invoice price for the goods to cover the shipping expense.

Purchase Returns and Allowances

A purchaser may be dissatisfied with the merchandise received because the goods are damaged or defective, of inferior quality, or do not meet the purchaser's specifications. In such cases, the purchaser may return the goods to the seller for credit if the sale was made on credit, or for a cash refund if the purchase was for cash. This transaction is known as a **purchase return**. Alternatively, the purchaser may choose to keep the merchandise if the seller is willing to grant an allowance (deduction) from the purchase price. This transaction is known as a **purchase allowance**.

Assume that Sauk Stereo returned goods costing €300 to PW Audio Supply on May 8. The following entry by Sauk Stereo for the returned merchandise decreases (debits) Accounts Payable and decreases (credits) Inventory.

A	=	L	+	E
		−300		
−300				

Cash Flows
no effect

May 8	Accounts Payable	300	
	Inventory		300
	(To record return of goods purchased from PW Audio Supply)		

Because Sauk Stereo increased Inventory when the goods were received, Inventory is decreased when Sauk Stereo returns the goods (or when it is granted an allowance).

Suppose instead that Sauk Stereo chose to keep the goods after being granted a €50 allowance (reduction in price). It would reduce (debit) Accounts Payable and reduce (credit) Inventory for €50.

Purchase Discounts

The credit terms of a purchase on account may permit the buyer to claim a cash discount for prompt payment. The buyer calls this cash discount a **purchase discount**. This incentive offers advantages to both parties: The purchaser saves money, and the seller is able to shorten the operating cycle by converting the accounts receivable into cash.

• HELPFUL HINT
The term *net* in "net 30" means the remaining amount due after subtracting any sales returns and allowances and partial payments.

Credit terms specify the amount of the cash discount and time period in which it is offered. They also indicate the time period in which the purchaser is expected to pay the full invoice price. In the sales invoice in Illustration 5-6 (page 224), credit terms are 2/10, n/30, which is read "two-ten, net thirty." This means that the buyer may take a 2% cash discount on the invoice price less ("net of") any returns or allowances, if payment is made within 10 days of the invoice date (the **discount period**). Otherwise, the invoice price, less any returns or allowances, is due 30 days from the invoice date.

Alternatively, the discount period may extend to a specified number of days following the month in which the sale occurs. For example, 1/10 EOM (end of month) means that a 1% discount is available if the invoice is paid within the first 10 days of the next month.

When the seller elects not to offer a cash discount for prompt payment, credit terms will specify only the maximum time period for paying the balance due. For example, the invoice may state the time period as n/30, n/60, or n/10 EOM. This means, respectively, that the buyer must pay the net amount in 30 days, 60 days, or within the first 10 days of the next month.

When the buyer pays an invoice within the discount period, the amount of the discount decreases Inventory. Why? Because companies record inventory at cost, and by paying within the discount period, the buyer has reduced its cost. To illustrate, assume Sauk Stereo pays the balance due of €3,500 (gross invoice price of €3,800 less purchase returns and allowances of €300) on May 14, the last day of the discount period. The cash discount is €70 (€3,500 × 2%), and Sauk Stereo pays €3,430 (€3,500 − €70). The entry Sauk Stereo makes to record its May 14 payment decreases (debits) Accounts Payable by the amount of the gross invoice price, reduces (credits) Inventory by the €70 discount, and reduces (credits) Cash by the net amount owed.

May 14	Accounts Payable	3,500	
	Cash		3,430
	Inventory		70
	(To record payment within discount period)		

A	=	L	+	E
		−3,500		
−3,430				
−70				

Cash Flows
−3,430

If Sauk Stereo failed to take the discount and instead made full payment of €3,500 on June 3, it would debit Accounts Payable and credit Cash for €3,500 each.

June 3	Accounts Payable	3,500	
	Cash		3,500
	(To record payment with no discount taken)		

A	=	L	+	E
		−3,500		
−3,500				

Cash Flows
−3,500

A merchandising company usually should take all available discounts. Passing up the discount may be viewed as **paying interest** for use of the money. For example, passing up the discount offered by PW Audio Supply would be comparable to Sauk Stereo paying an interest rate of 2% for the use of €3,500 for 20 days. This is the equivalent of an annual interest rate of approximately 36.5% (2% × 365/20). Obviously, it would be better for Sauk Stereo to borrow at prevailing bank interest rates of 6% to 10% than to lose the discount.

Summary of Purchasing Transactions

The following T-account (with transaction descriptions in red) provides a summary of the effect of the previous transactions on Inventory. Sauk Stereo originally purchased €3,800 worth of inventory for resale. It then returned €300 of goods. It paid €150 in freight charges, and finally, it received a €70 discount off the balance owed because it paid within the discount period. This results in a balance in Inventory of €3,580.

Inventory

Purchase	May 4	3,800	May 8	300	**Purchase return**
Freight-in	6	150	14	70	**Purchase discount**
Balance		3,580			

DO IT!

Purchase Transactions

On September 5, Zhū Company buys merchandise on account from Gāo Company. The selling price of the goods is ¥15,000, and the cost to Gāo Company was ¥8,000. On September 8, Zhū returns defective goods with a selling price of ¥2,000. Record the transactions on the books of Zhū Company.

Action Plan

✔ Purchaser records goods at cost.

✔ When goods are returned, purchaser reduces Inventory.

Solution

Sept. 5	Inventory	15,000	
	Accounts Payable		15,000
	(To record goods purchased on account)		
8	Accounts Payable	2,000	
	Inventory		2,000
	(To record return of defective goods)		

Related exercise material: BE5-2, BE5-4, E5-2, E5-3, E5-4, and DO IT! 5-2.

✔ The Navigator

Recording Sales of Merchandise

Learning Objective 3

Explain the recording of sales revenues under a perpetual inventory system.

In accordance with the revenue recognition principle, companies record sales revenue when the performance obligation is satisfied. Typically, the performance obligation is satisfied when the goods transfer from the seller to the buyer. At this point, the sales transaction is complete and the sales price established.

Sales may be made on credit or for cash. A **business document** should support every sales transaction, to provide written evidence of the sale. **Cash register documents** provide evidence of cash sales. A **sales invoice**, like the one shown in Illustration 5-6 (page 224), provides support for a credit sale. The original copy of the invoice goes to the customer, and the seller keeps a copy for use in recording the sale. The invoice shows the date of sale, customer name, total sales price, and other relevant information.

The seller makes two entries for each sale. **The first entry records the sale**: The seller increases (debits) Cash (or Accounts Receivable, if a credit sale), and also increases (credits) Sales Revenue. **The second entry records the cost of the merchandise sold**: The seller increases (debits) Cost of Goods Sold, and also decreases (credits) Inventory for the cost of those goods. As a result, the Inventory account will show at all times the amount of inventory that should be on hand.

To illustrate a credit sales transaction, PW Audio Supply records its May 4 sale of €3,800 to Sauk Stereo (see Illustration 5-6) as follows (assume the merchandise cost PW Audio Supply €2,400).

A	=	L	+	E
+3,800				
				+3,800 Rev

Cash Flows
no effect

May 4	Accounts Receivable	3,800	
	Sales Revenue		3,800
	(To record credit sale to Sauk Stereo per invoice #731)		

A	=	L	+	E
				−2,400 Exp
−2,400				

Cash Flows
no effect

4	Cost of Goods Sold	2,400	
	Inventory		2,400
	(To record cost of merchandise sold on invoice #731 to Sauk Stereo)		

For internal decision-making purposes, merchandising companies may use more than one sales account. For example, PW Audio Supply may decide to keep separate sales accounts for its sales of TVs, Blu-ray players, and headsets. Carrefour might use separate accounts for sporting goods, children's clothing, and hardware—or it might have even more narrowly defined accounts. By using separate sales accounts for major product lines, rather than a single combined sales account, company management can more closely monitor sales trends and respond more strategically to changes in sales patterns. For example, if TV sales are increasing while Blu-ray player sales are decreasing, PW Audio Supply might reevaluate both its advertising and pricing policies on these items to ensure they are optimal.

On its income statement presented to outside investors, a merchandising company normally would provide only a single sales figure—the sum of all of its individual sales accounts. This is done for two reasons. First, providing detail on all of its individual sales accounts would add considerable length to its income statement. Second, most companies do not want their competitors to know the details of their operating results. However, Microsoft (USA) at one point expanded its disclosure of revenue from three to five types. The reason: The additional categories will better enable financial statement users to evaluate the growth of the company's consumer and Internet businesses.

ANATOMY OF A FRAUD[1]

Holly Harmon was a cashier at a national superstore for only a short while when she began stealing merchandise using three methods. Under the first method, her husband or friends took UPC labels from cheaper items and put them on more expensive items. Holly then scanned the goods at the register. Using the second method, Holly scanned an item at the register but then voided the sale and left the merchandise in the shopping cart. A third approach was to put goods into large plastic containers. She scanned the plastic containers but not the goods within them. One day, Holly did not call in sick or show up for work. In such instances, the company reviews past surveillance tapes to look for suspicious activity by employees. This enabled the store to observe the thefts and to identify the participants.

Total take: $12,000

THE MISSING CONTROLS

Human resource controls. A background check would have revealed Holly's previous criminal record. She would not have been hired as a cashier.

Physical controls. Software can flag high numbers of voided transactions or a high number of sales of low-priced goods. Random comparisons of video records with cash register records can ensure that the goods reported as sold on the register are the same goods that are shown being purchased on the video recording. Finally, employees should be aware that they are being monitored.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 251–259.

At the end of "Anatomy of a Fraud" stories, which describe some recent real-world frauds, we discuss the missing control activities that would likely have prevented or uncovered the fraud.

Sales Returns and Allowances

We now look at the "flip side" of purchase returns and allowances, which the seller records as **sales returns and allowances**. These are transactions where the seller either accepts goods back from the buyer (a return) or grants a reduction in the purchase price (an allowance) so the buyer will keep the goods. PW Audio Supply's entries to record credit for returned goods involve (1) an increase (debit) in Sales Returns and Allowances (a contra account to Sales Revenue) and a decrease (credit) in Accounts Receivable at the €300 selling price, and (2) an increase (debit) in Inventory (assume a €140 cost) and a decrease (credit) in Cost of Goods Sold, as shown below (assuming that the goods were not defective).

May 8	Sales Returns and Allowances	300	
	Accounts Receivable		300
	(To record credit granted to Sauk Stereo for returned goods)		
8	Inventory	140	
	Cost of Goods Sold		140
	(To record cost of goods returned)		

A	=	L	+	E
				−300 Rev
−300				

Cash Flows
no effect

A	=	L	+	E
+140				
				+140 Exp

Cash Flows
no effect

If Sauk Stereo returns goods because they are damaged or defective, then PW Audio Supply's entry to Inventory and Cost of Goods Sold should be for the fair value of the returned goods, rather than their cost. For example, if the returned goods were defective and had a fair value of €50, PW Audio Supply would debit Inventory for €50, and would credit Cost of Goods Sold for €50.

[1]The "Anatomy of a Fraud" stories in this textbook are adapted from *Fraud Casebook: Lessons from the Bad Side of Business,* edited by Joseph T. Wells (Hoboken, NJ: John Wiley & Sons, Inc., 2007). Used by permission. The names of some of the people and organizations in the stories are fictitious, but the facts in the stories are true.

What happens if the goods are not returned but the seller grants the buyer an allowance by reducing the purchase price? In this case, the seller debits Sales Returns and Allowances and credits Accounts Receivable for the amount of the allowance. An allowance has no impact on Inventory or Cost of Goods Sold.

Sales Returns and Allowances is a **contra revenue account** to Sales Revenue. This means that it is offset against a revenue account on the income statement. The normal balance of Sales Returns and Allowances is a debit. Companies use a contra account, instead of debiting Sales Revenue, to disclose in the accounts and in the income statement the amount of sales returns and allowances. Disclosure of this information is important to management: Excessive returns and allowances may suggest problems—inferior merchandise, inefficiencies in filling orders, errors in billing customers, or delivery or shipment mistakes. Moreover, a decrease (debit) recorded directly to Sales Revenue would obscure the relative importance of sales returns and allowances as a percentage of sales. It also could distort comparisons between total sales in different accounting periods.

Accounting Across the Organization **Merchandiser's Accounting Causes Alarm**

Tesco (GBR)

© Julius Kielaitis/Shutterstock

Accounting for merchandising transactions is not always as easy as it might first appear. Recently, Tesco (GBR) announced that it had overstated profits by £263 million over a three-year period. The error related to how Tesco accounted for amounts received from suppliers for promotional activities of those companies' products. When a retailer runs advertisements promoting a particular product, the producer of that product shares part of the advertising cost. Typically, the producer pays the merchandiser its share of the advertising cost as much as a year before the advertisement is run. The questions become, how should these amounts be reported by the merchandiser at the time it receives the funds, and when should these amounts affect income? The scandal surrounding this accounting treatment was serious enough that it caused the company's chairman to resign, and an outside auditing firm was brought in to investigate. One analyst commentated that "we can never recall a period so damaging to the reputation of the company."

Source: Jenny Anderson, "Tesco Chairman to Step Down as Overstatement of Profit Grows," *The New York Times Online* (October 23, 2014).

Q Why would an error of this type be of concern to investors, and what steps did the company take to address these concerns? (See page 272.)

Sales Discounts

As mentioned in our discussion of purchase transactions, the seller may offer the customer a cash discount—called by the seller a **sales discount**—for the prompt payment of the balance due. Like a purchase discount, a sales discount is based on the invoice price less returns and allowances, if any. The seller increases (debits) the Sales Discounts account for discounts that are taken. For example, PW Audio Supply makes the following entry to record the cash receipt on May 14 from Sauk Stereo within the discount period.

A	=	L	+	E
+3,430				
				−70 Rev
−3,500				

Cash Flows
+3,430

May 14	Cash	3,430	
	Sales Discounts	70	
	Accounts Receivable		3,500
	(To record collection within 2/10, n/30 discount period from Sauk Stereo)		

Like Sales Returns and Allowances, Sales Discounts is a **contra revenue account** to Sales Revenue. Its normal balance is a debit. PW Audio Supply uses this account, instead of debiting Sales Revenue, to disclose the amount of cash discounts taken by customers. If Sauk Stereo does not take the discount, PW Audio Supply increases (debits) Cash for €3,500 and decreases (credits) Accounts Receivable for the same amount at the date of collection.

The following T-accounts summarize the three sales-related transactions and show their combined effect on net sales.

Sales Revenue		Sales Returns and Allowances		Sales Discounts	
	3,800	300		70	

Net Sales
€3,430

> DO IT!

Sales Transactions

On September 5, Zhū Company buys merchandise on account from Gāo Company. The selling price of the goods is ¥15,000, and the cost to Gāo Company was ¥8,000. On September 8, Zhū returns defective goods with a selling price of ¥2,000 and a fair value of ¥300. Record the transactions on the books of Gāo Company.

Solution

Sept. 5	Accounts Receivable	15,000	
	Sales Revenue		15,000
	(To record credit sale)		
5	Cost of Goods Sold	8,000	
	Inventory		8,000
	(To record cost of goods sold on account)		
8	Sales Returns and Allowances	2,000	
	Accounts Receivable		2,000
	(To record credit granted for receipt of returned goods)		
8	Inventory	300	
	Cost of Goods Sold		300
	(To record fair value of goods returned)		

Action Plan

✔ Seller records both the sale and the cost of goods sold at the time of the sale.

✔ When goods are returned, the seller records the return in a contra account, Sales Returns and Allowances, and reduces Accounts Receivable.

✔ Any goods returned increase Inventory and reduce Cost of Goods Sold. Defective or damaged inventory is recorded at fair value (scrap value).

Related exercise material: **BE5-2, BE5-3, E5-3, E5-4, E5-5, and DO IT! 5-3.**

✔ The Navigator

Completing the Accounting Cycle

Learning Objective 4
Explain the steps in the accounting cycle for a merchandising company.

Up to this point, we have illustrated the basic entries for transactions relating to purchases and sales in a perpetual inventory system. Now we consider the remaining steps in the accounting cycle for a merchandising company. Each of the required steps described in Chapter 4 for service companies apply to merchandising companies. Appendix 5A to this chapter shows the use of a worksheet by a merchandiser (an optional step).

Adjusting Entries

A merchandising company generally has the same types of adjusting entries as a service company. However, a merchandiser using a perpetual system will require one additional adjustment to make the records agree with the actual inventory on hand. Here's why: At the end of each period, for control purposes, a merchandising company that uses a perpetual system will take a physical count of its goods on hand. The company's unadjusted balance in Inventory usually does not agree with the actual amount of inventory on hand. The perpetual inventory records may be incorrect due to recording errors, theft, or waste. Thus, the company needs to adjust the perpetual records to make the recorded inventory amount agree with the inventory on hand. **This involves adjusting Inventory and Cost of Goods Sold.**

For example, suppose that PW Audio Supply, SE has an unadjusted balance of €40,500 in Inventory. Through a physical count, PW Audio Supply determines that its actual merchandise inventory at December 31 is €40,000. The company would make an adjusting entry as follows.

A	=	L	+	E
−500				−500 Exp

Cash Flows
no effect

Dec. 31	Cost of Goods Sold	500	
	Inventory		500
	(To adjust inventory to physical count)		

Closing Entries

A merchandising company, like a service company, closes to Income Summary all accounts that affect net income. In journalizing, the company credits all temporary accounts with debit balances, and debits all temporary accounts with credit balances, as shown below for PW Audio Supply. Note that PW Audio Supply closes Cost of Goods Sold to Income Summary.

• HELPFUL HINT
The easiest way to prepare the first two closing entries is to identify the temporary accounts by their balances and then prepare one entry for the credits and one for the debits.

Dec. 31	Sales Revenue	480,000	
	Income Summary		480,000
	(To close income statement accounts with credit balances)		
31	Income Summary	450,000	
	Cost of Goods Sold		316,000
	Salaries and Wages Expense		64,000
	Utilities Expense		17,000
	Advertising Expense		16,000
	Sales Returns and Allowances		12,000
	Sales Discounts		8,000
	Depreciation Expense		8,000
	Freight-Out		7,000
	Insurance Expense		2,000
	(To close income statement accounts with debit balances)		
31	Income Summary	30,000	
	Retained Earnings		30,000
	(To close net income to retained earnings)		
31	Retained Earnings	15,000	
	Dividends		15,000
	(To close dividends to retained earnings)		

After PW Audio Supply has posted the closing entries, all temporary accounts have zero balances. Also, Retained Earnings has a balance that is carried over to the next period.

Summary of Merchandising Entries

Illustration 5-8 summarizes the entries for the merchandising accounts using a perpetual inventory system.

Illustration 5-8
Daily recurring and adjusting and closing entries

	Transactions	Daily Recurring Entries	Dr.	Cr.
Sales Transactions	Selling merchandise to customers.	Cash or Accounts Receivable	XX	
		Sales Revenue		XX
		Cost of Goods Sold	XX	
		Inventory		XX
	Granting sales returns or allowances to customers.	Sales Returns and Allowances	XX	
		Cash or Accounts Receivable		XX
		Inventory	XX	
		Cost of Goods Sold		XX
	Paying freight costs on sales; FOB destination.	Freight-Out	XX	
		Cash		XX
	Receiving payment from customers within discount period	Cash	XX	
		Sales Discounts	XX	
		Accounts Receivable		XX
Purchase Transactions	Purchasing merchandise for resale.	Inventory	XX	
		Cash or Accounts Payable		XX
	Paying freight costs on merchandise purchased; FOB shipping point.	Inventory	XX	
		Cash		XX
	Receiving purchase returns or allowances from suppliers.	Cash or Accounts Payable	XX	
		Inventory		XX
	Paying suppliers within discount period.	Accounts Payable	XX	
		Inventory		XX
		Cash		XX
	Events	**Adjusting and Closing Entries**	**Dr.**	**Cr.**
	Adjust because book amount is higher than the inventory amount determined to be on hand.	Cost of Goods Sold	XX	
		Inventory		XX
	Closing temporary accounts with credit balances.	Sales Revenue	XX	
		Income Summary		XX
	Closing temporary accounts with debit balances.	Income Summary	XX	
		Sales Returns and Allowances		XX
		Sales Discounts		XX
		Cost of Goods Sold		XX
		Freight-Out		XX
		Expenses		XX

> DO IT!

Closing Entries

The trial balance of Celine's Sports Wear Shop at December 31 shows Inventory €25,000, Sales Revenue €162,400, Sales Returns and Allowances €4,800, Sales Discounts €3,600, Cost of Goods Sold €110,000, Rent Revenue €6,000, Freight-Out €1,800, Rent Expense €8,800, and Salaries and Wages Expense €22,000. Prepare the closing entries for the above accounts.

Action Plan

✔ Close all temporary accounts with credit balances to Income Summary by debiting these accounts.

✔ Close all temporary accounts with debit balances, except dividends, to Income Summary by crediting these accounts.

Solution

The two closing entries are:

Dec. 31	Sales Revenue	162,400	
	Rent Revenue	6,000	
	Income Summary		168,400
	(To close accounts with credit balances)		
31	Income Summary	151,000	
	Cost of Goods Sold		110,000
	Sales Returns and Allowances		4,800
	Sales Discounts		3,600
	Freight-Out		1,800
	Rent Expense		8,800
	Salaries and Wages Expense		22,000
	(To close accounts with debit balances)		

Related exercise material: **BE5-5, BE5-6, E5-6, E5-7, E5-8, and DO IT! 5-4.**

✔ The Navigator

Forms of Financial Statements

Learning Objective 5

Prepare an income statement for a merchandiser.

Merchandising companies widely use the classified statement of financial position introduced in Chapter 4. This section explains an income statement used by merchandisers.

Income Statement

The income statement is a primary source of information for evaluating a company's performance. The format is designed to differentiate between the various sources of income and expense.

INCOME STATEMENT PRESENTATION OF SALES

The income statement begins by presenting **sales revenue**. It then deducts contra revenue accounts—sales returns and allowances and sales discounts—from sales revenue to arrive at **net sales**. Illustration 5-9 presents the sales section for PW Audio Supply, using assumed data.

Illustration 5-9
Computation of net sales

PW AUDIO SUPPLY, SE
Income Statement (partial)

Sales		
Sales revenue		€ 480,000
Less: Sales returns and allowances	€12,000	
Sales discounts	8,000	20,000
Net sales		**€460,000**

This presentation discloses the key data about the company's principal revenue-producing activities.

GROSS PROFIT

From Illustration 5-1 (page 220), you learned that companies deduct cost of goods sold from sales revenue in order to determine **gross profit**. For this computation, companies use **net sales** (which takes into consideration Sales Returns and Allowances and Sales Discounts) as the amount of sales revenue. On the basis of the sales data in Illustration 5-9 (net sales of €460,000) and cost of goods sold under the perpetual inventory system (assume €316,000), PW Audio Supply's gross profit is €144,000, computed as follows.

Illustration 5-10
Computation of gross profit

Net sales	€ 460,000
Cost of goods sold	316,000
Gross profit	**€144,000**

We also can express a company's gross profit as a percentage, called the **gross profit rate**. To do so, we divide the amount of gross profit by net sales. For PW Audio Supply, the **gross profit rate** is 31.3%, computed as follows.

Illustration 5-11
Gross profit rate formula and computation

Gross Profit	÷	Net Sales	=	Gross Profit Rate
€144,000	÷	€460,000	=	31.3%

Analysts generally consider the gross profit **rate** to be more useful than the gross profit **amount**. The rate expresses a more meaningful (qualitative) relationship between net sales and gross profit. For example, a gross profit of €1,000,000 may sound impressive. But if it is the result of a gross profit rate of only 7% when others in the industry get 20%, it is not so impressive. The gross profit rate tells how much of each euro of sales go to gross profit.

Gross profit represents the **merchandising profit** of a company. It is not a measure of the overall profitability, because operating expenses are not yet deducted. But managers and other interested parties closely watch the amount and trend of gross profit. They compare current gross profit with amounts reported in past periods. They also compare the company's gross profit rate with rates of competitors and with industry averages. Such comparisons provide information about the effectiveness of a company's purchasing function and the soundness of its pricing policies.

OPERATING EXPENSES

Operating expenses are the next component in the income statement of a merchandising company. They are the expenses incurred in the process of earning sales revenue. Many of these expenses are similar in merchandising and service companies. At PW Audio Supply, operating expenses were €114,000. This €114,000 includes costs that were incurred for salaries, utilities, advertising, depreciation, freight-out, and insurance. The presentation of operating expenses is shown in Illustration 5-12.

Illustration 5-12
Operating expenses

Operating expenses	
Salaries and wages expense	€ 64,000
Utilities expense	17,000
Advertising expense	16,000
Depreciation expense	8,000
Freight-out	7,000
Insurance expense	2,000
Total operating expenses	€114,000

Illustration 5-12 provides an opportunity to discuss two different presentation formats allowed by IFRS: **presentation by nature** and **presentation by function**. Presentation by nature provides very detailed information, with numerous line items, that reveal the nature of costs incurred by the company. In Illustration 5-12, the detailed information regarding costs incurred for salaries and wages, utilities, advertising, depreciation, freight-out, and insurance demonstrates presentation by nature.

Presentation by function aggregates costs into groupings based on the primary functional activities in which the company engages. For example, at PW Audio Supply, operating expenses are those costs incurred to perform the operating functions of a merchandising business. If PW Audio Supply chose to present strictly by function, it would present its operating expenses as a single line item of €114,000. However, if a presentation by function is used, IFRS requires disclosure of additional details regarding the nature of certain expenses that were included in the functional grouping. For example, depreciation and salary and wage costs are items specifically required to be disclosed.

Illustration 5-12 combines both a presentation by function and by nature to present operating expenses. It uses a functional grouping of operating expenses but also presents in detail the nature of the costs included in that functional grouping. *In your homework, you should use this approach*.

OTHER INCOME AND EXPENSE

Other income and expense consists of various revenues and gains and expenses and losses that are unrelated to the company's main line of operations. Illustration 5-13 lists examples of each.

Illustration 5-13
Examples of other income and expense

Other Income
Interest revenue from notes receivable and marketable securities.
Dividend revenue from investments in ordinary shares.
Rent revenue from subleasing a portion of the store.
Gain from the sale of property, plant, and equipment.
Other Expense
Casualty losses from such causes as vandalism and accidents.
Loss from the sale or abandonment of property, plant, and equipment.
Loss from strikes by employees and suppliers.

Merchandising companies report other income and expense in the income statement immediately after the company's primary operating activities. Illustration 5-14 shows this presentation for PW Audio Supply.

INTEREST EXPENSE

Financing activities, which result in interest expense, represent distinctly different types of cost to a business. In evaluating the performance of a business, it is important to monitor its interest expense. As a consequence, interest expense, if material, must be disclosed on the face of the income statement. PW Audio Supply incurred interest expense of €1,800. Illustration 5-14 presents a complete income statement for PW Audio Supply. *Use this format when preparing your homework*.

Illustration 5-14
Income statement

PW AUDIO SUPPLY, SE Income Statement For the Year Ended December 31, 2017		
Sales		
Sales revenue		€480,000
Less: Sales returns and allowances	€12,000	
Sales discounts	8,000	20,000
Net sales		460,000
Cost of goods sold		316,000
Gross profit		144,000
Operating expenses		
Salaries and wages expense	64,000	
Utilities expense	17,000	
Advertising expense	16,000	
Depreciation expense	8,000	
Freight-out	7,000	
Insurance expense	2,000	
Total operating expenses		114,000
Income from operations		30,000
Other income and expense		
Interest revenue	3,000	
Gain on sale of equipment	600	
Casualty loss from vandalism	(200)	3,400
Interest expense		1,800
Net income		€ 31,600

COMPREHENSIVE INCOME

Chapter 1 discussed the fair value principle. IFRS requires companies to mark the recorded values of certain types of assets and liabilities to their fair values at the end of each reporting period. In some instances, the unrealized gains or losses that result from adjusting recorded amounts to fair value are included in net income. However, in other cases, these unrealized gains and losses are not included in net income. Instead, these excluded items are reported as part of a more inclusive earnings measure, called **comprehensive income**. Examples of such items include certain adjustments to pension plan assets, gains and losses on foreign currency translation, and unrealized gains and losses on certain types of investments. As shown in Chapter 1, items that are excluded from net income but included in comprehensive income are either reported in a combined statement of net income and comprehensive income, or in a separate schedule that reports only comprehensive income. Illustration 5-15 shows how comprehensive income is presented in a separate comprehensive income statement. *Use this format when preparing your homework*.

Illustration 5-15
Separate statement of net income and comprehensive income

PW AUDIO SUPPLY, SE Comprehensive Income Statement For the Year Ended December 31, 2017	
Net income	€31,600
Other comprehensive income	
Unrealized holding gain on investment securities	2,300
Comprehensive income	€33,900

Accounting Across the Organization **Online Sales Stall in India**

Flipkart (IND)

© pheonix3d/iStockphoto

India is well known for its large pool of excellent software engineers. Therefore, it may come as a surprise that online merchandise sales are only starting to take hold in this country. The reason for the delay compared to many other countries is that, until recently, consistent Internet access was limited to a small portion of the Indian population. But, experts predict that by 2015 up to 200 million Indians will have Internet access. To take advantage of this, two software engineers started the online merchandising company Flipkart (IND). Their goal is "to be the Amazon.com of India." Sales hit $20 million in a recent year, but the company faces many barriers to both growth and profitability. First, few Indians have credit cards, so many transactions must be done in cash. And, while the company has a book catalog of over 100 million titles, it is very difficult to deliver those books (or anything else) over India's poorly maintained roads. As a consequence, even if Internet access improves rapidly, online merchandisers need to see improvements in the banking and transportation systems in India for sales to really take off.

Source: Amol Sharma, "Dot-Coms Begin to Blossom in India," *Wall Street Journal* (April 12, 2011).

Q What implications do the lack of customer credit cards and the limited transportation system have for Flipkart's profitability? (See page 273.)

Inventory Presentation in the Classified Statement of Financial Position

In the statement of financial position, merchandising companies report inventory as a current asset immediately above accounts receivable. Recall from Chapter 4 that companies generally list current asset items in the reverse order of their closeness to cash (liquidity). Inventory is less close to cash than accounts receivable because the goods must first be sold and then collection made from the customer. Illustration 5-16 presents the assets section of a classified statement of financial position for PW Audio Supply.

Illustration 5-16
Assets section of a classified statement of financial position

PW AUDIO SUPPLY, SE
Statement of Financial Position (Partial)
December 31, 2017

Assets		
Property, plant, and equipment		
Equipment	€80,000	
Less: Accumulated depreciation—equipment	24,000	€ 56,000
Current assets		
Prepaid insurance	1,800	
Inventory	40,000	
Accounts receivable	16,100	
Cash	9,500	67,400
Total assets		€123,400

• HELPFUL HINT
The €40,000 is the cost of the inventory on hand, not its expected selling price.

> DO IT!

Financial Statement Classifications

You are presented with the following list of accounts from the adjusted trial balance for merchandiser Gorman Company. Indicate in which financial statement (income statement, IS; statement of financial position, SFP; or retained earnings statement, RES) and under what classification each of the following would be reported.

Accounts Payable	Interest Expense
Accounts Receivable	Interest Payable
Accumulated Depreciation—Buildings	Inventory
Accumulated Depreciation—Equipment	Land
Advertising Expense	Notes Payable (due in 3 years)
Buildings	Property Taxes Payable
Cash	Salaries and Wages Expense
Depreciation Expense	Salaries and Wages Payable
Dividends	Sales Returns and Allowances
Equipment	Sales Revenue
Freight-Out	Share Capital—Ordinary
Gain on Disposal of Plant Assets	Utilities Expense
Insurance Expense	

Action Plan

✔ Review the major sections of the income statement: sales, cost of goods sold, operating expenses, other income and expense, and interest expense.

✔ Add net income to beginning retained earnings and deduct dividends to arrive at ending retained earnings in the retained earnings statement.

✔ Review the major sections of the statement of financial position, income statement, and retained earnings statement.

Solution

Account	Financial Statement	Classification
Accounts Payable	SFP	Current liabilities
Accounts Receivable	SFP	Current assets
Accumulated Depreciation—Buildings	SFP	Property, plant, and equipment
Accumulated Depreciation—Equipment	SFP	Property, plant, and equipment
Advertising Expense	IS	Operating expenses
Buildings	SFP	Property, plant, and equipment
Cash	SFP	Current assets
Depreciation Expense	IS	Operating expenses
Dividends	RES	Deduction section
Equipment	SFP	Property, plant, and equipment
Freight-Out	IS	Operating expenses
Gain on Disposal of Plant Assets	IS	Other income and expense
Insurance Expense	IS	Operating expenses
Interest Expense	IS	Interest expense
Interest Payable	SFP	Current liabilities
Inventory	SFP	Current assets
Land	SFP	Property, plant, and equipment
Notes Payable	SFP	Non-current liabilities
Property Taxes Payable	SFP	Current liabilities
Salaries and Wages Expense	IS	Operating expenses
Salaries and Wages Payable	SFP	Current liabilities
Sales Returns and Allowances	IS	Sales
Sales Revenue	IS	Sales
Share Capital—Ordinary	SFP	Equity
Utilities Expense	IS	Operating expenses

Related exercise material: **BE5-7, BE5-8, BE5-9, E5-9, E5-10, E5-12, E5-13, E5-14, and DO IT! 5-5.**

✔ The Navigator

APPENDIX 5A Worksheet for a Merchandising Company

Learning Objective *6

Prepare a worksheet for a merchandising company.

Using a Worksheet

As indicated in Chapter 4, a worksheet enables companies to prepare financial statements before they journalize and post adjusting entries. The steps in preparing a worksheet for a merchandising company are the same as for a service company (see pages 162–165). Illustration 5A-1 shows the worksheet for PW Audio Supply (excluding non-operating items). The unique accounts for a merchandiser using a perpetual inventory system are shown in capital red letters. This worksheet assumes that the company did not have comprehensive income.

Illustration 5A-1
Worksheet for merchandising company

PW Audio Supply.xls

Home Insert Page Layout Formulas Data Review View

P18 fx

PW AUDIO SUPPLY, SE
Worksheet
For the Year Ended December 31, 2017

	A	B	C	D	E	F	G	H	I	J	K
5–6		Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Statement of Financial Position	
7	Accounts	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
8	Cash	9,500				9,500				9,500	
9	Accounts Receivable	16,100				16,100				16,100	
10	INVENTORY	40,500			(a) 500	40,000				40,000	
11	Prepaid Insurance	3,800			(b) 2,000	1,800				1,800	
12	Equipment	80,000				80,000				80,000	
13	Accumulated Depreciation—Equipment		16,000		(c) 8,000		24,000				24,000
14	Accounts Payable		20,400				20,400				20,400
15	Share Capital—Ordinary		50,000				50,000				50,000
16	Retained Earnings		33,000				33,000				33,000
17	Dividends	15,000				15,000				15,000	
18	SALES REVENUE		480,000				480,000		480,000		
19	SALES RETURNS AND ALLOWANCES	12,000				12,000		12,000			
20	SALES DISCOUNTS	8,000				8,000		8,000			
21	COST OF GOODS SOLD	315,500		(a) 500		316,000		316,000			
22	Freight-Out	7,000				7,000		7,000			
23	Advertising Expense	16,000				16,000		16,000			
24	Salaries and Wages Expense	59,000		(d) 5,000		64,000		64,000			
25	Utilities Expense	17,000				17,000		17,000			
26	Totals	599,400	599,400								
27	Insurance Expense			(b) 2,000		2,000		2,000			
28	Depreciation Expense			(c) 8,000		8,000		8,000			
29	Salaries and Wages Payable				(d) 5,000		5,000				5,000
30	Totals			15,500	15,500	612,400	612,400	450,000	480,000	162,400	132,400
31	Net Income							30,000			30,000
32	Totals							480,000	480,000	162,400	162,400
33											

Key: (a) Adjustment to inventory on hand. (b) Insurance expired. (c) Depreciation expense.
(d) Salaries and wages accrued.

TRIAL BALANCE COLUMNS

Data for the trial balance come from the ledger balances of PW Audio Supply at December 31. The amount shown for Inventory, €40,500, is the year-end inventory amount from the perpetual inventory system.

ADJUSTMENTS COLUMNS

A merchandising company generally has the same types of adjustments as a service company. As you see in the worksheet, adjustments (b), (c), and (d) are for insurance, depreciation, and salaries and wages. Yazici Advertising A.Ş., as illustrated in Chapters 3 and 4, also had these adjustments. Adjustment (a) was required to adjust the perpetual inventory carrying amount to the actual count.

After PW Audio Supply enters all adjustments data on the worksheet, it establishes the equality of the adjustments column totals. It then extends the balances in all accounts to the adjusted trial balance columns.

ADJUSTED TRIAL BALANCE

The adjusted trial balance shows the balance of all accounts after adjustment at the end of the accounting period.

INCOME STATEMENT COLUMNS

Next, the merchandising company transfers the accounts and balances that affect the income statement from the adjusted trial balance columns to the income statement columns. PW Audio Supply shows sales of €480,000 in the credit column. It shows the contra revenue accounts Sales Returns and Allowances €12,000 and Sales Discounts €8,000 in the debit column. The difference of €460,000 is the net sales shown on the income statement (Illustration 5-14, page 237).

Finally, the company totals all the credits in the income statement column and compares those totals to the total of the debits in the income statement column. If the credits exceed the debits, the company has net income. PW Audio Supply has net income of €30,000. If the debits exceed the credits, the company would report a net loss.

STATEMENT OF FINANCIAL POSITION COLUMNS

The major difference between the statements of financial position of a service company and a merchandiser is inventory. PW Audio Supply shows the ending inventory amount of €40,000 in the statement of financial position debit column. The information to prepare the retained earnings statement is also found in these columns. That is, the retained earnings beginning balance is €33,000. Dividends are €15,000. Net income results when the total of the debit column exceeds the total of the credit column in the statement of financial position columns. A net loss results when the total of the credits exceeds the total of the debit balances.

APPENDIX 5B Periodic Inventory System

Learning Objective *7

Explain the recording of purchases and sales of inventory under a periodic inventory system.

As described in this chapter, companies may use one of two basic systems of accounting for inventories: (1) the perpetual inventory system or (2) the periodic inventory system. In the chapter, we focused on the characteristics of the perpetual inventory system. In this appendix, we discuss and illustrate the **periodic inventory system**. One key difference between the two systems is the point at which the company computes cost of goods sold. For a visual reminder of this difference, refer back to Illustration 5-5 (on page 222).

Determining Cost of Goods Sold Under a Periodic System

Determining cost of goods sold is different when a periodic inventory system is used rather than a perpetual system. As you have seen, a company using a

perpetual system makes an entry to record cost of goods sold and to reduce inventory each time a sale is made. A company using a **periodic system** does not determine cost of goods sold until the end of the period. At the end of the period the company performs a count to determine the ending balance of inventory. It then **calculates cost of goods sold by subtracting ending inventory from the cost of goods available for sale**. Goods available for sale is the sum of beginning inventory plus cost of goods purchased, as shown in Illustration 5B-1.

Illustration 5B-1
Basic formula for cost of goods sold using the periodic system

	Beginning Inventory
+	Cost of Goods Purchased
	Cost of Goods Available for Sale
−	Ending Inventory
	Cost of Goods Sold

Another difference between the two approaches is that the perpetual system directly adjusts the Inventory account for any transaction that affects inventory (such as freight costs, returns, and discounts). The periodic system does not do this. Instead, it creates different accounts for purchases, freight costs, returns, and discounts. These various accounts are shown in Illustration 5B-2, which presents the calculation of cost of goods sold for PW Audio Supply using the periodic approach.

Illustration 5B-2
Cost of goods sold for a merchandiser using a periodic inventory system

PW AUDIO SUPPLY, SE
Cost of Goods Sold
For the Year Ended December 31, 2017

Cost of goods sold			
Inventory, January 1			**€ 36,000**
Purchases		€325,000	
Less: Purchase returns and allowances	€10,400		
Purchase discounts	6,800	17,200	
Net purchases		307,800	
Add: Freight-in		12,200	
Cost of goods purchased			**320,000**
Cost of goods available for sale			**356,000**
Less: Inventory, December 31			**40,000**
Cost of goods sold			**€316,000**

• HELPFUL HINT
The far right column identifies the primary items that make up cost of goods sold of €316,000. The middle column explains cost of goods purchased of €320,000. The left column reports contra purchase items of €17,200.

Note that the basic elements from Illustration 5B-1 are highlighted in Illustration 5B-2. You will learn more in Chapter 6 about how to determine cost of goods sold using the periodic system.

The use of the periodic inventory system does not affect the form of presentation in the statement of financial position. As under the perpetual system, a company reports inventory in the current assets section.

Recording Merchandise Transactions

In a **periodic inventory system**, companies record revenues from the sale of merchandise when sales are made, just as in a perpetual system. Unlike the perpetual system, however, companies **do not attempt on the date of sale to record the cost of the merchandise sold**. Instead, they take a physical inventory count at the **end of the period** to determine (1) the cost of the merchandise then on hand and (2) the cost of the goods sold during the period. And, **under a periodic system, companies record purchases of merchandise in the Purchases**

account rather than the Inventory account. Also, in a periodic system, purchase returns and allowances, purchase discounts, and freight costs on purchases are recorded in separate accounts.

To illustrate the recording of merchandise transactions under a periodic inventory system, we will use purchase/sales transactions between PW Audio Supply, SE and Sauk Stereo, as illustrated for the perpetual inventory system in this chapter.

Recording Purchases of Merchandise

On the basis of the sales invoice (Illustration 5-6, shown on page 224) and receipt of the merchandise ordered from PW Audio Supply, Sauk Stereo records the €3,800 purchase as follows.

• **HELPFUL HINT**
Be careful not to debit purchases of equipment or supplies to a Purchases account.

May 4	Purchases	3,800	
	Accounts Payable		3,800
	(To record goods purchased on account from PW Audio Supply)		

Purchases is a temporary account whose normal balance is a debit.

FREIGHT COSTS

When the purchaser directly incurs the freight costs, it debits the account Freight-In (or Transportation-In). For example, if Sauk Stereo pays Acme Freight Company €150 for freight charges on its purchase from PW Audio Supply on May 6, the entry on Sauk Stereo's books is:

• **Alternative Terminology**
Freight-in is also called *transportation-in*.

May 6	Freight-In (Transportation-In)	150	
	Cash		150
	(To record payment of freight on goods purchased)		

Like Purchases, Freight-In is a temporary account whose normal balance is a debit. **Freight-In is part of cost of goods purchased.** The reason is that cost of goods purchased should include any freight charges necessary to bring the goods to the purchaser. Freight costs are not subject to a purchase discount. Purchase discounts apply only to the invoice cost of the merchandise.

PURCHASE RETURNS AND ALLOWANCES

Sauk Stereo returns €300 of goods to PW Audio Supply and prepares the following entry to recognize the return.

May 8	Accounts Payable	300	
	Purchase Returns and Allowances		300
	(To record return of goods purchased from PW Audio Supply)		

Purchase Returns and Allowances is a temporary account whose normal balance is a credit.

PURCHASE DISCOUNTS

On May 14, Sauk Stereo pays the balance due on account to PW Audio Supply, taking the 2% cash discount allowed by PW Audio Supply for payment within 10 days. Sauk Stereo records the payment and discount as follows.

May 14	Accounts Payable (€3,800 – €300)	3,500	
	Purchase Discounts (€3,500 × .02)		70
	Cash		3,430
	(To record payment within the discount period)		

Purchase Discounts is a temporary account whose normal balance is a credit.

Recording Sales of Merchandise

The seller, PW Audio Supply, records the sale of €3,800 of merchandise to Sauk Stereo on May 4 (sales invoice No. 731, Illustration 5-6, page 224) as follows.

May 4	Accounts Receivable	3,800	
	Sales Revenue		3,800
	(To record credit sales per invoice #731 to Sauk Stereo)		

SALES RETURNS AND ALLOWANCES

To record the returned goods received from Sauk Stereo on May 8, PW Audio Supply records the €300 sales return as follows.

May 8	Sales Returns and Allowances	300	
	Accounts Receivable		300
	(To record credit granted to Sauk Stereo for returned goods)		

SALES DISCOUNTS

On May 14, PW Audio Supply receives payment of €3,430 on account from Sauk Stereo. PW Audio Supply honors the 2% cash discount and records the payment of Sauk Stereo's account receivable in full as follows.

May 14	Cash	3,430	
	Sales Discounts (€3,500 × .02)	70	
	Accounts Receivable (€3,800 − €300)		3,500
	(To record collection within 2/10, n/30 discount period from Sauk Stereo)		

COMPARISON OF ENTRIES—PERPETUAL VS. PERIODIC

Illustration 5B-3 summarizes the periodic inventory entries shown in this appendix and compares them to the perpetual-system entries from the chapter. Entries that differ in the two systems are shown in color.

Journalizing and Posting Closing Entries

For a merchandising company, like a service company, all accounts that affect the determination of net income are closed to Income Summary. Data for the preparation of closing entries may be obtained from the income statement columns of the worksheet. In journalizing, all debit column amounts are credited, and all credit columns amounts are debited. To close the merchandise inventory in a periodic inventory system:

1. The beginning inventory balance is debited to Income Summary and credited to Inventory.
2. The ending inventory balance is debited to Inventory and credited to Income Summary.

The two entries for PW Audio Supply are as follows.

(1)

Dec. 31	Income Summary	36,000	
	Inventory		36,000
	(To close beginning inventory)		

(2)

31	Inventory	40,000	
	Income Summary		40,000
	(To record ending inventory)		

ENTRIES ON SAUK STEREO'S BOOKS

Transaction		Perpetual Inventory System			Periodic Inventory System		
May 4	Purchase of merchandise on credit.	**Inventory**	**3,800**		**Purchases**	**3,800**	
		Accounts Payable		3,800	Accounts Payable		3,800
6	Freight costs on purchases.	**Inventory**	**150**		**Freight-In**	**150**	
		Cash		150	Cash		150
8	Purchase returns and allowances.	Accounts Payable	300		Accounts Payable	300	
		Inventory		**300**	**Purchase Returns and Allowances**		**300**
14	Payment on account with a discount.	Accounts Payable	3,500		Accounts Payable	3,500	
		Cash		3,430	Cash		3,430
		Inventory		**70**	**Purchase Discounts**		**70**

ENTRIES ON PW AUDIO SUPPLY'S BOOKS

Transaction		Perpetual Inventory System			Periodic Inventory System		
May 4	Sale of merchandise on credit.	Accounts Receivable	3,800		Accounts Receivable	3,800	
		Sales Revenue		3,800	Sales Revenue		3,800
		Cost of Goods Sold	**2,400**		**No entry for cost of goods sold**		
		Inventory		**2,400**			
8	Return of merchandise sold.	Sales Returns and Allowances	300		Sales Returns and Allowances	300	
		Accounts Receivable		300	Accounts Receivable		300
		Inventory	**140**		**No entry**		
		Cost of Goods Sold		**140**			
14	Cash received on account with a discount.	Cash	3,430		Cash	3,430	
		Sales Discounts	70		Sales Discounts	70	
		Accounts Receivable		3,500	Accounts Receivable		3,500

Illustration 5B-3
Comparison of entries for perpetual and periodic inventory systems

After posting, the Inventory and Income Summary accounts will show the following.

Illustration 5B-4
Posting closing entries for merchandise inventory

Inventory

1/1 Bal. 36,000	12/31 Close **36,000**
12/31 Close **40,000**	
12/31 Bal. 40,000	

Income Summary

12/31 Close **36,000**	12/31 Close **40,000**

Often, the closing of Inventory is included with other closing entries, as shown on the next page for PW Audio Supply. (*Close Inventory with other accounts in homework problems unless stated otherwise*.)

Date	Account	Debit	Credit
Dec. 31	**Inventory (Dec. 31)**	**40,000**	
	Sales Revenue	480,000	
	Purchase Returns and Allowances	10,400	
	Purchase Discounts	6,800	
	Income Summary		537,200
	(To record ending inventory and close accounts with credit balances)		
31	Income Summary	507,200	
	Inventory (Jan. 1)		**36,000**
	Sales Returns and Allowances		12,000
	Sales Discounts		8,000

• HELPFUL HINT
Except for merchandise inventory, the easiest way to prepare the first two closing entries is to identify the temporary accounts by their balances and then prepare one entry for the credits and one for the debits.

31	Purchases		325,000
	Freight-In		12,200
	Salaries and Wages Expense		64,000
	Freight-Out		7,000
	Advertising Expense		16,000
	Utilities Expense		17,000
	Depreciation Expense		8,000
	Insurance Expense		2,000
	(To close beginning inventory and other income statement accounts with debit balances)		
31	Income Summary	30,000	
	Retained Earnings		30,000
	(To transfer net income to retained earnings)		
31	Retained Earnings	15,000	
	Dividends		15,000
	(To close dividends to retained earnings)		

After the closing entries are posted, all temporary accounts have zero balances. In addition, Retained Earnings has a credit balance of €48,000: Beginning balance + Net income − Dividends (€33,000 + €30,000 − €15,000).

Using a Worksheet

As indicated in Chapter 4, a worksheet enables companies to prepare financial statements before journalizing and posting adjusting entries. The steps in preparing a worksheet for a merchandising company are the same as they are for a service company (see pages 162–165).

TRIAL BALANCE COLUMNS

Data for the trial balance come from the ledger balances of PW Audio Supply at December 31. The amount shown for Inventory, €36,000, is the beginning inventory amount from the periodic inventory system.

ADJUSTMENTS COLUMNS

A merchandising company generally has the same types of adjustments as a service company. As you see in the worksheet in Illustration 5B-5, adjustments (a), (b), and (c) are for insurance, depreciation, and salaries and wages. These adjustments were also required for Yazici Advertising A.Ş., as illustrated in Chapters 3 and 4. The unique accounts for a merchandiser using a **periodic inventory system** are shown in capital red letters. Note, however, that the worksheet excludes non-operating items.

After all adjustment data are entered on the worksheet, the equality of the adjustment column totals is established. The balances in all accounts are then extended to the adjusted trial balance columns.

INCOME STATEMENT COLUMNS

Next, PW Audio Supply transfers the accounts and balances that affect the income statement from the adjusted trial balance columns to the income statement columns. The company shows Sales Revenue of €480,000 in the credit column. It shows the contra revenue accounts, Sales Returns and Allowances of €12,000 and Sales Discounts of €8,000, in the debit column. The difference of €460,000 is the net sales shown on the income statement (Illustration 5-9, page 234). Similarly, Purchases of €325,000 and Freight-In of €12,200 are extended to the debit column. The contra purchase accounts, Purchase Returns and Allowances of €10,400 and Purchase Discounts of €6,800, are extended to the credit columns.

PW Audio Supply.xls

Home | Insert | Page Layout | Formulas | Data | Review | View

P18 *fx*

PW AUDIO SUPPLY, SE
Worksheet
For the Year Ended December 31, 2017

	A	B	C	D	E	F	G	H	I	J	K
5–6		Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Statement of Financial Position	
7	Accounts	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
8	Cash	9,500				9,500				9,500	
9	Accounts Receivable	16,100				16,100				16,100	
10	INVENTORY	36,000				36,000		36,000	40,000	40,000	
11	Prepaid Insurance	3,800			(a) 2,000	1,800				1,800	
12	Equipment	80,000				80,000				80,000	
13	Accumulated Depreciation—Equipment		16,000		(b) 8,000		24,000				24,000
14	Accounts Payable		20,400				20,400				20,400
15	Share Capital—Ordinary		50,000				50,000				50,000
16	Retained Earnings		33,000				33,000				33,000
17	Dividends	15,000				15,000				15,000	
18	SALES REVENUE		480,000				480,000		480,000		
19	SALES RETURNS AND ALLOWANCES	12,000				12,000		12,000			
20	SALES DISCOUNTS	8,000				8,000		8,000			
21	PURCHASES	325,000				325,000		325,000			
22	PURCHASE RETURNS AND ALLOWANCES		10,400				10,400		10,400		
23	PURCHASE DISCOUNTS		6,800				6,800		6,800		
24	FREIGHT-IN	12,200				12,200		12,200			
25	Freight-Out	7,000				7,000		7,000			
26	Advertising Expense	16,000				16,000		16,000			
27	Salaries and Wages Expense	59,000		(c) 5,000		64,000		64,000			
28	Utilities Expense	17,000				17,000		17,000			
29	Totals	616,600	616,600								
30	Insurance Expense			(a) 2,000		2,000		2,000			
31	Depreciation Expense			(b) 8,000		8,000		8,000			
32	Salaries and Wages Payable				(c) 5,000		5,000				5,000
33	Totals			15,000	15,000	629,600	629,600	507,200	537,200	162,400	132,400
34	Net Income							30,000			30,000
35	Totals							537,200	537,200	162,400	162,400
36											
37											

Key: (a) Insurance expired. (b) Depreciation expense. (c) Salaries and wages accrued.

Illustration 5B-5
Worksheet for merchandising company—periodic inventory system

The worksheet procedures for the Inventory account merit specific comment:

1. The beginning balance, €36,000, is extended from the adjusted trial balance column to the **income statement debit column**. From there, it can be added in reporting cost of goods available for sale in the income statement.
2. The ending inventory, €40,000, is added to the worksheet by an **income statement credit and a statement of financial position debit**. The credit makes it possible to deduct ending inventory from the cost of goods available for sale in the income statement to determine cost of goods sold. The debit means the ending inventory can be reported as an asset on the statement of financial position.

These two procedures are specifically illustrated below:

Illustration 5B-6
Worksheet procedures for inventories

		Income Statement			Statement of Financial Position	
		Dr.	Cr.		Dr.	Cr.
Inventory	**(1)**	**36,000**	**40,000** ←	**(2)**	→ **40,000**	

The computation for cost of goods sold, taken from the income statement column in Illustration 5B-5, is as follows.

Illustration 5B-7
Computation of cost of goods sold from worksheet columns

• HELPFUL HINT
In a periodic system, cost of goods sold is a computation—it is not a separate account with a balance.

Debit Column		Credit Column	
Beginning inventory	€ 36,000	Ending inventory	€40,000
Purchases	325,000	Purchase returns and allowances	10,400
Freight-in	12,200	Purchase discounts	6,800
Total debits	373,200	Total credits	€57,200
Less: Total credits	57,200		
Cost of goods sold	**€316,000**		

Finally, PW Audio Supply totals all the credits in the income statement column and compares these totals to the total of the debits in the income statement column. If the credits exceed the debits, the company has net income. PW Audio Supply has net income of €30,000. If the debits exceed the credits, the company would report a net loss.

STATEMENT OF FINANCIAL POSITION COLUMNS

The major difference between the statements of financial position of a service company and a merchandising company is inventory. PW Audio Supply shows ending inventory of €40,000 in the statement of financial position debit column. The information to prepare the retained earnings statement is also found in these columns. That is, the retained earnings beginning balance is €33,000. Dividends are €15,000. Net income results when the total of the debit column exceeds the total of the credit column in the statement of financial position columns. A net loss results when the total of the credits exceeds the total of the debit balances.

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Identify the differences between service and merchandising companies.** Because of inventory, a merchandising company has sales revenue, cost of goods sold, and gross profit. To account for inventory, a merchandising company must choose between a perpetual and a periodic inventory system.

2 **Explain the recording of purchases under a perpetual inventory system.** The company debits the Inventory account for all purchases of merchandise and freight-in, and credits it for purchase discounts and purchase returns and allowances.

3 **Explain the recording of sales revenues under a perpetual inventory system.** When a merchandising company sells inventory, it debits Accounts Receivable (or Cash), and credits Sales Revenue for the **selling price** of the merchandise. At the same time, it debits Cost of Goods Sold and credits Inventory for the cost of the inventory items sold. Sales Returns and Allowances and Sales Discounts are debited and are contra revenue accounts.

4 **Explain the steps in the accounting cycle for a merchandising company.** Each of the required steps in the accounting cycle for a service company applies to a

merchandising company. A worksheet is again an optional step. Under a perpetual inventory system, the company must adjust the Inventory account to agree with the physical count.

5 Prepare an income statement for a merchandiser. The income statement usually has the following components: sales, cost of goods sold, gross profit, operating expenses, other income and expense, and interest expense.

***6 Prepare a worksheet for a merchandising company.** The steps in preparing a worksheet for a merchandising company are the same as for a service company. The unique accounts for a merchandiser are Inventory, Sales Revenue, Sales Returns and Allowances, Sales Discounts, and Cost of Goods Sold.

***7 Explain the recording of purchases and sales of inventory under a periodic inventory system.** In recording purchases under a periodic system, companies must make entries for (a) cash and credit purchases, (b) purchase returns and allowances, (c) purchase discounts, and (d) freight costs. In recording sales, companies must make entries for (a) cash and credit sales, (b) sales returns and allowances, and (c) sales discounts.

GLOSSARY REVIEW

Comprehensive income An income measure that includes gains and losses that are excluded from the determination of net income. (p. 237).

Contra revenue account An account that is offset against a revenue account on the income statement. (p. 230).

Cost of goods sold The total cost of merchandise sold during the period. (p. 220).

FOB destination Freight terms indicating that the seller places the goods free on board to the buyer's place of business, and the seller pays the freight. (p. 225).

FOB shipping point Freight terms indicating that the seller places goods free on board the carrier, and the buyer pays the freight costs. (p. 225).

Gross profit The excess of net sales over the cost of goods sold. (p. 235).

Gross profit rate Gross profit expressed as a percentage, by dividing the amount of gross profit by net sales. (p. 235).

Net sales Sales revenue less sales returns and allowances and less sales discounts. (p. 234).

Operating expenses Expenses incurred in the process of earning sales revenue. (p. 235).

Periodic inventory system An inventory system under which the company does not keep detailed inventory records throughout the accounting period but determines the cost of goods sold only at the end of an accounting period. (p. 222).

Perpetual inventory system An inventory system under which the company keeps detailed records of the cost of each inventory purchase and sale, and the records continuously show the inventory that should be on hand. (p. 221).

Purchase allowance A deduction made to the selling price of merchandise, granted by the seller so that the buyer will keep the merchandise. (p. 226).

Purchase discount A cash discount claimed by a buyer for prompt payment of a balance due. (p. 226).

Purchase invoice A document that supports each credit purchase. (p. 224).

Purchase return A return of goods from the buyer to the seller for a cash or credit refund. (p. 226).

Sales discount A reduction given by a seller for prompt payment of a credit sale. (p. 230).

Sales invoice A document that supports each credit sale. (p. 228).

Sales returns and allowances Purchase returns and allowances from the seller's perspective. See *Purchase return* and *Purchase allowance*, above. (p. 229).

Sales revenue (Sales) The primary source of revenue in a merchandising company. (p. 220).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Gross profit will result if:
(a) operating expenses are less than net income.
(b) sales revenues are greater than operating expenses.
(c) sales revenues are greater than cost of goods sold.
(d) operating expenses are greater than cost of goods sold.

(LO 2) **2.** Under a perpetual inventory system, when goods are purchased for resale by a company:
(a) purchases on account are debited to Inventory.
(b) purchases on account are debited to Purchases.
(c) purchase returns are debited to Purchase Returns and Allowances.
(d) freight costs are debited to Freight-Out.

3. The sales accounts that normally have a debit balance are: (LO 3)
(a) Sales Discounts.
(b) Sales Returns and Allowances.
(c) Both (a) and (b).
(d) Neither (a) nor (b).

4. A credit sale of NT$7,500 is made on June 13, terms 2/10, net/30. A return of NT$500 is granted on June 16. The amount received as payment in full on June 23 is: (LO 3)
(a) NT$7,000.
(b) NT$6,860.
(c) NT$6,850.
(d) NT$6,500.

(LO 2) **5.** Which of the following accounts will normally appear in the ledger of a merchandising company that uses a perpetual inventory system?
(a) Purchases. (c) Cost of Goods Sold.
(b) Freight-In. (d) Purchase Discounts.

(LO 3) **6.** To record the sale of goods for cash in a perpetual inventory system:
(a) only one journal entry is necessary to record cost of goods sold and reduction of inventory.
(b) only one journal entry is necessary to record the receipt of cash and the sales revenue.
(c) two journal entries are necessary: one to record the receipt of cash and sales revenue, and one to record the cost of goods sold and reduction of inventory.
(d) two journal entries are necessary: one to record the receipt of cash and reduction of inventory, and one to record the cost of goods sold and sales revenue.

(LO 4) **7.** The steps in the accounting cycle for a merchandising company are the same as those in a service company **except**:
(a) an additional adjusting journal entry for inventory may be needed in a merchandising company.
(b) closing journal entries are not required for a merchandising company.
(c) a post-closing trial balance is not required for a merchandising company.
(d) an income statement is required for a merchandising company.

(LO 5) **8.** The income statement for a merchandising company shows each of the following features **except**:
(a) gross profit.
(b) cost of goods sold.
(c) a sales section.
(d) investing activities section.

9. If sales revenues are €400,000, cost of goods sold is €310,000, and operating expenses are €60,000, the gross profit is: (LO 5)
(a) €30,000. (c) €340,000.
(b) €90,000. (d) €400,000.

***10.** In a worksheet using a perpetual inventory system, Inventory is shown in the following columns: (LO 6)
(a) adjusted trial balance debit and statement of financial position debit.
(b) income statement debit and statement of financial position debit.
(c) income statement credit and statement of financial position debit.
(d) income statement credit and adjusted trial balance debit.

***11.** In determining cost of goods sold in a periodic system: (LO 7)
(a) purchase discounts are deducted from net purchases.
(b) freight-out is added to net purchases.
(c) purchase returns and allowances are deducted from net purchases.
(d) freight-in is added to net purchases.

***12.** If beginning inventory is HK$600,000, cost of goods purchased is HK$3,800,000, and ending inventory is HK$500,000, cost of goods sold is: (LO 7)
(a) HK$3,900,000. (c) HK$3,300,000.
(b) HK$3,700,000. (d) HK$4,200,000.

***13.** When goods are purchased for resale by a company using a periodic inventory system: (LO 7)
(a) purchases on account are debited to Inventory.
(b) purchases on account are debited to Purchases.
(c) purchase returns are debited to Purchase Returns and Allowances.
(d) freight costs are debited to Purchases.

Solutions

1. (c) Gross profit will result if sales revenues are greater than cost of goods sold. The other choices are incorrect because (a) operating expenses and net income are not used in the computation of gross profit; (b) gross profit results when sales revenues are greater than cost of goods sold, not operating expenses; and (d) gross profit results when sales revenues, not operating expenses, are greater than cost of goods sold.

2. (a) Under a perpetual inventory system, when a company purchases goods for resale, purchases on account are debited to the Inventory account, not (b) Purchases or (c) Purchase Returns and Allowances. Choice (d) is incorrect because freight costs are also debited to the Inventory account, not the Freight-Out account.

3. (c) Both Sales Discounts and Sales Returns and Allowances normally have a debit balance. Choices (a) and (b) are both correct, but (c) is the better answer. Choice (d) is incorrect as both (a) and (b) are correct.

4. (b) The full amount of NT$6,860 is paid within 10 days of the purchase (NT$7,500 − NT$500) − [(NT$7,500 − NT$500) × 2%]. The other choices are incorrect because (a) does not consider the discount of NT$140; (c) the amount of the discount is based upon the amount after the return is granted (NT$7,000 × 2%), not the amount before the return of merchandise (NT$7,500 × 2%); and (d) does not constitute payment in full on June 23.

5. (c) The Cost of Goods Sold account normally appears in the ledger of a merchandising company using a perpetual inventory system. The other choices are incorrect because (a) the Purchases account, (b) the Freight-In account, and (d) the Purchase Discounts account all appear in the ledger of a merchandising company that uses a periodic inventory system.

6. (c) Two journal entries are necessary: one to record the receipt of cash and sales revenue, and one to record the cost of goods sold and reduction of inventory. The other choices are incorrect because (a) only considers the recognition of the expense and ignores the revenue, (b) only considers the recognition of revenue and leaves out the expense or cost of merchandise sold, and (d) the receipt of cash and sales revenue, not reduction of inventory, are paired together, and the cost of goods sold and reduction of inventory, not sales revenue, are paired together.

7. (a) An additional adjusting journal entry for inventory may be needed in a merchandising company to adjust for a physical inventory count, but it is not needed for a service company. The other choices are incorrect because (b) closing journal entries and

(c) a post-closing trial balance are required for both types of companies. Choice (d) is incorrect because an income statement is required for both a merchandising company and a service company.

8. (d) An investing activities section appears on the statement of cash flows, not on an income statement. Choices (a) gross profit, (b) cost of goods sold, and (c) a sales section are all features of an income statement.

9. (b) Gross profit = Sales revenue (€400,000) − Cost of goods sold (€310,000) = €90,000, not (a) €30,000, (c) €340,000, or (d) €400,000.

***10. (a)** In a worksheet using a perpetual inventory system, Inventory is shown in the adjusted trial balance debit column and in the statement of financial position debit column. The other choices are incorrect because the Inventory account is not shown in the income statement columns.

***11. (d)** In determining cost of goods sold in a periodic system, freight-in is added to net purchases. The other choices are incorrect because (a) purchase discounts are deducted from purchases, not net purchases; (b) freight-out is a cost of sales, not a cost of purchases; and (c) purchase returns and allowances are deducted from purchases, not net purchases.

***12. (a)** Beginning inventory (HK$600,000) + Cost of goods purchased (HK$3,800,000) − Ending inventory (HK$500,000) = Cost of goods sold (HK$3,900,000), not (b) HK$3,700,000, (c) HK$3,300,000, or (d) HK$4,200,000.

***13. (b)** Purchases for resale are debited to the Purchases account. The other choices are incorrect because (a) purchases on account are debited to Purchases, not Inventory; (c) Purchase Returns and Allowances are always credited; and (d) freight costs are debited to Freight-In, not Purchases.

PRACTICE EXERCISES

Prepare purchase and sales entries.
(LO 2, 3)

1. On June 10, Vareen Company purchased £8,000 of merchandise from Harrah Company, FOB shipping point, terms 3/10, n/30. Vareen pays the freight costs of £400 on June 11. Damaged goods totaling £300 are returned to Harrah for credit on June 12. The fair value of these goods in £70. On June 19, Vareen pays Harrah Company in full, less the purchase discount. Both companies use a perpetual inventory system.

Instructions

(a) Prepare separate entries for each transaction on the books of Vareen Company.
(b) Prepare separate entries for each transaction for Harrah Company. The merchandise purchased by Vareen on June 10 had cost Harrah £4,800.

Solution

1. (a)

June 10	Inventory	8,000	
	Accounts Payable		8,000
11	Inventory	400	
	Cash		400
12	Accounts Payable	300	
	Inventory		300
19	Accounts Payable (£8,000 − £300)	7,700	
	Inventory (£7,700 × 3%)		231
	Cash (£7,700 − £231)		7,469

(b)

June 10	Accounts Receivable	8,000	
	Sales Revenue		8,000
10	Cost of Goods Sold	4,800	
	Inventory		4,800
12	Sales Returns and Allowances	300	
	Accounts Receivable		300
12	Inventory	70	
	Cost of Goods Sold		70
19	Cash (£7,700 − £231)	7,469	
	Sales Discounts (£7,700 × 3%)	231	
	Accounts Receivable (£8,000 − £300)		7,700

Prepare an income statement.
(LO 5)

2. In its income statement for the year ended December 31, 2017, Sun Company Ltd. reported the following condensed data.

Interest expense	NT$ 70,000	Net sales	NT$2,200,000
Operating expenses	725,000	Interest revenue	25,000
Cost of goods sold	1,300,000	Loss on disposal of plant assets	17,000

Instructions

Prepare an income statement.

Solution

2.

SUN COMPANY LTD.
Income Statement
For the Year Ended December 31, 2017

Net sales		NT$2,200,000
Cost of goods sold		1,300,000
Gross profit		900,000
Operating expenses		725,000
Income from operations		175,000
Other income and expense		
Interest revenue	NT$25,000	
Loss on disposal of plant assets	(17,000)	8,000
Interest expense		70,000
Net income		NT$ 113,000

PRACTICE PROBLEM

Prepare an income statement.
(LO 5)

The adjusted trial balance columns of Falcetto Company SpA's worksheet for the year ended December 31, 2017, are as follows. (All amounts are in euros.)

	Debit		Credit
Cash	14,500	Accumulated Depreciation—Equipment	18,000
Accounts Receivable	11,100	Notes Payable	25,000
Inventory	29,000	Accounts Payable	10,600
Prepaid Insurance	2,500	Share Capital—Ordinary	50,000
Equipment	95,000	Retained Earnings	31,000
Dividends	12,000	Sales Revenue	536,800
Sales Returns and Allowances	6,700	Interest Revenue	2,500
Sales Discounts	5,000		673,900
Cost of Goods Sold	363,400		
Freight-Out	7,600		
Advertising Expense	12,000		
Salaries and Wages Expense	56,000		
Utilities Expense	18,000		
Rent Expense	24,000		
Depreciation Expense	9,000		
Insurance Expense	4,500		
Interest Expense	3,600		
	673,900		

Instructions

Prepare an income statement for Falcetto Company SpA.

Solution

FALCETTO COMPANY SpA
Income Statement
For the Year Ended December 31, 2017

Sales		
Sales revenue		€536,800
Less: Sales returns and allowances	€ 6,700	
Sales discounts	5,000	11,700
Net sales		525,100
Cost of goods sold		363,400
Gross profit		161,700
Operating expenses		
Salaries and wages expense	56,000	
Rent expense	24,000	
Utilities expense	18,000	
Advertising expense	12,000	
Depreciation expense	9,000	
Freight-out	7,600	
Insurance expense	4,500	
Total operating expenses		131,100
Income from operations		30,600
Other income and expense		
Interest revenue		2,500
Interest expense		3,600
Net income		€ 29,500

WileyPLUS Brief Exercises, DO IT! Review, Exercises, and Problems, and many additional resources are available for practice in WileyPLUS.

NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendices to the chapter.

QUESTIONS

1. (a) "The steps in the accounting cycle for a merchandising company are different from the accounting cycle for a service company." Do you agree or disagree? (b) Is the measurement of net income for a merchandising company conceptually the same as for a service company? Explain.
2. Why is the normal operating cycle for a merchandising company likely to be longer than for a service company?
3. (a) How do the components of revenues and expenses differ between merchandising and service companies? (b) Explain the income measurement process in a merchandising company.
4. How does income measurement differ between a merchandising and a service company?
5. When is cost of goods sold determined in a perpetual inventory system?
6. Distinguish between FOB shipping point and FOB destination. Identify the freight terms that will result in a debit to Inventory by the buyer and a debit to Freight-Out by the seller.
7. Explain the meaning of the credit terms 2/10, n/30.
8. Goods costing £2,500 are purchased on account on July 15 with credit terms of 2/10, n/30. On July 18, a £200 credit memo is received from the supplier for damaged goods. Give the journal entry on July 24 to record payment of the balance due within the discount period using a perpetual inventory system.
9. Karen Lloyd believes revenues from credit sales may be recorded before they are collected in cash. Do you agree? Explain.
10. (a) What is the primary source document for recording (1) cash sales, (2) credit sales. (b) Using XXs for amounts, give the journal entry for each of the transactions in part (a).
11. A credit sale is made on July 10 for €700, terms 2/10, n/30. On July 12, €100 of goods are returned for credit.

Give the journal entry on July 19 to record the receipt of the balance due within the discount period.

12. Explain why the Inventory account will usually require adjustment at year-end.

13. Prepare the closing entries for the Sales Revenue account, assuming a balance of €180,000 and the Cost of Goods Sold account with a €125,000 balance.

14. What merchandising account(s) will appear in the post-closing trial balance?

15. Regis Co. has sales revenue of HK$1,090,000, cost of goods sold of HK$700,000, and operating expenses of HK$230,000. What is its gross profit and its gross profit rate?

16. Kim Ho Company reports net sales of ¥800,000, gross profit of ¥570,000, and net income of ¥240,000. What are its operating expenses?

17. Identify the distinguishing features of an income statement for a merchandising company.

18. Identify the sections of an income statement that relate to (a) operating activities, and (b) non-operating activities.

***19.** Indicate the columns of the worksheet in which (a) inventory and (b) cost of goods sold will be shown using a perpetual inventory system.

***20.** Identify the accounts that are added to or deducted from Purchases to determine the cost of goods purchased using a periodic inventory system. For each account, indicate whether it is added or deducted.

***21.** Goods costing NT$60,000 are purchased on account on July 15 with credit terms of 2/10, n/30. On July 18, a NT$6,000 credit was received from the supplier for damaged goods. Give the journal entry on July 24 to record payment of the balance due within the discount period, assuming a periodic inventory system.

BRIEF EXERCISES

Compute missing amounts in determining net income.
(LO 1)

BE5-1 Presented below are the components in Clearwater Company, Ltd.'s income statement. Determine the missing amounts.

	Sales Revenue	Cost of Goods Sold	Gross Profit	Operating Expenses	Net Income
(a)	£78,000	?	£30,000	?	£10,800
(b)	£108,000	£55,000	?	?	£29,500
(c)	?	£83,900	£79,600	£39,500	?

Journalize perpetual inventory entries.
(LO 2, 3)

BE5-2 Giovanni Company buys merchandise on account from Gordon Company. The selling price of the goods is €780, and the cost of the goods is €560. Both companies use perpetual inventory systems. Journalize the transaction on the books of both companies.

Journalize sales transactions.
(LO 3)

BE5-3 Prepare the journal entries to record the following transactions on Benson Company, Ltd.'s books using a perpetual inventory system.

(a) On March 2, Benson Company sold £800,000 of merchandise to Edgebrook Company, terms 2/10, n/30. The cost of the merchandise sold was £620,000.
(b) On March 6, Edgebrook Company returned £120,000 of the merchandise purchased on March 2. The cost of the returned merchandise was £90,000.
(c) On March 12, Benson Company received the balance due from Edgebrook Company.

Journalize purchase transactions.
(LO 2)

BE5-4 From the information in BE5-3, prepare the journal entries to record these transactions on Edgebrook Company's books under a perpetual inventory system.

Prepare adjusting entry for merchandise inventory.
(LO 4)

BE5-5 At year-end, the perpetual inventory records of Federer Company showed merchandise inventory of CHF98,000. The company determined, however, that its actual inventory on hand was CHF96,100. Record the necessary adjusting entry.

Prepare closing entries for accounts.
(LO 4)

BE5-6 Orlaida Company has the following account balances: Sales Revenue €192,000, Sales Discounts €2,000, Cost of Goods Sold €105,000, and Inventory €40,000. Prepare the entries to record the closing of these items to Income Summary.

Prepare sales section of income statement.
(LO 5)

BE5-7 Yangtze Company, Ltd. provides the following information for the month ended October 31, 2017 (amounts in Chinese yuan): sales on credit ¥280,000, cash sales ¥100,000, sales discounts ¥5,000, sales returns and allowances ¥22,000. Prepare the sales section of the income statement based on this information.

BE5-8 Explain where each of the following items would appear on an income statement: (a) gain on sale of equipment, (b) interest expense, (c) casualty loss from vandalism, (d) cost of goods sold, and (e) depreciation expense.

Explain presentation in an income statement.
(LO 5)

BE5-9 Assume Jose Company has the following reported amounts: Sales revenue €506,000, Sales returns and allowances €13,000, Cost of goods sold €342,000, Operating expenses €110,000. Compute the following: (a) net sales, (b) gross profit, (c) income from operations, and (d) gross profit rate. (Round to one decimal place.)

Compute net sales, gross profit, income from operations, and gross profit rate.
(LO 5)

***BE5-10** Presented below is the format of the worksheet presented in the chapter.

Identify worksheet columns for selected accounts.
(LO 6)

Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Statement of Financial Position	
Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.

Indicate where the following items will appear on the worksheet: (a) Cash, (b) Inventory, (c) Sales revenue, and (d) Cost of goods sold.

Example:
Cash: Trial balance debit column; Adjusted trial balance debit column; and Statement of financial position debit column.

***BE5-11** Assume that Kowloon Company uses a periodic inventory system and has these account balances (in thousands): Purchases ₩430,000; Purchase Returns and Allowances ₩13,000; Purchase Discounts ₩8,000; and Freight-In ₩16,000. Determine net purchases and cost of goods purchased.

Compute net purchases and cost of goods purchased.
(LO 7)

***BE5-12** Assume the same information as in BE5-11 and also that Kowloon Company has beginning inventory (in thousands) of ₩60,000, ending inventory of ₩86,000, and net sales of ₩680,000. Determine the amounts to be reported for cost of goods sold and gross profit.

Compute cost of goods sold and gross profit.
(LO 7)

***BE5-13** Prepare the journal entries to record these transactions on Huntington Company's books using a periodic inventory system.

(a) On March 2, Huntington Company purchased £900,000 of merchandise from Saunder Company, terms 2/10, n/30.
(b) On March 6, Huntington Company returned £184,000 of the merchandise purchased on March 2.
(c) On March 12, Huntington Company paid the balance due to Saunder Company.

Journalize purchase transactions.
(LO 7)

***BE5-14** A. Hall Company has the following merchandise account balances: Sales Revenue $180,000, Sales Discounts $2,000, Purchases $120,000, and Purchases Returns and Allowances $30,000. In addition, it has a beginning inventory of $40,000 and an ending inventory of $30,000. Prepare the entries to record the closing of these items to Income Summary using the periodic inventory system.

Prepare closing entries for merchandise accounts.
(LO 7)

***BE5-15** Presented below is the format of the worksheet using the periodic inventory system presented in Appendix 5B.

Identify worksheet columns for selected accounts.
(LO 7)

Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Statement of Financial Position	
Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.

Indicate where the following items will appear on the worksheet: (a) Cash, (b) Beginning inventory, (c) Accounts payable, and (d) Ending inventory.

Example:
Cash: Trial balance debit column; Adjustment trial balance debit column; and Statement of financial position debit column.

> DO IT! REVIEW

Answer general questions about merchandisers.
(LO 1)

DO IT! 5-1 Indicate whether the following statements are true or false.

1. A merchandising company reports gross profit but a service company does not.
2. Under a periodic inventory system, a company determines the cost of goods sold each time a sale occurs.
3. A service company is likely to use accounts receivable but a merchandising company is not likely to do so.
4. Under a periodic inventory system, the cost of goods on hand at the beginning of the accounting period plus the cost of goods purchased less the cost of goods on hand at the end of the accounting period equals cost of goods sold.

Record transactions of purchasing company.
(LO 2)

DO IT! 5-2 On October 5, Lepik Company buys merchandise on account from Tamm Company. The selling price of the goods is €4,700, and the cost to Tamm Company is €3,100. On October 8, Lepik returns defective goods with a selling price of €650 and a fair value of €160. Record the transactions on the books of Lepik Company.

Record transactions of selling company.
(LO 3)

DO IT! 5-3 Assume information similar to that in **DO IT! 5-2**. That is: On October 5, Lepik Company buys merchandise on account from Tamm Company. The selling price of the goods is €4,700, and the cost to Tamm Company is €3,100. On October 8, Lepik returns defective goods with a selling price of €650 and a fair value of €160. Record the transactions on the books of Tamm Company.

Prepare closing entries for a merchandising company.
(LO 4)

DO IT! 5-4 The trial balance of Alagoas's Boutique at December 31 shows Inventory R$21,000, Sales Revenue R$156,000, Sales Returns and Allowances R$4,100, Sales Discounts R$3,000, Cost of Goods Sold R$92,400, Interest Revenue R$3,000, Freight-Out R$2,200, Utilities Expense R$7,400, and Salaries and Wages Expense R$19,500. Prepare the closing entries for Alagoas for these accounts.

Classify financial statement accounts.
(LO 5)

DO IT! 5-5 Dorothea Company is preparing its income statement, retained earnings statement, and classified statement of financial position. Using the column headings *Account*, *Financial Statement*, and *Classification*, indicate in which financial statement and under what classification each of the following would be reported.

Account	Financial Statement	Classification
Accounts Payable		
Accounts Receivable		
Accumulated Depreciation—Buildings		
Cash		
Casualty Loss from Vandalism		
Cost of Goods Sold		
Depreciation Expense		
Dividends		
Equipment		
Freight-Out		
Insurance Expense		
Interest Payable		
Inventory		
Land		
Notes Payable (due in 5 years)		
Property Taxes Payable		
Salaries and Wages Expense		
Salaries and Wages Payable		
Sales Returns and Allowances		
Sales Revenue		
Share Capital—Ordinary		
Unearned Rent Revenue		
Utilities Expense		

EXERCISES

E5-1 Mr. Soukup has prepared the following list of statements about service companies and merchandisers.

Answer general questions about merchandisers.

(LO 1)

1. Measuring net income for a merchandiser is conceptually the same as for a service company.
2. For a merchandiser, sales less operating expenses is called gross profit.
3. For a merchandiser, the primary source of revenues is the sale of inventory.
4. Sales salaries and wages is an example of an operating expense.
5. The operating cycle of a merchandiser is the same as that of a service company.
6. In a perpetual inventory system, no detailed inventory records of goods on hand are maintained.
7. In a periodic inventory system, the cost of goods sold is determined only at the end of the accounting period.
8. A periodic inventory system provides better control over inventories than a perpetual system.

Instructions

Identify each statement as true or false. If false, indicate how to correct the statement.

E5-2 Information related to Duffy Co., Ltd. is presented below.

Journalize purchase transactions.

(LO 2)

1. On April 5, purchased merchandise from Thomas Company, Ltd. for £25,000, terms 2/10, net/30, FOB shipping point.
2. On April 6, paid freight costs of £900 on merchandise purchased from Thomas.
3. On April 7, purchased equipment on account for £26,000.
4. On April 8, returned damaged merchandise to Thomas and was granted a £2,600 credit for returned merchandise.
5. On April 15, paid the amount due to Thomas in full.

Instructions

(a) Prepare the journal entries to record these transactions on the books of Duffy Co., Ltd. under a perpetual inventory system.

(b) Assume that Duffy Co., Ltd. paid the balance due to Thomas Company, Ltd. on May 4 instead of April 15. Prepare the journal entry to record this payment.

E5-3 On September 1, Moreau Office Supply SA had an inventory of 30 calculators at a cost of €22 each. The company uses a perpetual inventory system. During September, the following transactions occurred.

Journalize perpetual inventory entries.

(LO 2, 3)

Sept.	6	Purchased with cash 90 calculators at €20 each from Roux Co. SA, terms 2/10, n/30.
	9	Paid freight of €180 on calculators purchased from Roux Co.
	10	Returned 3 calculators to Roux Co. for €66 credit (including freight) because they did not meet specifications.
	12	Sold 28 calculators costing €22 (including freight) for €33 each to Village Book Store, terms n/30.
	14	Granted credit of €33 to Village Book Store for the return of one calculator that was not ordered.
	20	Sold 40 calculators costing €22 for €35 each to Holiday Card Shop, terms n/30.

Instructions

Journalize the September transactions.

E5-4 On June 10, York Company Ltd. purchased £7,600 of merchandise from Bianchi Company, FOB shipping point, terms 2/10, n/30. York pays the freight costs of £400 on June 11. Damaged goods totaling £300 are returned to Bianchi for credit on June 12. The fair value of these goods is £70. On June 19, York pays Bianchi Company in full, less the purchase discount. Both companies use a perpetual inventory system.

Prepare purchase and sales entries.

(LO 2, 3)

Instructions

(a) Prepare separate entries for each transaction on the books of York Company, Ltd.

(b) Prepare separate entries for each transaction for Bianchi Company. The merchandise purchased by York on June 10 had cost Bianchi £4,300.

Journalize sales transactions.
(LO 3)

E5-5 Presented below are transactions related to Li Company, Ltd.

1. On December 3, Li sold HK$580,000 of merchandise to South China Co., Ltd. terms 1/10, n/30, FOB shipping point. The cost of the merchandise sold was HK$364,800.
2. On December 8, South China was granted an allowance of HK$28,000 for merchandise purchased on December 3.
3. On December 13, Li received the balance due from South China.

Instructions

(a) Prepare the journal entries to record these transactions on the books of Li Company, Ltd. using a perpetual inventory system.
(b) Assume that Li Company, Ltd. received the balance due from South China Co., Ltd. on January 2 of the following year instead of December 13. Prepare the journal entry to record the receipt of payment on January 2.

Prepare sales section and closing entries.
(LO 4, 5)

E5-6 The adjusted trial balance of Mendoza Company SLU shows the following data pertaining to sales at the end of its fiscal year October 31, 2017: Sales Revenue €820,000, Freight-Out €16,000, Sales Returns and Allowances €28,000, and Sales Discounts €13,000.

Instructions

(a) Prepare the sales section of the income statement.
(b) Prepare separate closing entries for (1) sales, and (2) the contra accounts to sales.

Prepare adjusting and closing entries.
(LO 4)

E5-7 Hezir Company A.Ş. had the following account balances at year-end: Cost of Goods Sold ₺60,000, Inventory ₺15,000, Operating Expenses ₺29,000, Sales Revenue ₺117,000, Sales Discounts ₺1,300, and Sales Returns and Allowances ₺1,700. A physical count of inventory determines that merchandise inventory on hand is ₺14,200.

Instructions

(a) Prepare the adjusting entry necessary as a result of the physical count.
(b) Prepare closing entries.

Prepare adjusting and closing entries.
(LO 4)

E5-8 Presented below is information related to Poulsen Industries, A/S for the month of January 2017.

Ending inventory per perpetual records	€ 21,600	Insurance expense	€ 12,000
Ending inventory actually on hand	21,000	Rent expense	20,000
Cost of goods sold	208,000	Salaries and wages expense	59,000
Freight-out	7,000	Sales discounts	8,000
		Sales returns and allowances	13,000
		Sales revenue	378,000

Instructions

(a) Prepare the necessary adjusting entry for inventory.
(b) Prepare the necessary closing entries.

Prepare an income statement.
(LO 5)

E5-9 Presented below is information for Bach Company, Ltd. for the month of March 2017.

Cost of goods sold	£212,000	Rent expense	£ 32,000
Freight-out	9,000	Sales discounts	7,400
Insurance expense	7,000	Sales returns and allowances	13,000
Salaries and wages expense	58,000	Sales revenue	380,000
		Other comprehensive income	2,200

Instructions

(a) Prepare an income statement.
(b) Prepare a comprehensive income statement.
(c) Compute the gross profit rate.

Prepare an income statement.
(LO 5)

E5-10 In its income statement for the year ended December 31, 2017, Mancini Company, SpA reported the following condensed data.

Operating expenses	€ 725,000	Interest revenue	€ 33,000
Cost of goods sold	1,256,000	Loss on disposal of plant assets	17,000
Interest expense	70,000	Net sales	2,200,000
		Other comprehensive income	8,300

Instructions

(a) Prepare an income statement.
(b) Prepare a comprehensive income statement.

E5-11 An inexperienced accountant for Zoeng Company, Ltd. made the following errors in recording merchandising transactions.

Prepare correcting entries for sales and purchases.

(LO 2, 3)

1. A HK$1,750 refund to a customer for faulty merchandise was debited to Sales Revenue HK$1,750 and credited to Cash HK$1,750.
2. A HK$1,400 credit purchase of supplies was debited to Inventory HK$1,400 and credited to Cash HK$1,400.
3. A HK$2,150 sales discount was debited to Sales Revenue.
4. A cash payment of HK$200 for freight on merchandise purchases was debited to Freight-Out HK$2,000 and credited to Cash HK$2,000.

Instructions

Prepare separate correcting entries for each error, assuming that the incorrect entry is not reversed. (Omit explanations.)

E5-12 In 2017, Endeaver Company, Ltd. had net sales of £860,000 and cost of goods sold of £533,200. Operating expenses were £221,000, and interest expense was £7,000.

Compute various income measures.

(LO 5)

Instructions

(a) Compute Endeaver's gross profit.
(b) Compute the gross profit rate. Why is this rate computed by financial statement users?
(c) What is Endeaver's income from operations and net income?
(d) In what section of its classified statement of financial position should Endeaver report merchandise inventory?

E5-13 Presented below is financial information for two different companies (amounts in thousands).

Compute missing amounts and compute gross profit rate.

(LO 5)

	Natasha Company	Boris Company
Sales revenue	руб94,000	(d)
Sales returns	(a)	руб 5,000
Net sales	80,000	98,000
Cost of goods sold	56,000	(e)
Gross profit	(b)	37,500
Operating expenses	12,000	(f)
Net income	(c)	15,000

Instructions

(a) Determine the missing amounts.
(b) Determine the gross profit rates. (Round to one decimal place.)

E5-14 Financial information is presented below for three different companies.

Compute missing amounts.

(LO 5)

	Athena Cosmetics	Harry Grocery	Panama Wholesalers
Sales revenue	€90,000	€ (e)	€122,000
Sales returns and allowances	(a)	5,000	12,000
Net sales	86,000	95,000	(i)
Cost of goods sold	56,000	(f)	(j)
Gross profit	(b)	22,000	24,000
Operating expenses	15,000	(g)	18,000
Income from operations	(c)	(h)	(k)
Other income and expense	(4,000)	(3,000)	(l)
Net income	(d)	11,000	5,000

Instructions

Determine the missing amounts.

***E5-15** Presented on the next page are selected accounts for Feisal Company Ltd. as reported in the worksheet at the end of May 2017.

Complete worksheet.

(LO 6)

Accounts	Adjusted Trial Balance		Income Statement		Statement of Financial Position	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	9,000					
Inventory	76,000					
Sales Revenue		460,000				
Sales Returns and Allowances	10,000					
Sales Discounts	9,000					
Cost of Goods Sold	288,000					

Instructions

Complete the worksheet by extending amounts reported in the adjusted trial balance to the appropriate columns in the worksheet. Do not total individual columns.

Prepare a worksheet.
(LO 6)

***E5-16** The trial balance columns of the worksheet for Barbosa Company, SA at June 30, 2017, are as follows.

BARBOSA COMPANY, SA
Worksheet
For the Month Ended June 30, 2017

Account Titles	Trial Balance Debit	Trial Balance Credit
Cash	2,120	
Accounts Receivable	2,740	
Inventory	11,640	
Accounts Payable		1,120
Share Capital—Ordinary		4,000
Sales Revenue		42,800
Cost of Goods Sold	20,560	
Operating Expenses	10,860	
	47,920	47,920

Other data:
Operating expenses incurred on account, but not yet recorded, total R$1,640.

Instructions

Enter the trial balance on a worksheet and complete the worksheet.

Prepare cost of goods sold section.
(LO 7)

***E5-17** The trial balance of Biju Company, Ltd. at the end of its fiscal year, August 31, 2017, includes these accounts (amounts in thousands): Inventory Rp17,200; Purchases Rp149,000; Sales Revenue Rp190,000; Freight-In Rp5,000; Sales Returns and Allowances Rp3,000; Freight-Out Rp1,000; and Purchase Returns and Allowances Rp6,200. The ending inventory is Rp16,000.

Instructions

Prepare a cost of goods sold section for the year ending August 31 (periodic inventory).

Compute various income statement items.
(LO 7)

***E5-18** On January 1, 2017, Scott Enterprises, Ltd. had inventory of £50,000. At December 31, 2017, Scott had the following account balances.

Freight-in	£ 4,000
Purchases	509,000
Purchase discounts	6,000
Purchase returns and allowances	8,000
Sales revenue	840,000
Sales discounts	7,000
Sales returns and allowances	11,000

At December 31, 2017, Scott determines that its ending inventory is £60,000.

Instructions

(a) Compute Scott's 2017 gross profit.
(b) Compute Scott's 2017 operating expenses if net income is £130,000 and there are no non-operating activities.

***E5-19** Below is a series of cost of goods sold sections for companies Alpha, Beta, Chi, and Decca.

Compute missing amounts for cost of goods sold section.

(LO 7)

	Alpha	Beta	Chi	Decca
Beginning inventory	€ 165	€ 70	€1,000	€ (j)
Purchases	1,620	1,060	(g)	43,810
Purchase returns and allowances	40	(d)	290	(k)
Net purchases	(a)	1,030	6,210	41,090
Freight-in	95	(e)	(h)	2,240
Cost of goods purchased	(b)	1,280	7,940	(l)
Cost of goods available for sale	1,840	1,350	(i)	49,530
Ending inventory	310	(f)	1,450	6,230
Cost of goods sold	(c)	1,260	7,490	43,300

Instructions

Fill in the lettered blanks to complete the cost of goods sold sections.

***E5-20** This information relates to Olaf Co., ASA.

Journalize purchase transactions.

(LO 7)

1. On April 5, purchased merchandise from DeVito Company for €18,000, terms 2/10, net/30, FOB shipping point.
2. On April 6, paid freight costs of €820 on merchandise purchased from DeVito Company.
3. On April 7, purchased equipment on account for €30,000.
4. On April 8, returned some of April 5 merchandise, which cost €2,800, to DeVito Company.
5. On April 15, paid the amount due to DeVito Company in full.

Instructions

(a) Prepare the journal entries to record these transactions on the books of Olaf Co. using a periodic inventory system.

(b) Assume that Olaf Co. paid the balance due to DeVito Company on May 4 instead of April 15. Prepare the journal entry to record this payment.

***E5-21** Presented below is information related to Chilean Industries, Ltd.

Journalize purchase transactions.

(LO 7)

1. On April 5, purchased merchandise from Graham Company, Ltd. for £17,400, terms 2/10, net/30, FOB shipping point.
2. On April 6, paid freight costs of £800 on merchandise purchased from Graham.
3. On April 7, purchased equipment on account from Reed Mfg., Ltd. for £27,000.
4. On April 8, returned merchandise, which cost £4,000, to Graham.
5. On April 15, paid the amount due to Graham in full.

Instructions

(a) Prepare the journal entries to record these transactions on the books of Chilean Industries, Ltd. using a periodic inventory system.

(b) Assume that Chilean Industries, Ltd. paid the balance due to Graham on May 4 instead of April 15. Prepare the journal entry to record this payment.

***E5-22** Presented below are selected accounts for B. Midler Company as reported in the worksheet at the end of May 2017. Ending inventory is $75,000.

Complete worksheet.

(LO 7)

Accounts	Adjusted Trial Balance		Income Statement		Statement of Financial Position	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	9,000					
Inventory	80,000					
Purchases	240,000					
Purchase Returns and Allowances		30,000				
Sales Revenue		450,000				
Sales Returns and Allowances	10,000					
Sales Discounts	5,000					
Rent Expense	42,000					

Instructions

Complete the worksheet by extending amounts reported in the adjusted trial balance to the appropriate columns in the worksheet. The company uses the periodic inventory system.

PROBLEMS: SET A

Journalize purchase and sales transactions under a perpetual inventory system.

(LO 2, 3)

P5-1A Ready-Set-Go, Ltd. distributes suitcases to retail stores and extends credit terms of 1/10, n/30 to all of its customers. At the end of June, Ready-Set-Go's inventory consisted of suitcases costing £1,200. During the month of July, the following merchandising transactions occurred.

July	1	Purchased suitcases on account for £1,620 from Trunk Manufacturers, FOB destination, terms 2/10, n/30. The appropriate party also made a cash payment of £100 for freight on this date.
	3	Sold suitcases on account to Satchel World for £2,200. The cost of suitcases sold was £1,400.
	9	Paid Trunk Manufacturers in full.
	12	Received payment in full from Satchel World.
	17	Sold suitcases on account to Lady GoGo for £1,400. The cost of the suitcases sold was £1,030.
	18	Purchased suitcases on account for £1,900 from Holiday Manufacturers, FOB shipping point, terms 1/10, n/30. The appropriate party also made a cash payment of £125 for freight on this date.
	20	Received £300 credit (including freight) for suitcases returned to Holiday Manufacturers.
	21	Received payment in full from Lady GoGo.
	22	Sold suitcases on account to Vagabond for £2,400. The cost of suitcases sold was £1,350.
	30	Paid Holiday Manufacturers in full.
	31	Granted Vagabond £200 credit for suitcases returned costing £120.

Ready-Set-Go's chart of accounts includes the following: No. 101 Cash, No. 112 Accounts Receivable, No. 120 Inventory, No. 201 Accounts Payable, No. 401 Sales Revenue, No. 412 Sales Returns and Allowances, No. 414 Sales Discounts, and No. 505 Cost of Goods Sold.

Instructions

Journalize the transactions for the month of July for Ready-Set-Go, Ltd. using a perpetual inventory system.

Journalize, post, and prepare a partial income statement.

(LO 2, 3, 5)

P5-2A Vree Distributing Company plc completed the following merchandising transactions in the month of April. At the beginning of April, the ledger of Vree showed Cash of €8,000 and Share Capital—Ordinary of €8,000.

Apr.	2	Purchased merchandise on account from Walker Supply Co. €6,200, terms 1/10, n/30.
	4	Sold merchandise on account €5,500, FOB destination, terms 1/10, n/30. The cost of the merchandise sold was €3,400.
	5	Paid €240 freight on April 4 sale.
	6	Received credit from Walker Supply Co. for merchandise returned €500.
	11	Paid Walker Supply Co. in full, less discount.
	13	Received collections in full, less discounts, from customers billed on April 4.
	14	Purchased merchandise for cash €3,800.
	16	Received refund from supplier for returned goods on cash purchase of April 14, €500.
	18	Purchased merchandise from Benjamin Distributors €4,500, FOB shipping point, terms 2/10, n/30.
	20	Paid freight on April 18 purchase €160.
	23	Sold merchandise for cash €7,400. The merchandise sold had a cost of €4,120.
	26	Purchased merchandise for cash €2,300.
	27	Paid Benjamin Distributors in full, less discount.
	29	Made refunds to cash customers for defective merchandise €90. The returned merchandise had a fair value of €30.
	30	Sold merchandise on account €3,400, terms n/30. The cost of the merchandise sold was €1,900.

Vree Distributing Company's chart of accounts includes the following: No. 101 Cash, No. 112 Accounts Receivable, No. 120 Inventory, No. 201 Accounts Payable, No. 311 Share Capital—Ordinary, No. 401 Sales Revenue, No. 412 Sales Returns and Allowances, No. 414 Sales Discounts, No. 505 Cost of Goods Sold, and No. 644 Freight-Out.

Instructions

(a) Journalize the transactions using a perpetual inventory system.
(b) Enter the beginning cash and share capital—ordinary balances, and post the transactions. (Use J1 for the journal reference.)
(c) Prepare the income statement through gross profit for the month of April 2017.

(c) Gross profit €6,765

P5-3A Starz Department Store, Ltd. is located near the Towne Shopping Mall. At the end of the company's calendar year on December 31, 2017, the following accounts appeared in two of its trial balances.

Prepare financial statements and adjusting and closing entries.

(LO 4, 5)

	Unadjusted	Adjusted		Unadjusted	Adjusted
Accounts Payable	£ 76,300	£ 77,300	Inventory	£ 75,000	£ 75,000
Accounts Receivable	50,300	50,300	Mortgage Payable	80,000	80,000
Accumulated Depr.—Buildings	42,100	52,500	Prepaid Insurance	9,600	2,400
Accumulated Depr.—Equipment	29,600	42,700	Property Tax Expense		4,800
Buildings	290,000	290,000	Property Taxes Payable		4,800
Cash	23,800	23,800	Retained Earnings	64,600	64,600
Cost of Goods Sold	412,700	412,700	Salaries and Wages Expense	105,000	105,000
Depreciation Expense		23,500	Sales Commissions Expense	10,200	14,500
Dividends	24,000	24,000	Sales Commissions Payable		4,300
Equipment	110,000	110,000	Sales Returns and Allowances	8,000	8,000
Insurance Expense		7,200	Sales Revenue	724,000	724,000
Interest Expense	3,000	8,100	Share Capital—Ordinary	112,000	112,000
Interest Payable		5,100	Utilities Expense	11,000	12,000
Interest Revenue	4,000	4,000			

Instructions

(a) Prepare an income statement, a retained earnings statement, and a classified statement of financial position. £16,000 of the mortgage payable is due for payment next year.
(b) Journalize the adjusting entries that were made.
(c) Journalize the closing entries that are necessary.

(a) Net income £132,200
Retained earnings £172,800
Total assets £456,300

P5-4A J. Zheng, a former professional tennis star, operates Zheng's Tennis Shop, Ltd. at the Yalong River Resort. At the beginning of the current season, the ledger of Zheng's Tennis Shop showed Cash ¥2,200, Inventory ¥1,800, and Share Capital—Ordinary ¥4,000. The following transactions were completed during April.

Journalize, post, and prepare a trial balance.

(LO 2, 3, 4)

Apr.	4	Purchased racquets and balls from Jay-Mac Co. ¥760, FOB shipping point, terms 2/10, n/30.
	6	Paid freight on purchase from Jay-Mac Co. ¥40.
	8	Sold merchandise to members ¥1,150, terms n/30. The merchandise sold had a cost of ¥790.
	10	Received credit of ¥60 from Jay-Mac Co. for a racquet that was returned.
	11	Purchased tennis shoes from Li Sports for cash, ¥420.
	13	Paid Jay-Mac Co. in full.
	14	Purchased tennis shirts and shorts from Everett Sportswear ¥800, FOB shipping point, terms 3/10, n/60.
	15	Received cash refund of ¥50 from Li Sports for damaged merchandise that was returned.
	17	Paid freight on Everett Sportswear purchase ¥30.
	18	Sold merchandise to members ¥980, terms n/30. The cost of the merchandise sold was ¥520.
	20	Received ¥600 in cash from members in settlement of their accounts.

Apr. 21 Paid Everett Sportswear in full.
27 Granted an allowance of ¥40 to members for tennis clothing that did not fit properly.
30 Received cash payments on account from members, ¥820.

The chart of accounts for the tennis shop includes the following: No. 101 Cash, No. 112 Accounts Receivable, No. 120 Inventory, No. 201 Accounts Payable, No. 311 Share Capital—Ordinary, No. 401 Sales Revenue, No. 412 Sales Returns and Allowances, and No. 505 Cost of Goods Sold.

Instructions

(a) Journalize the April transactions using a perpetual inventory system.
(b) Enter the beginning balances in the ledger accounts and post the April transactions. (Use J1 for the journal reference.)
(c) Prepare a trial balance on April 30, 2017.

(c) Total debits ¥6,130

Complete accounting cycle beginning with a worksheet.

(LO 4, 5, 6)

***P5-5A** The trial balance of Mr. Rosiak Fashion Center, Ltd. contained the following accounts at November 30, the end of the company's fiscal year.

MR. ROSIAK FASHION CENTER, LTD.
Trial Balance
November 30, 2017

	Debit	Credit
Cash	£ 8,700	
Accounts Receivable	27,700	
Inventory	44,700	
Supplies	6,200	
Equipment	133,000	
Accumulated Depreciation—Equipment		£ 23,000
Notes Payable		51,000
Accounts Payable		48,500
Share Capital—Ordinary		50,000
Retained Earnings		38,000
Dividends	8,000	
Sales Revenue		755,200
Sales Returns and Allowances	12,800	
Cost of Goods Sold	497,400	
Salaries and Wages Expense	136,000	
Advertising Expense	24,400	
Utilities Expense	14,000	
Maintenance and Repairs Expense	12,100	
Freight-Out	16,700	
Rent Expense	24,000	
Totals	£965,700	£965,700

Adjustment data:

1. Supplies on hand totaled £2,100.
2. Depreciation is £11,500 on the equipment.
3. Interest of £4,000 is accrued on notes payable at November 30.
4. Inventory actually on hand is £44,520.

Instructions

(a) Enter the trial balance on a worksheet, and complete the worksheet.
(b) Prepare an income statement and a retained earnings statement for the year, and a classified statement of financial position as of November 30, 2017. Notes payable of £6,000 are due in January 2018.
(c) Journalize the adjusting entries.
(d) Journalize the closing entries.
(e) Prepare a post-closing trial balance.

(a) Adj. trial balance £981,200
Net loss £1,980

(b) Gross profit £244,820
Total assets £181,520

***P5-6A** At the end of Hotai Department Store, Ltd.'s fiscal year on December 31, 2017, these accounts appeared in its adjusted trial balance.

Determine cost of goods sold and gross profit under periodic approach.

(LO 7)

Freight-In	NT$ 165,000
Inventory	1,215,000
Purchases	13,200,000
Purchase Discounts	360,000
Purchase Returns and Allowances	192,000
Sales Revenue	21,540,000
Sales Returns and Allowances	510,000

Additional facts:

1. Merchandise inventory on December 31, 2017, is NT$1,950,000.
2. Hotai Department Store, Ltd. uses a periodic system.

Instructions

Prepare an income statement through gross profit for the year ended December 31, 2017.

Gross profit NT$8,952,000

***P5-7A** Valerie Fons operates a retail clothing operation. She purchases all merchandise inventory on credit and uses a periodic inventory system. The Accounts Payable account is used for recording inventory purchases only; all other current liabilities are accrued in separate accounts. You are provided with the following selected information for the fiscal years 2014 through 2017, inclusive.

Calculate missing amounts and assess profitability.

(LO 7)

	2014	**2015**	**2016**	**2017**
Inventory (ending)	€13,000	€ 11,300	€ 14,700	€ 12,200
Accounts payable (ending)	20,000			
Sales revenue		225,700	240,300	235,000
Purchases of merchandise inventory on account		141,000	150,000	132,000
Cash payments to suppliers		135,000	161,000	127,000

Instructions

(a) Calculate cost of goods sold for each of the 2015, 2016, and 2017 fiscal years.

(b) Calculate the gross profit for each of the 2015, 2016, and 2017 fiscal years.

(c) Calculate the ending balance of accounts payable for each of the 2015, 2016, and 2017 fiscal years.

(d) Sales declined in fiscal 2017. Does that mean that profitability, as measured by the gross profit rate, necessarily also declined? Explain, calculating the gross profit rate for each fiscal year to help support your answer. (Round to one decimal place.)

(a) 2016 €146,600

(c) 2016 Ending accts payable €15,000

***P5-8A** At the beginning of the current season, the ledger of Village Tennis Shop AG showed Cash CHF2,500, Inventory CHF1,700, and Share Capital—Ordinary CHF4,200. The following transactions were completed during April.

Journalize, post, and prepare trial balance and partial income statement using periodic approach.

(LO 7)

Apr. 4 Purchased racquets and balls from Hingis Co. CHF860, terms 3/10, n/30.
6 Paid freight on Hingis Co. purchase CHF74.
8 Sold merchandise to members CHF900, terms n/30.
10 Received credit of CHF60 from Hingis Co. for a racquet that was returned.
11 Purchased tennis shoes from Volker Sports for cash CHF300.
13 Paid Hingis Co. in full.
14 Purchased tennis shirts and shorts from Linzey Sportswear CHF700, terms 2/10, n/60.
15 Received cash refund of CHF90 from Volker Sports for damaged merchandise that was returned.
17 Paid freight on Linzey Sportswear purchase CHF25.
18 Sold merchandise to members CHF1,200, terms n/30.
20 Received CHF500 in cash from members in settlement of their accounts.
21 Paid Linzey Sportswear in full.
27 Granted an allowance of CHF25 to members for tennis clothing that did not fit properly.
30 Received cash payments on account from members CHF630.

The chart of accounts for the tennis shop includes Cash, Accounts Receivable, Inventory, Accounts Payable, Share Capital—Ordinary, Sales Revenue, Sales Returns and Allowances, Purchases, Purchase Returns and Allowances, Purchase Discounts, and Freight-In.

Instructions

(a) Journalize the April transactions using a periodic inventory system.
(b) Using T-accounts, enter the beginning balances in the ledger accounts and post the April transactions.
(c) Prepare a trial balance on April 30, 2017.
(d) Prepare an income statement through gross profit, assuming inventory on hand at April 30 is CHF2,140.

(c) Tot. trial balance CHF6,488
(d) Gross profit CHF744

PROBLEMS: SET B

Journalize purchase and sales transactions under a perpetual inventory system.
(LO 2, 3)

P5-1B Book Nook Warehouse, AG distributes hardcover books to retail stores and extends credit terms of 2/10, n/30 to all of its customers. At the end of May, Book Nook's inventory consisted of books purchased for €2,100. During June, the following merchandising transactions occurred.

June	1	Purchased books on account for €1,850 from Phantom Publishers, FOB destination, terms 2/10, n/30. The appropriate party also made a cash payment of €50 for the freight on this date.
	3	Sold books on account to Ex Libris for €2,600. The cost of the books sold was €1,440.
	6	Received €150 credit for books returned to Phantom Publishers.
	9	Paid Phantom Publishers in full, less discount.
	15	Received payment in full from Ex Libris.
	17	Sold books on account to Bargain Books for €1,800. The cost of the books sold was €1,040.
	20	Purchased books on account for €1,500 from Bookem Publishers, FOB destination, terms 2/15, n/30. The appropriate party also made a cash payment of €50 for the freight on this date.
	24	Received payment in full from Bargain Books.
	26	Paid Bookem Publishers in full, less discount.
	28	Sold books on account to Corner Bookstore for €1,300. The cost of the books sold was €850.
	30	Granted Corner Bookstore €125 credit for books returned costing €74.

Book Nook Warehouse's chart of accounts includes the following: No. 101 Cash, No. 112 Accounts Receivable, No. 120 Inventory, No. 201 Accounts Payable, No. 401 Sales Revenue, No. 412 Sales Returns and Allowances, No. 414 Sales Discounts, and No. 505 Cost of Goods Sold.

Instructions

Journalize the transactions for the month of June for Book Nook Warehouse using a perpetual inventory system.

Journalize, post, and prepare a partial income statement.
(LO 2, 3, 5)

P5-2B Norwich Hardware Store, Ltd. completed the following merchandising transactions in the month of May. At the beginning of May, the ledger of Norwich showed Cash of £5,000 and Share Capital—Ordinary of £5,000.

May	1	Purchased merchandise on account from Nute's Wholesale Supply £4,200, terms 2/10, n/30.
	2	Sold merchandise on account £2,300, terms 1/10, n/30. The cost of the merchandise sold was £1,300.
	5	Received credit from Nute's Wholesale Supply for merchandise returned £500.
	9	Received collections in full, less discounts, from customers billed on sales of £2,300 on May 2.
	10	Paid Nute's Wholesale Supply in full, less discount.
	11	Purchased supplies for cash £400.
	12	Purchased merchandise for cash £1,400.

May 15 Received refund for poor quality merchandise from supplier on cash purchase £150.
17 Purchased merchandise from Sherrick Distributors £1,300, FOB shipping point, terms 2/10, n/30.
19 Paid freight on May 17 purchase £130.
24 Sold merchandise for cash £3,200. The merchandise sold had a cost of £2,000.
25 Purchased merchandise from Herbert, Inc. £620, FOB destination, terms 2/10, n/30.
27 Paid Sherrick Distributors in full, less discount.
29 Made refunds to cash customers for defective merchandise £90. The returned merchandise had a fair value of £40.
31 Sold merchandise on account £1,000 terms n/30. The cost of the merchandise sold was £560.

Norwich Hardware's chart of accounts includes the following: No. 101 Cash, No. 112 Accounts Receivable, No. 120 Inventory, No. 126 Supplies, No. 201 Accounts Payable, No. 311 Share Capital—Ordinary, No. 401 Sales Revenue, No. 412 Sales Returns and Allowances, No. 414 Sales Discounts, and No. 505 Cost of Goods Sold.

Instructions

(a) Journalize the transactions using a perpetual inventory system.
(b) Enter the beginning cash and share capital—ordinary balances and post the transactions. (Use J1 for the journal reference.)
(c) Prepare an income statement through gross profit for the month of May 2017.

(c) Gross profit £2,567

Prepare financial statements and adjusting and closing entries.

(LO 4, 5)

P5-3B Lerwick Store Ltd. is located in midtown Metropolis. During the past several years, net income has been declining because of suburban shopping centers. At the end of the company's fiscal year on November 30, 2017, the following accounts appeared in two of its trial balances.

	Unadjusted	Adjusted		Unadjusted	Adjusted
Accounts Payable	£ 25,200	£ 25,200	Notes Payable	£ 37,000	£ 37,000
Accounts Receivable	30,500	30,500	Prepaid Insurance	10,500	4,500
Accumulated Depr.—Equip.	22,000	33,000	Property Tax Expense		3,200
Cash	21,000	21,000	Property Taxes Payable		3,200
Cost of Goods Sold	507,000	507,000	Rent Expense	15,000	15,000
Depreciation Expense		11,000	Retained Earnings	61,700	61,700
Dividends	8,000	8,000	Salaries and Wages Expense	96,000	96,000
Equipment	154,300	154,300	Sales Commissions Expense	6,500	13,500
Freight-Out	6,500	6,500	Sales Commissions Payable		7,000
Insurance Expense		6,000	Sales Returns and Allowances	9,000	9,000
Interest Expense	6,100	6,100	Sales Revenue	706,000	706,000
Interest Revenue	8,000	8,000	Share Capital—Ordinary	45,000	45,000
Inventory	26,000	26,000	Utilities Expense	8,500	8,500

Instructions

(a) Prepare an income statement, a retained earnings statement, and a classified statement of financial position. Notes payable are due in 2020.
(b) Journalize the adjusting entries that were made.
(c) Journalize the closing entries that are necessary.

(a) Net income £32,200
Retained earnings £85,900
Total assets £203,300

Journalize, post, and prepare a trial balance.

(LO 2, 3, 4)

P5-4B Emile Kokott, a former disc golf star, operates Emile's Discorama, SA. At the beginning of the current season on April 1, the ledger of Emile's Discorama showed Cash €1,850, Inventory €2,150, and Share Capital—Ordinary €4,000. The following transactions were completed during April.

Apr. 5 Purchased golf discs, bags, and other inventory on account from Ellis Co. €1,200, FOB shipping point, terms 2/10, n/60.
7 Paid freight on the Ellis purchase €75.
9 Received credit from Ellis Co. for merchandise returned €100.
10 Sold merchandise on account for €930, terms n/30. The merchandise sold had a cost of €540.
12 Purchased disc golf shirts and other accessories on account from Penguin Sportswear €720, terms 1/10, n/30.

Apr. 14 Paid Ellis Co. in full, less discount.
17 Received credit from Penguin Sportswear for merchandise returned €120.
20 Made sales on account for €610, terms n/30. The cost of the merchandise sold was €370.
21 Paid Penguin Sportswear in full, less discount.
27 Granted an allowance to customers for clothing that was flawed €20.
30 Received payments on account from customers €960.

The chart of accounts for the store includes the following: No. 101 Cash, No. 112 Accounts Receivable, No. 120 Inventory, No. 201 Accounts Payable, No. 311 Share Capital—Ordinary, No. 401 Sales Revenue, No. 412 Sales Returns and Allowances, and No. 505 Cost of Goods Sold.

Instructions

(a) Journalize the April transactions using a perpetual inventory system.
(b) Enter the beginning balances in the ledger accounts and post the April transactions. (Use J1 for the journal reference.)
(c) Prepare a trial balance on April 30, 2017.

(c) Total debits €5,540

Determine cost of goods sold and gross profit under periodic approach.

(LO 7)

***P5-5B** At the end of Ilhan Department Store's fiscal year on November 30, 2017, these accounts appeared in its adjusted trial balance.

Freight-In	₺ 7,500
Inventory	42,000
Purchases	585,000
Purchase Discounts	5,100
Purchase Returns and Allowances	2,900
Sales Revenue	1,000,000
Sales Returns and Allowances	25,000

Additional facts:

1. Merchandise inventory on November 30, 2017, is ₺54,600.
2. Ilhan Department Store uses a periodic system.

Instructions

Prepare an income statement through gross profit for the year ended November 30, 2017.

Gross profit ₺403,100

Calculate missing amounts and assess profitability.

(LO 7)

***P5-6B** Psang Ltd. operates a retail operation that purchases and sells home entertainment products. The company purchases all merchandise inventory on credit and uses a periodic inventory system. The Accounts Payable account is used for recording inventory purchases only; all other current liabilities are accrued in separate accounts. You are provided with the following selected information for the fiscal years 2014 through 2017, inclusive.

	2014	2015	2016	2017
Income Statement Data				
Sales revenue		£53,000	£ (e)	£46,000
Cost of goods sold		(a)	13,800	14,300
Gross profit		38,300	35,200	(i)
Operating expenses		35,900	(f)	28,600
Net income		£ (b)	£ 2,500	£ (j)
Statement of Financial Position				
Inventory	£7,200	£ (c)	£ 8,100	£ (k)
Accounts payable	3,200	3,400	2,500	(l)
Additional Information				
Purchases of merchandise inventory on account		£14,200	£ (g)	£13,200
Cash payments to suppliers		(d)	(h)	13,600

Instructions

(a) Calculate the missing amounts.
(b) Sales declined over the 3-year fiscal period, 2015–2017. Does that mean that profitability necessarily also declined? Explain, computing the gross profit rate and the profit margin ratio for each fiscal year to help support your answer. (Round to one decimal place.)

(c) £6,700
(g) £15,200
(i) £31,700

***P5-7B** At the beginning of the current season on April 1, the ledger of Oosthuizen Pro Shop, NV showed Cash €3,000; Inventory €4,000; and Share Capital—Ordinary €7,000. The following transactions occurred during April 2017.

Journalize, post, and prepare trial balance and partial income statement using periodic approach.

(LO 7)

Apr.	5	Purchased golf bags, clubs, and balls on account from Balata Co. €1,300, FOB shipping point, terms 2/10, n/60.
	7	Paid freight on Balata Co. purchases €80.
	9	Received credit from Balata Co. for merchandise returned €100.
	10	Sold merchandise on account to members €710, terms n/30.
	12	Purchased golf shoes, sweaters, and other accessories on account from Arrow Sportswear €450, terms 1/10, n/30.
	14	Paid Balata Co. in full.
	17	Received credit from Arrow Sportswear for merchandise returned €50.
	20	Made sales on account to members €600, terms n/30.
	21	Paid Arrow Sportswear in full.
	27	Granted credit to members for clothing that had flaws €55.
	30	Received payments on account from members €590.

The chart of accounts for the pro shop includes Cash, Accounts Receivable, Inventory, Accounts Payable, Share Capital—Ordinary, Sales Revenue, Sales Returns and Allowances, Purchases, Purchase Returns and Allowances, Purchase Discounts, and Freight-In.

Instructions

(a) Journalize the April transactions using a periodic inventory system.

(b) Using T-accounts, enter the beginning balances in the ledger accounts and post the April transactions.

(c) Prepare a trial balance on April 30, 2017.

(d) Prepare an income statement through gross profit, assuming merchandise inventory on hand at April 30 is €4,824.

(c) Tot. trial balance €8,488
Gross profit €427

COMPREHENSIVE PROBLEM

CP5 On December 1, 2017, Jurczyk Distributing Company, Ltd. had the following account balances.

	Debit		Credit
Cash	€ 7,200	Accumulated Depreciation—Equipment	€ 2,200
Accounts Receivable	4,600	Accounts Payable	4,500
Inventory	12,000	Salaries and Wages Payable	1,000
Supplies	1,200	Share Capital—Ordinary	30,000
Equipment	22,000	Retained Earnings	9,300
	€47,000		€47,000

During December, the company completed the following summary transactions.

Dec.	6	Paid €1,600 for salaries and wages due employees, of which €600 is for December and €1,000 is for November salaries and wages payable.
	8	Received €2,100 cash from customers in payment of account (no discount allowed).
	10	Sold merchandise for cash €6,600. The cost of the merchandise sold was €4,100.
	13	Purchased merchandise on account from Gong Co. €9,000, terms 2/10, n/30.
	15	Purchased supplies for cash €2,000.
	18	Sold merchandise on account €12,000, terms 3/10, n/30. The cost of the merchandise sold was €8,400.
	20	Paid salaries and wages €1,800.
	23	Paid Gong Co. in full, less discount.
	27	Received collections in full, less discounts, from customers billed on December 18.

Adjustment data:

1. Accrued salaries and wages payable €800.
2. Depreciation €200 per month.
3. Supplies on hand €1,700.

Instructions

(a) Journalize the December transactions using a perpetual inventory system.

(b) Enter the December 1 balances in the ledger T-accounts and post the December transactions. Use Cost of Goods Sold, Depreciation Expense, Salaries and Wages Expense, Sales Revenue, Sales Discounts, and Supplies Expense.

(c) Journalize and post adjusting entries.

(d) Totals €65,600

(e) Net income €840

(d) Prepare an adjusted trial balance.

(e) Prepare an income statement and a retained earnings statement for December and a classified statement of financial position at December 31.

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–4.)

MC5 Because Mei-ling has had such a successful first few months, she is considering other opportunities to develop her business. One opportunity is the sale of fine European mixers. The owner of Kzinski Supply Company has approached Mei-ling to become the exclusive distributor of these fine mixers in her country. The current cost of a mixer is approximately NT$575, and Mei-ling would sell each one for NT$1,150. Mei-ling comes to you for advice on how to account for these mixers.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP5-1 The financial statements of TSMC are presented in Appendix A at the end of this textbook. The complete annual report, including the notes to the financial statements, is available in the Investors section of the company's website, *www.tsmc.com*.

Instructions

Answer the following questions using TSMC's consolidated income statement.

(a) What was the percentage change in (1) sales (net revenue) and in (2) net income from 2012 to 2013?

(b) What was the company's gross profit rate in 2012 and 2013?

(c) What was the company's percentage of net income to net sales in 2012 and 2013? Comment on any trend in this percentage.

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP5-2 Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C.

Instructions

(a) Based on the information contained in these financial statements, determine each of the following for each company.

(1) Gross profit for the most recent fiscal year reported in the appendices.

(2) Gross profit rate for the most recent fiscal year reported in the appendices.

(3) Operating income for the most recent fiscal year reported in the appendices. (*Note:* Operating income may be described with alternative labels.)

(4) Percentage change in operating income for the most recent fiscal year reported in the appendices.

(b) What conclusions concerning the relative profitability of the two companies can you draw from these data?

Real-World Focus

BYP5-3 No financial decision-maker should ever rely solely on the financial information reported in the annual report to make decisions. It is important to keep abreast of financial news. This activity demonstrates how to search for financial news on the Internet.

Address: **biz.yahoo.com/i**, or go to **www.wiley.com/college/weygandt**

Steps

1. Type in either Nestlé or Petra Foods.
2. Choose **News**.
3. Select an article that sounds interesting to you.

Instructions

(a) What was the source of the article (e.g., Reuters, Businesswire, PR Newswire)?

(b) Assume that you are a personal financial planner and that one of your clients owns shares in the company. Write a brief memo to your client, summarizing the article and explaining the implications of the article for his or her investment.

Critical Thinking

Decision-Making Across the Organization

BYP5-4 Three years ago, Debbie Sells and her brother-in-law Mike Mooney opened Family Department Store, Ltd. For the first two years, business was good, but the following condensed income results for 2016 were disappointing.

FAMILY DEPARTMENT STORE, LTD.
Income Statement
For the Year Ended December 31, 2016

Net sales		£700,000
Cost of goods sold		553,000
Gross profit		147,000
Operating expenses		
Selling expenses	£100,000	
Administrative expenses	20,000	120,000
Net income		£ 27,000

Debbie believes the problem lies in the relatively low gross profit rate (gross profit divided by net sales) of 21%. Mike believes the problem is that operating expenses are too high.

Debbie thinks the gross profit rate can be improved by making both of the following changes. She does not anticipate that these changes will have any effect on operating expenses.

1. Increase average selling prices by 20%. This increase is expected to lower sales volume so that total sales will increase only 5%.
2. Buy merchandise in larger quantities and take all purchase discounts. These changes are expected to increase the gross profit rate by 3 percentage points.

Mike thinks expenses can be cut by making both of the following changes. He feels that these changes will not have any effect on net sales.

1. Cut 2017 sales salaries of £60,000 in half and give sales personnel a commission of 2% of net sales.
2. Reduce store deliveries to one day per week rather than twice a week; this change will reduce 2017 delivery expenses of £30,000 by 40%.

Debbie and Mike come to you for help in deciding the best way to improve net income.

Instructions

With the class divided into groups, answer the following.

(a) Prepare a condensed income statement for 2017, assuming (1) Debbie's changes are implemented and (2) Mike's ideas are adopted.

(b) What is your recommendation to Debbie and Mike?

(c) Prepare a condensed income statement for 2017, assuming both sets of proposed changes are made.

Communication Activity

BYP5-5 The following situation is in chronological order.

1. Dexter decides to buy a surfboard.
2. He calls Boardin Co. to inquire about its surfboards.
3. Two days later, he requests Boardin Co. to make a surfboard.
4. Three days later, Boardin Co. sends Dexter a purchase order to fill out.
5. He sends back the purchase order.
6. Boardin Co. receives the completed purchase order.
7. Boardin Co. completes the surfboard.
8. Dexter picks up the surfboard.
9. Boardin Co. bills Dexter.
10. Boardin Co. receives payment from Dexter.

Instructions

In a memo to the president of Boardin Co., answer the following.

(a) When should Boardin Co. record the sale?

(b) Suppose that with his purchase order, Dexter is required to make a down payment. Would that change your answer?

Ethics Case

BYP5-6 Anita Zurbrugg was just hired as the assistant treasurer of Yorktown Stores. The company is a specialty chain store with nine retail stores concentrated in one metropolitan area. Among other things, the payment of all invoices is centralized in one of the departments Anita will manage. Her primary responsibility is to maintain the company's high credit rating by paying all bills when due and to take advantage of all cash discounts.

Chris Dadian, the former assistant treasurer who has been promoted to treasurer, is training Anita in her new duties. He instructs Anita that she is to continue the practice of preparing all checks "net of discount" and dating the checks the last day of the discount period. "But," Chris continues, "we always hold the checks at least 4 days beyond the discount period before mailing them. That way, we get another 4 days of interest on our money. Most of our creditors need our business and don't complain. And, if they scream about our missing the discount period, we blame it on the mail room or the post office. We've only lost one discount out of every hundred we take that way. I think everybody does it. By the way, welcome to our team!"

Instructions

(a) What are the ethical considerations in this case?

(b) Who are the stakeholders that are harmed or benefitted in this situation?

(c) Should Anita continue the practice started by Chris? Does she have any choice?

Answers to Insight and Accounting Across the Organization Questions

p. 223 Snowboard Company Improves Its Share Appeal Q: If a perpetual system keeps track of inventory on a daily basis, why do companies ever need to do a physical count? **A:** A perpetual system keeps track of all sales and purchases on a continuous basis. This provides a constant record of the number of units in the inventory. However, if employees make errors in recording sales or purchases, or if there is theft, the inventory value will not be correct. As a consequence, all companies do a physical count of inventory at least once a year.

p. 230 Merchandiser's Accounting Causes Alarm Q: Why would an error of this type be of concern to investors, and what steps did the company take to address these concerns? **A:** This error would cause concern for a number of reasons. First, it was a very large amount. Second, it covered multiple periods. This increases concerns that the problem might be even larger than previously disclosed. Finally, it might cause investors to lose confidence in general with the company's accounting practices and the integrity of management. To restore confidence, a new auditor was brought in and the chairman was replaced.

p. 238 Online Sales Stall in India Q: What implications do the lack of customer credit cards and the limited transportation system have for Flipkart's profitability? **A:** Credit card payments reduce many of the costs and complications of payment collection. They also decrease the potential for fraud and theft. The limited transportation system increases the cost of shipping goods to individuals' homes, as well as increasing the likelihood of lost or damaged goods.

A Look at U.S. GAAP

Learning Objective 8

Compare the accounting for merchandising under IFRS and U.S. GAAP.

The basic accounting entries for merchandising are the same under both GAAP and IFRS. The income statement is a required statement under both sets of standards. The basic format is similar although some differences do exist.

Key Points

- *IAS 1*, "Presentation of Financial Statements," provides general guidelines for the reporting of income statement information. Subsequently, a number of international standards have been issued that provide additional guidance to issues related to income statement presentation. The following is the income statement for Wal-Mart Stores, Inc. (USA). The income statement is presented in conformity with GAAP.

Real World

WAL-MART STORES, INC.
Income Statement
For the Year Ended January 31, 2014

(Amounts in millions except per share data)	
Revenues:	
Net sales	$473,076
Membership and other income	3,218
	476,294
Costs and expenses:	
Cost of sales	358,069
Operating, selling, general and administrative expenses	91,353
Operating income	26,872
Interest:	
Debt	2,072
Capital leases	263
Interest income	(119)
Interest, net	2,216
Income from continuing operations before income taxes	24,656
Provision for income taxes:	
Current	8,619
Deferred	(514)
	8,105
Income from continuing operations	16,551
Income (loss) from discontinued operations, net of tax	144
Consolidated net income	16,695
Less consolidated net income attributable to noncontrolling interest	(673)
Consolidated net income attributable to Wal-Mart	$ 16,022

Similarities

- Under both GAAP and IFRS, a company can choose to use either a perpetual or a periodic system.
- Inventories are defined by IFRS as held-for-sale in the ordinary course of business, in the process of production for such sale, or in the form of materials or supplies to be consumed in the production process or in the performing of services. The definition under GAAP is essentially the same.
- Similar to GAAP, comprehensive income under IFRS includes unrealized gains and losses (such as those on non-trading securities) that are not included in the calculation of net income.

Differences

- Under GAAP, companies generally classify income statement items by function. Classification by function leads to descriptions like administration, distribution, and manufacturing. Under IFRS, companies must classify expenses by either nature or by function. Classification by nature leads to descriptions such as the following: salaries, depreciation expense, and utilities expense. If a company uses the functional-expense method on the income statement, disclosure by nature is required in the notes to the financial statements.
- Presentation of the income statement under GAAP follows either a single-step or multiple-step format. IFRS does not mention a single-step or multiple-step approach.
- Under IFRS, revaluation of land, buildings, and intangible assets is permitted. The initial gains and losses resulting from this revaluation are reported as adjustments to equity, often referred to as **other comprehensive income**. The effect of this difference is that the use of IFRS instead of GAAP results in more transactions affecting equity (other comprehensive income) but not net income.
- IFRS requires that two years of income statement information be presented, whereas GAAP requires three years.

Looking to the Future

The IASB and FASB are working on a project that would rework the structure of financial statements. Specifically, this project will address the issue of how to classify various items in the income statement. A main goal of this new approach is to provide information that better represents how businesses are run. In addition, this approach draws attention away from just one number—net income. It will adopt major groupings similar to those currently used by the statement of cash flows (operating, investing, and financing), so that numbers can be more readily traced across statements. For example, the amount of income that is generated by operations would be traceable to the assets and liabilities used to generate the income. Finally, this approach would also provide detail, beyond that currently seen in most statements (either GAAP or IFRS), by requiring that line items be presented both by function and by nature. The new financial statement format was heavily influenced by suggestions from financial analysts.

GAAP Practice

GAAP Self-Test Questions

1. Which of the following would **not** be included in the definition of inventory under GAAP?
   (a) Photocopy paper held for sale by an office-supply store.
   (b) Stereo equipment held for sale by an electronics store.
   (c) Used office equipment held for sale by the human relations department of a plastics company.
   (d) All of the above would meet the definition.
2. Which of the following would **not** be a line item of a company reporting costs by nature?
   (a) Depreciation expense.
   (b) Salaries and wages expense.
   (c) Interest expense.
   (d) Manufacturing expense
3. Which of the following would **not** be a line item of a company reporting costs by function?
   (a) Administration.
   (b) Manufacturing.
   (c) Utilities expense.
   (d) Distribution.

4. Which of the following statements is **false**?
   (a) GAAP specifically requires use of a multiple-step income statement.
   (b) Under GAAP, companies can use either a perpetual or periodic system.
   (c) The proposed new format for financial statements was heavily influenced by the suggestions of financial statement analysts.
   (d) The new income statement format will try to de-emphasize the focus on the "net income" line item.
5. Under the new format for financial statements being proposed under a joint IASB/FASB project:
   (a) all financial statements would adopt headings similar to the current format of the statement of financial position (balance sheet).
   (b) financial statements would be presented consistent with the way management usually run companies.
   (c) companies would be required to report income statement line items by function only.
   (d) the amount of detail shown in the income statement would decrease compared to current presentations.

GAAP Exercises

GAAP5-1 Explain the difference between the "nature-of-expense" and "function-of-expense" classifications.

GAAP5-2 For each of the following income statement line items, state whether the item is a "by nature" expense item or a "by function" expense item.

________ Cost of goods sold.
________ Depreciation expense.
________ Salaries and wages expense.
________ Selling expenses.
________ Utilities expense.
________ Delivery expense.
________ General and administrative expenses.

GAAP5-3 Atlantis Company reported the following amounts in 2017: net income, $150,000; unrealized gain related to revaluation of buildings, $10,000; and unrealized loss on non-trading securities, $(35,000). Determine Atlantis's total comprehensive income for 2017.

GAAP Financial Reporting Problem: Apple Inc.

GAAP5-4 The financial statements of Apple are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions
(Round to one decimal place.)

(a) What was the percentage change in (1) total revenue (net sales) and in (2) net income from 2011 to 2012 and from 2012 to 2013?
(b) What was the company's gross profit margin rate in 2011, 2012, and 2013?
(c) What was the company's percentage of net income to total revenue in 2011, 2012, and 2013?

Answers to GAAP Self-Test Questions
1. c **2.** d **3.** c **4.** a **5.** b

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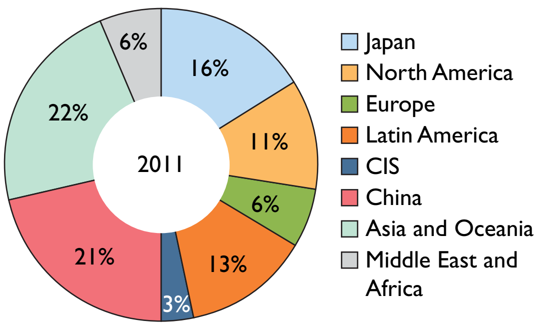
✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER 6 Inventories

FEATURE STORY "Where Is That Spare Bulldozer Blade?"

Let's talk inventory—big, bulldozer-size inventory. Komatsu Ltd. (JPN) is one of the world's largest manufacturers of giant construction and mining equipment. The company's name is actually somewhat ironic, since *komatsu* is Japanese for "small pine tree." But, there is nothing small about what Komatsu does. It produces many types of earthmoving equipment: excavators, forestry equipment for hauling giant logs, forklifts, metal presses, and lots of other really big things. It is the second largest seller of heavy equipment in the world. And, as the chart below shows, it sells this equipment in every region of the world.

Komatsu Sales by Region



How does a company remain profitable if it sells so many different products, many of them giant, all over the world? To be profitable, the company needs to effectively manage its inventory. Imagine what it costs Komatsu to have too many D575 bulldozers (the largest bulldozers in the world) sitting around in inventory. That is something the company definitely wants to avoid. On the other hand, the company must make sure that it has enough inventory readily available to meet demand, or it will lose sales.

Komatsu's inventory management expertise has helped it meet many challenges, including Japan's recent tsunami. In fact, Komatsu is so good at managing its own inventory that it actually has a division, Komatsu Logistics, that helps other companies address their inventory challenges. It offers a broad range of services such as disassembly, packing, storage, assembly, and international distribution. When you build equipment that is used to move mountains, everything else seems easy.

Sources: Company website and Peter Marsh, "Komatsu Carries Strong Yen Load," *Financial Times (www.FT.com)* (October 25, 2010).

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- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 300–306
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problems
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Discuss how to classify and determine inventory.
2. Explain the accounting for inventories and apply the inventory cost flow methods.
3. Explain the financial effects of the inventory cost flow assumptions.
4. Explain the lower-of-cost-or-net realizable value basis of accounting for inventories.
5. Indicate the effects of inventory errors on the financial statements.
6. Discuss the presentation and analysis of inventory.

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PREVIEW OF CHAPTER 6

In the previous chapter, we discussed the accounting for merchandise inventory using a perpetual inventory system. In this chapter, we explain the methods used to calculate the cost of inventory on hand at the statement of financial position date and the cost of goods sold.

The content and organization of this chapter are as follows.

INVENTORIES

Classifying and Determining Inventory	Inventory Costing	Inventory Errors	Statement Presentation and Analysis
• Classifying inventory • Determining inventory quantities	• Specific identification • Cost flow assumptions • Financial statement and tax effects • Consistent use • Lower-of-cost-or-net realizable value	• Income statement effects • Statement of financial position effects	• Presentation • Analysis

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Classifying and Determining Inventory

Learning Objective 1

Discuss how to classify and determine inventory.

Two important steps in the reporting of inventory at the end of the accounting period are the classification of inventory based on its degree of completeness and the determination of inventory amounts.

Classifying Inventory

How a company classifies its inventory depends on whether the firm is a merchandiser or a manufacturer. In a **merchandising** company, such as those described in Chapter 5, inventory consists of many different items. For example, in a grocery store, canned goods, dairy products, meats, and produce are just a few of the inventory items on hand. These items have two common characteristics: (1) they are owned by the company, and (2) they are in a form ready for sale to customers in the ordinary course of business. Thus, merchandisers need only one inventory classification, **merchandise inventory**, to describe the many different items that make up the total inventory.

In a **manufacturing** company, some inventory may not yet be ready for sale. As a result, manufacturers usually classify inventory into three categories: finished goods, work in process, and raw materials. **Finished goods inventory** is manufactured items that are completed and ready for sale. **Work in process** is that portion of manufactured inventory that has been placed into the production process but is not yet complete. **Raw materials** are the basic goods that will be used in production but have not yet been placed into production.

• HELPFUL HINT
Regardless of the classification, companies report all inventories under Current Assets on the statement of financial position.

For example, Komatsu (JPN) classifies earthmoving tractors completed and ready for sale as **finished goods**. It classifies the tractors on the assembly line in various stages of production as **work in process**. The steel, glass, tires, and other components that are on hand waiting to be used in the production of tractors are identified as **raw materials**. Illustration 6-1 shows an excerpt from Note 5 of Komatsu's annual report.

Illustration 6-1
Composition of Komatsu's inventory

Real World

KOMATSU
Notes to the Financial Statements
(yen in millions)

	March 31	
	2014	**2013**
Finished products, including finished parts held for sale	¥444,586	¥437,729
Work in process	128,458	141,166
Materials and supplies	52,033	54,752
Total	¥625,077	¥633,647

By observing the levels and changes in the levels of these three inventory types, financial statement users can gain insight into management's production plans. For example, low levels of raw materials and high levels of finished goods suggest that management believes it has enough inventory on hand and production will be slowing down—perhaps in anticipation of a recession. Conversely, high levels of raw materials and low levels of finished goods probably signal that management is planning to step up production.

Many companies have significantly lowered inventory levels and costs using **just-in-time (JIT) inventory** methods. Under a just-in-time method, companies manufacture or purchase goods only when needed for use. Dell (USA) is famous for having developed a system for making computers in response to individual customer requests. Even though it makes each computer to meet each customer's particular specifications, Dell is able to assemble the computer and put it on a truck in less than 48 hours. The success of the JIT system depends on reliable suppliers. By integrating its information systems with those of its suppliers, Dell reduced its inventories to nearly zero. This is a huge advantage in an industry where products become obsolete nearly overnight.

The accounting concepts discussed in this chapter apply to the inventory classifications of both merchandising and manufacturing companies. Our focus here is on merchandise inventory.

Accounting Across the Organization **A Big Hiccup**

JIT can save a company a lot of money, but it isn't without risk. An unexpected disruption in the supply chain can cost a company a lot of money. Japanese automakers experienced just such a disruption when a 6.8-magnitude earthquake caused major damage to the company that produces 50% of their piston rings. The rings themselves cost only $1.50, but you cannot make a car without them. No other supplier could quickly begin producing sufficient quantities of the rings to match the desired specifications. As a result, the automakers were forced to shut down production for a few days—a loss of tens of thousands of cars.

Source: Amy Chozick, "A Key Strategy of Japan's Car Makers Backfires," *Wall Street Journal* (July 20, 2007).

Q What steps might the companies take to avoid such a serious disruption in the future? (See page 325.)

Determining Inventory Quantities

No matter whether they are using a periodic or perpetual inventory system, all companies need to determine inventory quantities at the end of the accounting period. If using a perpetual system, companies take a physical inventory for two reasons:

1. To check the accuracy of their perpetual inventory records.
2. To determine the amount of inventory lost due to wasted raw materials, shoplifting, or employee theft.

Companies using a periodic inventory system take a physical inventory for **two different purposes**: to determine the inventory on hand at the statement of financial position date, and to determine the cost of goods sold for the period.

Determining inventory quantities involves two steps: (1) taking a physical inventory of goods on hand and (2) determining the ownership of goods.

TAKING A PHYSICAL INVENTORY

Companies take a physical inventory at the end of the accounting period. Taking a physical inventory involves actually counting, weighing, or measuring each kind of inventory on hand. In many companies, taking an inventory is a formidable task. Retailers such as PPR (FRA), Esprit Holdings (HKG), or Kingfisher (GBR) have thousands of different inventory items. An inventory count is generally more accurate when goods are not being sold or received during the counting. Consequently, companies often "take inventory" when the business is closed or when business is slow. Many retailers close early on a chosen day in January—after the holiday sales and returns, when inventories are at their lowest level—to count inventory. For example, Wal-Mart Stores, Inc. (USA) has a year-end of January 31.

Ethics Note

In a famous fraud, a salad oil company filled its storage tanks mostly with water. The oil rose to the top, so auditors thought the tanks were full of oil. The company also said it had more tanks than it really did: It repainted numbers on the tanks to confuse auditors.

Ethics Insight Falsifying Inventory to Boost Income


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Managers at a women's apparel maker were convicted of falsifying inventory records to boost net income—and consequently to boost management bonuses. In another case, executives at an electronics manufacturer were accused of defrauding lenders by manipulating inventory records. The indictment said the company classified "defective goods as new or refurbished" and claimed that it owned certain shipments "from overseas suppliers" when, in fact, the company either did not own the shipments or the shipments did not exist.

Q What effect does an overstatement of inventory have on a company's financial statements? (See page 325.)

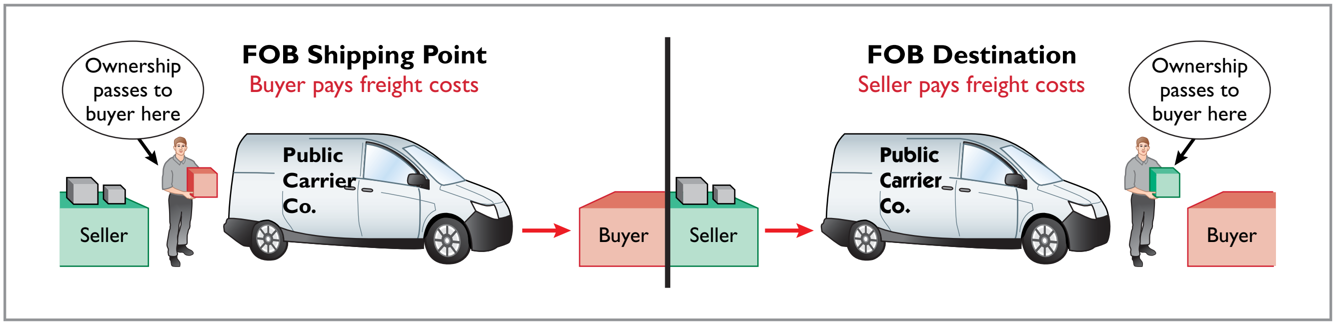
DETERMINING OWNERSHIP OF GOODS

One challenge in computing inventory quantities is determining what inventory a company owns. To determine ownership of goods, two questions must be answered: Do all of the goods included in the count belong to the company? Does the company own any goods that were not included in the count?

GOODS IN TRANSIT A complication in determining ownership is **goods in transit** (on board a truck, train, ship, or plane) at the end of the period. The company may have purchased goods that have not yet been received, or it may have sold goods that have not yet been delivered. To arrive at an accurate count, the company must determine ownership of these goods.

Goods in transit should be included in the inventory of the company that has legal title to the goods. Legal title is determined by the terms of the sale, as shown in Illustration 6-2 and described below.

Illustration 6-2
Terms of sale



1. When the terms are **FOB (free on board) shipping point**, ownership of the goods passes to the buyer when the public carrier accepts the goods from the seller.
2. When the terms are **FOB destination**, ownership of the goods remains with the seller until the goods reach the buyer.

If goods in transit at the statement date are ignored, inventory quantities may be seriously miscounted. Assume, for example, that Hargrove Company has 20,000 units of inventory on hand on December 31. It also has the following goods in transit:

1. Sales of 1,500 units shipped December 31 FOB destination.
2. Purchases of 2,500 units shipped FOB shipping point by the seller on December 31.

Hargrove has legal title to both the 1,500 units sold and the 2,500 units purchased. If the company ignores the units in transit, it would understate inventory quantities by 4,000 units (1,500 + 2,500).

As we will see later in the chapter, inaccurate inventory counts affect not only the inventory amount shown on the statement of financial position but also the cost of goods sold calculation on the income statement.

CONSIGNED GOODS In some lines of business, it is common to hold the goods of other parties and try to sell the goods for them for a fee, but without taking ownership of the goods. These are called **consigned goods**.

For example, you might have a used car that you would like to sell. If you take the item to a dealer, the dealer might be willing to put the car on its lot and charge you a commission if it is sold. Under this agreement, the dealer **would not take ownership** of the car, which would still belong to you. Therefore, if an inventory count were taken, the car would not be included in the dealer's inventory.

Many car, boat, and antique dealers sell goods on consignment to keep their inventory costs down and to avoid the risk of purchasing an item that they will not be able to sell. Today, even some manufacturers are making consignment agreements with their suppliers in order to keep their inventory levels low.

ANATOMY OF A FRAUD

Ted Nickerson, CEO of clock manufacturer Dally Industries, was feared by all of his employees. Ted also had expensive tastes. To support this habit, Ted took out large loans, which he collateralized with his ordinary shares of Dally Industries. If the price of Dally's shares fell, he was required to provide the bank with more ordinary shares. To achieve target net income figures and thus maintain the share price, Ted coerced employees in the company to alter inventory figures. Inventory quantities were manipulated by changing the amounts on inventory control tags after the year-end physical inventory count. For example, if a tag said there were 20 units of a particular item, the tag was changed to 220. Similarly, the unit costs that were used to determine the value of ending inventory were increased from, for example, $125 per unit to $1,250. Both of these fraudulent changes had the effect of increasing the amount of reported ending inventory. This reduced cost of goods sold and increased net income.

Total take: $245,000

THE MISSING CONTROL

Independent internal verification. The company should have spot-checked its inventory records periodically, verifying that the number of units in the records agreed with the amount on hand and that the unit costs agreed with vendor price sheets.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 502–509.

DO IT!

Rules of Ownership

Deng Yaping Company completed its inventory count. It arrived at a total inventory value of ¥200,000. As a new member of Deng Yaping's accounting department, you have been given the information listed below. Discuss how this information affects the reported cost of inventory.

1. Deng Yaping included in the inventory goods held on consignment for Falls Co., costing ¥15,000.
2. The company did not include in the count purchased goods of ¥10,000 which were in transit (terms: FOB shipping point).
3. The company did not include in the count sold inventory with a cost of ¥12,000 which was in transit (terms: FOB shipping point).

Action Plan

✔ Apply the rules of ownership to goods held on consignment.

✔ Apply the rules of ownership to goods in transit.

Solution

The goods of ¥15,000 held on consignment should be deducted from the inventory count. The goods of ¥10,000 purchased FOB shipping point should be added to the inventory count. Sold goods of ¥12,000 which were in transit FOB shipping point should not be included in the ending inventory. Thus, inventory should be carried at ¥195,000 (¥200,000 − ¥15,000 + ¥10,000).

Related exercise material: **BE6-1, BE6-2, E6-1, E6-2, and DO IT! 6-1.**

✔ The Navigator

Inventory Costing

Learning Objective 2

Explain the accounting for inventories and apply the inventory cost flow methods.

Inventory is accounted for at cost. Cost includes all expenditures necessary to acquire goods and place them in a condition ready for sale. For example, freight costs incurred to acquire inventory are added to the cost of inventory, but the cost of shipping goods to a customer are a selling expense.

After a company has determined the quantity of units of inventory, it applies unit costs to the quantities to compute the total cost of the inventory and the cost of goods sold. This process can be complicated if a company has purchased inventory items at different times and at different prices.

For example, assume that Crivitz TV Company purchases three identical 50-inch TVs on different dates at costs of £700, £750, and £800. During the year, Crivitz sold two sets at £1,200 each. These facts are summarized in Illustration 6-3.

Illustration 6-3
Data for inventory costing example

Purchases			
February 3	1 TV	at	£700
March 5	1 TV	at	£750
May 22	1 TV	at	£800
Sales			
June 1	2 TVs	for	£2,400 (£1,200 × 2)

Cost of goods sold will differ depending on which two TVs the company sold. For example, it might be £1,450 (£700 + £750), or £1,500 (£700 + £800), or £1,550 (£750 + £800). In this section, we discuss alternative costing methods available to Crivitz.

Specific Identification

If Crivitz can positively identify which particular units it sold and which are still in ending inventory, it can use the **specific identification method** of inventory costing. For example, if Crivitz sold the TVs it purchased on February 3 and May 22, then its cost of goods sold is £1,500 (£700 + £800), and its ending inventory is £750 (see Illustration 6-4). Using this method, companies can accurately determine ending inventory and cost of goods sold.

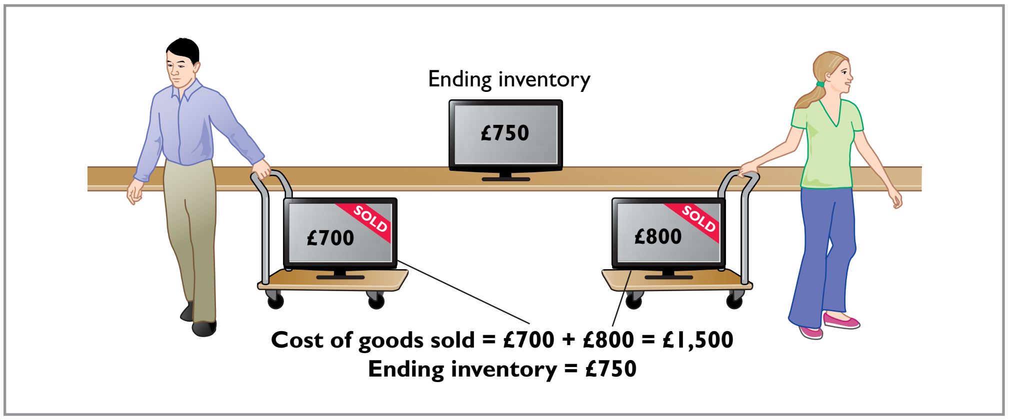


Illustration 6-4
Specific identification method

Specific identification requires that companies keep records of the original cost of each individual inventory item. Historically, specific identification was possible only when a company sold a limited variety of high-unit-cost items that could be identified clearly from the time of purchase through the time of sale. Examples of such products are cars, pianos, or expensive antiques.

Today, bar coding, electronic product codes, and radio frequency identification make it theoretically possible to do specific identification with nearly any type of product. The reality is, however, that this practice is still relatively rare. Instead, rather than keep track of the cost of each particular item sold, most companies make assumptions, called **cost flow assumptions**, about which units were sold.

Ethics Note

A major disadvantage of the specific identification method is that management may be able to manipulate net income. For example, it can boost net income by selling units purchased at a low cost, or reduce net income by selling units purchased at a high cost.

Cost Flow Assumptions

Because specific identification is often impractical, other cost flow methods are permitted. These differ from specific identification in that they **assume** flows of costs that may be unrelated to the physical flow of goods. There are two assumed cost flow methods:

1. First-in, first-out (FIFO)
2. Average-cost

There is no accounting requirement that the cost flow assumption be consistent with the physical movement of the goods. Company management selects the appropriate cost flow method.

To demonstrate the two cost flow methods, we will use a **periodic** inventory system. We assume a periodic system for two main reasons. First, many small companies use periodic rather than perpetual systems. Second, **very few companies use perpetual FIFO or average-cost** to cost their inventory and related cost of goods sold. Instead, companies that use perpetual systems often use an assumed cost (called a standard cost) to record cost of goods sold at the time of sale. Then, at the end of the period when they count their inventory, they

recalculate cost of goods sold using periodic FIFO or average-cost and adjust cost of goods sold to this recalculated number.[1]

To illustrate the two inventory cost flow methods, we will use the data for Lin Electronics' Astro condensers, shown in Illustration 6-5.

Illustration 6-5
Data for Lin Electronics

LIN ELECTRONICS
Astro Condensers

Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	10	HK$100	HK$ 1,000
Apr. 15	Purchase	20	110	2,200
Aug. 24	Purchase	30	120	3,600
Nov. 27	Purchase	40	130	5,200
	Total units available for sale	100		HK$12,000
	Units in ending inventory	(45)		
	Units sold	55		

The cost of goods sold formula in a periodic system is:

(Beginning Inventory + Purchases) − Ending Inventory = Cost of Goods Sold

Lin Electronics had a total of 100 units available to sell during the period (beginning inventory plus purchases). The total cost of these 100 units is HK$12,000, referred to as **cost of goods available for sale**. A physical inventory taken at December 31 determined that there were 45 units in ending inventory. Therefore, Lin sold 55 units (100 − 45) during the period. To determine the cost of the 55 units that were sold (the cost of goods sold), we assign a cost to the ending inventory and subtract that value from the cost of goods available for sale. The value assigned to the ending inventory **will depend on which cost flow method we use**. No matter which cost flow assumption we use, though, the sum of cost of goods sold plus the cost of the ending inventory must equal the cost of goods available for sale—in this case, HK$12,000.

FIRST-IN, FIRST-OUT (FIFO)

The **first-in, first-out (FIFO) method** assumes that the **earliest goods** purchased are the first to be sold. FIFO often parallels the actual physical flow of merchandise. That is, it generally is good business practice to sell the oldest units first. Under the FIFO method, therefore, the **costs** of the earliest goods purchased are the first to be recognized in determining cost of goods sold. (This does not necessarily mean that the oldest units **are** sold first, but that the costs of the oldest units are **recognized** first. In a bin of picture hangers at the hardware store, for example, no one really knows, nor would it matter, which hangers are sold first.) Illustration 6-6 shows the allocation of the cost of goods available for sale at Lin Electronics under FIFO.

[1]Also, some companies use a perpetual system to keep track of units, but they do not make an entry for perpetual cost of goods sold. FIFO periodic and FIFO perpetual give the same result. Therefore, companies should not incur the additional cost to use FIFO perpetual. Few companies use perpetual average-cost because of the added cost of record-keeping. Finally, for instructional purposes, we believe it is easier to demonstrate the cost flow assumptions under the periodic system, which makes it more pedagogically appropriate.

Illustration 6-6
Allocation of costs—FIFO method

Cost of Goods Available for Sale

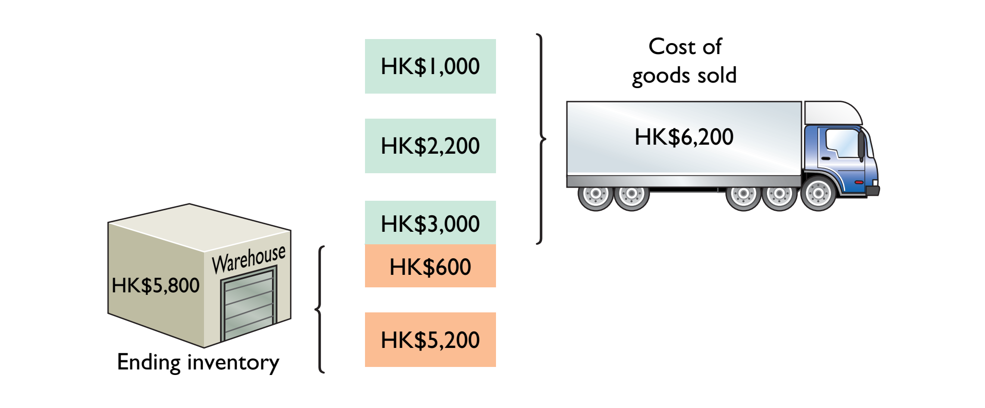
Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	10	HK$100	HK $ 1,000
Apr. 15	Purchase	20	110	2,200
Aug. 24	Purchase	30	120	3,600
Nov. 27	Purchase	40	130	5,200
	Total	100		**HK$12,000**

Step 1: Ending Inventory

Date	Units	Unit Cost	Total Cost
Nov. 27	40	HK$130	HK$ 5,200
Aug. 24	5	120	600
Total	45		**HK$5,800**

Step 2: Cost of Goods Sold

Cost of goods available for sale	HK$12,000
Less: Ending inventory	5,800
Cost of goods sold	**HK$ 6,200**



• HELPFUL HINT
Note the sequencing of the allocation: (1) compute ending inventory, and (2) determine cost of goods sold.

• HELPFUL HINT
Another way of thinking about the calculation of FIFO ending inventory is the **LISH assumption**—last in still here.

Under FIFO, since it is assumed that the first goods purchased were the first goods sold, ending inventory is based on the prices of the most recent units purchased. That is, **under FIFO, companies obtain the cost of the ending inventory by taking the unit cost of the most recent purchase and working backward until all units of inventory have been costed**. In this example, Lin Electronics prices the 45 units of ending inventory using the **most recent** prices. The last purchase was 40 units at HK$130 on November 27. The remaining 5 units are priced using the unit cost of the second most recent purchase, HK$120, on August 24. Next, Lin Electronics calculates cost of goods sold by subtracting the cost of the units **not sold** (ending inventory) from the cost of all goods available for sale.

Illustration 6-7 demonstrates that companies also can calculate cost of goods sold by pricing the 55 units sold using the prices of the first 55 units acquired. Note that of the 30 units purchased on August 24, only 25 units are assumed sold. This agrees with our calculation of the cost of ending inventory, where 5 of these units were assumed unsold and thus included in ending inventory.

Illustration 6-7
Proof of cost of goods sold

Date	Units	Unit Cost	Total Cost
Jan. 1	10	HK$100	HK$ 1,000
Apr. 15	20	110	2,200
Aug. 24	25	120	3,000
Total	55		**HK$6,200**

AVERAGE-COST

The **average-cost method** allocates the cost of goods available for sale on the basis of the **weighted-average unit cost** incurred. The average-cost method assumes that goods are similar in nature. Illustration 6-8 presents the formula and a sample computation of the weighted-average unit cost.

Illustration 6-8
Formula for weighted-average unit cost

Cost of Goods Available for Sale	÷	Total Units Available for Sale	=	Weighted-Average Unit Cost
HK$12,000	÷	100	=	HK$120

The company then applies the weighted-average unit cost to the units on hand to determine the cost of the ending inventory. Illustration 6-9 shows the allocation of the cost of goods available for sale at Lin Electronics using average-cost.

Illustration 6-9
Allocation of costs—average-cost method

Cost of Goods Available for Sale

Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	10	HK$100	HK$ 1,000
Apr. 15	Purchase	20	110	2,200
Aug. 24	Purchase	30	120	3,600
Nov. 27	Purchase	40	130	5,200
	Total	100		**HK$12,000**

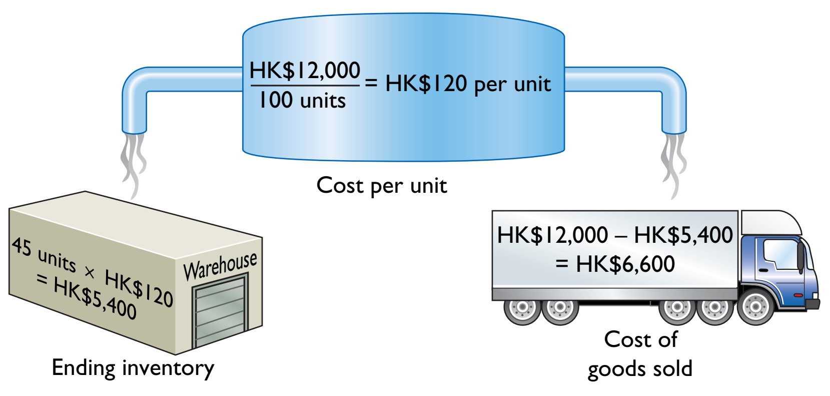
Step 1: Ending Inventory

HK$12,000 ÷ 100 = HK$120

Units	Unit Cost	Total Cost
45	HK$120	**HK$5,400**

Step 2: Cost of Goods Sold

Cost of goods available for sale	HK$12,000
Less: Ending inventory	5,400
Cost of goods sold	**HK$ 6,600**



We can verify the cost of goods sold under this method by multiplying the units sold times the weighted-average unit cost (55 × HK$120 = HK$6,600). Note that this method does not use the average of the unit costs. That average is HK$115 (HK$100 + HK$110 + HK$120 + HK$130 = HK$460; HK$460 ÷ 4).

The average-cost method instead uses the average **weighted by** the quantities purchased at each unit cost.[2]

DO IT!

Cost Flow Methods

The accounting records of Shumway Ag Implement show the following data.

Beginning inventory	4,000 units at £ 3
Purchases	6,000 units at £ 4
Sales	7,000 units at £12

Determine the cost of goods sold during the period under a periodic inventory system using (a) the FIFO method and (b) the average-cost method.

Action Plan

✔ Understand the periodic inventory system.

✔ Allocate costs between goods sold and goods on hand (ending inventory) for each cost flow method.

✔ Compute cost of goods sold for each method.

Solution

Cost of goods available for sale = (4,000 × £3) + (6,000 × £4) = £36,000
Ending inventory = 10,000 − 7,000 = 3,000 units

(a) FIFO: £36,000 − (3,000 × £4) = £24,000

(b) Average cost per unit: [(4,000 × £3) + (6,000 × £4)] ÷ 10,000 = £3.60
Average-cost: £36,000 − (3,000 × £3.60) = £25,200

Related exercise material: **BE6-3, E6-3, E6-4, E6-5, E6-6, E6-7, and DO IT! 6-2.**

✔ The Navigator

Financial Statement and Tax Effects of Cost Flow Methods

Learning Objective 3

Explain the financial effects of the inventory cost flow assumptions.

Either of the two cost flow assumptions is acceptable for use. For example, adidas (DEU) and Lenovo (CHN) use the average-cost method, whereas Syngenta Group (CHE) and Nokia (FIN) use FIFO. A recent survey of IFRS companies indicated that approximately 60% of these companies use the average-cost method, with 40% using FIFO. In fact, approximately 23% use both average-cost and FIFO for different parts of their inventory.

The reasons companies adopt different inventory cost flow methods are varied, but they usually involve one of three factors: (1) income statement effects, (2) statement of financial position effects, or (3) tax effects.

INCOME STATEMENT EFFECTS

To understand why companies choose either FIFO or average-cost, let's examine the effects of these two cost flow assumptions on the financial statements of Lin Electronics. The condensed income statements in Illustration 6-10 (page 288) assume that Lin sold its 55 units for HK$11,500, had operating expenses of HK$2,000, and is subject to an income tax rate of 30%.

Note the cost of goods available for sale (HK$12,000) is the same under both FIFO and average-cost. However, the ending inventories and the costs of goods sold are different. This difference is due to the unit costs that the company allocated to cost of goods sold and to ending inventory. Each dollar of difference in ending inventory results in a corresponding dollar difference in income before income taxes. For Lin, a HK$400 difference exists between cost of goods sold using FIFO versus average-cost.

[2]A cost flow method that is used extensively in the United States is the last-in, first-out (LIFO) method. Under IFRS, LIFO is not permitted for financial reporting purposes because the IASB states that LIFO does not provide a reliable representation of recent cost levels of inventory. Appendix 6C discusses the basics of the LIFO method.

Illustration 6-10
Comparative effects of cost flow methods

LIN ELECTRONICS
Condensed Income Statements

	FIFO	Average-Cost
Sales revenue	HK$11,500	HK$11,500
Beginning inventory	1,000	1,000
Purchases	11,000	11,000
Cost of goods available for sale	12,000	12,000
Ending inventory	**5,800**	**5,400**
Cost of goods sold	6,200	6,600
Gross profit	5,300	4,900
Operating expenses	2,000	2,000
Income before income taxes*	3,300	2,900
Income tax expense (30%)	990	870
Net income	**HK$ 2,310**	**HK$ 2,030**

*We are assuming that Lin Electronics is a corporation, and corporations are required to pay income taxes.

In periods of changing prices, the cost flow assumption can have a significant impact on income and on evaluations based on income, such as the following.

1. In a period of inflation, FIFO produces a higher net income because the lower unit costs of the first units purchased are matched against revenues.
2. In a period of rising prices (as is the case in the Lin example), FIFO reports a higher net income (HK$2,310) than average-cost (HK$2,030).
3. If prices are falling, the results from the use of FIFO and average-cost are reversed. FIFO will report the lower net income and average-cost the higher.

To management, higher net income is an advantage. It causes external users to view the company more favorably. In addition, management bonuses, if based on net income, will be higher. Therefore, when prices are rising (which is usually the case), companies tend to prefer FIFO because it results in higher net income.

STATEMENT OF FINANCIAL POSITION EFFECTS

A major advantage of the FIFO method is that in a period of inflation, the costs allocated to ending inventory will approximate their current cost. For example, for Lin Electronics, 40 of the 45 units in the ending inventory are costed under FIFO at the higher November 27 unit cost of HK$130.

Conversely, a shortcoming of the average-cost method is that in a period of inflation, the costs allocated to ending inventory may be understated in terms of current cost. The understatement becomes greater over prolonged periods of inflation if the inventory includes goods purchased in one or more prior accounting periods.

TAX EFFECTS

We have seen that both inventory on the statement of financial position and net income on the income statement are higher when companies use FIFO in a period of inflation. Yet, some companies use average-cost. Why? The reason is that average-cost results in lower income taxes (because of lower net income) during times of rising prices. For example, at Lin Electronics, income taxes are HK$870 under average-cost, compared to HK$990 under FIFO. The tax savings of HK$120 makes more cash available for use in the business.

Using Inventory Cost Flow Methods Consistently

Whatever cost flow method a company chooses, it should use that method consistently from one accounting period to another. This approach is often referred to as the **consistency concept**, which means that a company uses the same accounting principles and methods from year to year. Consistent application enhances the comparability of financial statements over successive time periods. In contrast, using the FIFO method one year and the average-cost method the next year would make it difficult to compare the net incomes of the two years.

Although consistent application is preferred, it does not mean that a company may never change its inventory costing method. When a company adopts a different method, it should disclose in the financial statements the change and its effects on net income.

Global Insight **Is LIFO Fair?**

ExxonMobil Corporation (USA)

© AP/Wide World Photos

ExxonMobil Corporation (USA), like many U.S. companies, uses a cost flow assumption called last-in, first-out (LIFO) to value its inventory for financial reporting and tax purposes. In one recent year, this resulted in a cost of goods sold figure that was $5.6 billion higher than under FIFO. By increasing cost of goods sold, ExxonMobil reduces net income, which reduces taxes. Critics say that LIFO provides an unfair "tax dodge." As the U.S. Congress looks for more sources of tax revenue, some lawmakers favor the elimination of LIFO. Supporters of LIFO argue that the method is conceptually sound because it matches current costs with current revenues. In addition, they point out that this matching provides protection against inflation.

International accounting standards do not allow the use of LIFO. Because of this, the net income of foreign oil companies, such as BP (GBR) and Royal Dutch Shell (GBR and NLD), are not directly comparable to U.S. companies, which makes analysis difficult.

Source: David Reilly, "Big Oil's Accounting Methods Fuel Criticism," *Wall Street Journal* (August 8, 2006), p. C1.

Q What are the arguments for and against the use of LIFO? (See page 325.)

Lower-of-Cost-or-Net Realizable Value

Learning Objective 4

Explain the lower-of-cost-or-net realizable value basis of accounting for inventories.

The value of inventory for companies selling high-technology or fashion goods can drop very quickly due to continual changes in technology or styles. These circumstances sometimes call for inventory valuation methods other than those presented so far. For example, assume that purchasing managers at Mulroy Company decided to make a large purchase of palladium, a precious metal used in vehicle emission devices. They made this purchase because they feared a future shortage. The shortage did not materialize, and by the end of the year the price of palladium had plummeted. Mulroy's inventory was then worth $1 billion less than its original cost. Do you think Mulroy's inventory should have been stated at cost, in accordance with the historical cost principle, or at its net realizable value?

As you probably reasoned, this situation requires a departure from the cost basis of accounting. When the value of inventory is lower than its cost, companies must "write down" the inventory to its net realizable value. This is done by valuing the inventory at the **lower-of-cost-or-net realizable value (LCNRV)** in the period in which the price decline occurs. LCNRV is an example of the accounting concept of **prudence**, which means that the best choice among accounting alternatives is the method that is least likely to overstate assets and net income.

Under the LCNRV basis, **net realizable value** refers to the net amount that a company expects to realize (receive) from the sale of inventory. Specifically, net realizable value is the estimated selling price in the normal course of business, less estimated costs to complete and sell.

Companies apply LCNRV to the items in inventory after they have used one of the inventory costing methods (specific identification, FIFO, or average-cost) to determine cost. To illustrate the application of LCNRV, assume that Gāo TV has the following lines of merchandise with costs and net realizable values as indicated. LCNRV produces the results shown in Illustration 6-11. Note that the amounts shown in the final column are the lower-of-cost-or-net realizable value amounts for each item.

Illustration 6-11
Computation of lower-of-cost-or-net realizable value

	Units	Cost per Unit	Net Realizable Value per Unit	Lower-of-Cost-or-Net Realizable Value	
Flat-screen TVs	100	NT$600	**NT$550**	NT$ 55,000	(NT$550 × 100)
Satellite radios	500	**90**	104	45,000	(NT$90 × 500)
DVD recorders	850	50	**48**	40,800	(NT$48 × 850)
DVDs	3,000	**5**	6	15,000	(NT$5 × 3,000)
Total inventory				NT$155,800	

Inventory Errors

Learning Objective 5

Indicate the effects of inventory errors on the financial statements.

Unfortunately, errors occasionally occur in accounting for inventory. In some cases, errors are caused by failure to count or price the inventory correctly. In other cases, errors occur because companies do not properly recognize the transfer of legal title to goods that are in transit. When errors occur, they affect both the income statement and the statement of financial position.

Income Statement Effects

The ending inventory of one period automatically becomes the beginning inventory of the next period. Thus, inventory errors affect the computation of cost of goods sold and net income in two periods.

The effects on cost of goods sold can be computed by first entering incorrect data in the formula in Illustration 6-12 and then substituting the correct data.

Illustration 6-12
Formula for cost of goods sold

Beginning Inventory	+	Cost of Goods Purchased	−	Ending Inventory	=	Cost of Goods Sold

If the error understates **beginning** inventory, cost of goods sold will be understated. If the error understates **ending** inventory, cost of goods sold will be overstated. Illustration 6-13 shows the effects of inventory errors on the current year's income statement.

Illustration 6-13
Effects of inventory errors on current year's income statement

When Inventory Error:	Cost of Goods Sold Is:	Net Income Is:
Understates beginning inventory	Understated	Overstated
Overstates beginning inventory	Overstated	Understated
Understates ending inventory	Overstated	Understated
Overstates ending inventory	Understated	Overstated

So far, the effects of inventory errors are fairly straightforward. Now, though, comes the (at first) surprising part: An error in the ending inventory of the current period will have a **reverse effect on net income of the next accounting period**. Illustration 6-14 shows this effect. As you study the illustration, you will see that the reverse effect comes from the fact that understating ending inventory in 2016 results in understating beginning inventory in 2017 and overstating net income in 2017.

Over the two years, though, total net income is correct because the errors **offset each other**. Notice that total income using incorrect data is €35,000 (€22,000 + €13,000), which is the same as the total income of €35,000 (€25,000 + €10,000) using correct data. Also note in this example that an error in the beginning inventory does not result in a corresponding error in the ending inventory for that period. The correctness of the ending inventory depends entirely on the accuracy of taking and costing the inventory at the statement of financial position date under the periodic inventory system.

Ethics Note

Inventory fraud increases during recessions. Such fraud includes reporting inventory at amounts in excess of its actual value, or claiming to have inventory when no inventory exists. Inventory fraud usually overstates ending inventory, thereby understating cost of goods sold and creating higher income.

SAMPLE COMPANY
Condensed Income Statements

	2016				2017			
	Incorrect		Correct		Incorrect		Correct	
Sales revenue		€80,000		€80,000		€90,000		€90,000
Beginning inventory	€20,000		€20,000		**€12,000**		**€15,000**	
Cost of goods purchased	40,000		40,000		68,000		68,000	
Cost of goods available for sale	60,000		60,000		80,000		83,000	
Ending inventory	**12,000**		**15,000**		23,000		23,000	
Cost of goods sold		48,000		45,000		57,000		60,000
Gross profit		32,000		35,000		33,000		30,000
Operating expenses		10,000		10,000		20,000		20,000
Net income		€22,000		€25,000		€13,000		€10,000

€(3,000) Net income understated

€3,000 Net income overstated

The errors cancel. Thus the combined total income for the 2-year period is correct.

Illustration 6-14
Effects of inventory errors on two years' income statements

Statement of Financial Position Effects

Companies can determine the effect of ending inventory errors on the statement of financial position by using the basic accounting equation: Assets = Liabilities + Equity. Errors in the ending inventory have the effects shown in Illustration 6-15.

Ending Inventory Error	Assets	Liabilities	Equity
Overstated	Overstated	No effect	Overstated
Understated	Understated	No effect	Understated

Illustration 6-15
Effects of ending inventory errors on the statement of financial position

The effect of an error in ending inventory on the subsequent period was shown in Illustration 6-14. Recall that if the error is not corrected, the combined total net income for the two periods would be correct. Thus, total equity reported on the statement of financial position at the end of 2017 will also be correct.

DO IT!

LCNRV Basis; Inventory Errors

(a) Tracy Company sells three different types of home heating stoves (gas, wood, and pellet). The cost and net realizable value of its inventory of stoves are as follows.

	Cost	Net Realizable Value
Gas	NT$ 84,000	NT$ 79,000
Wood	250,000	280,000
Pellet	112,000	101,000

Determine the value of the company's inventory under the lower-of-cost-or-net realizable value approach.

Action Plan

✔ Determine whether cost or net realizable value is lower for each inventory type.

✔ Sum the lowest value of each inventory type to determine the total value of inventory.

Solution

The lowest value for each inventory type is gas NT$79,000, wood NT$250,000, and pellet NT$101,000. The total inventory value is the sum of these amounts, NT$430,000.

(b) Visual Company overstated its 2016 ending inventory by NT$22,000. Determine the impact this error has on ending inventory, cost of goods sold, and equity in 2016 and 2017.

Action Plan

✔ An ending inventory error in one period will have an equal and opposite effect on cost of goods sold and net income in the next period.

✔ After two years, the errors have offset each other.

Solution

	2016	2017
Ending inventory	NT$22,000 overstated	No effect
Cost of goods sold	NT$22,000 understated	NT$22,000 overstated
Equity	NT$22,000 overstated	No effect

Related exercise material: BE6-5, BE6-6, E6-8, E6-9, E6-10, E6-11, and DO IT! 6-3.

✔ The Navigator

Statement Presentation and Analysis

Learning Objective 6
Discuss the presentation and analysis of inventory.

Presentation

As indicated in Chapter 5, inventory is classified in the statement of financial position as a current asset. In an income statement, cost of goods sold is subtracted from sales. There also should be disclosure of (1) the major inventory classifications, (2) the basis of accounting (cost, or lower-of-cost-or-net realizable value), and (3) the cost method (specific identification, FIFO, or average-cost).

Esprit Holdings (HKG), for example, in a recent statement of financial position reported inventories of HK$3,254 million under current assets. The accompanying notes to the financial statements, as shown in Illustration 6-16, disclosed the following information.

Illustration 6-16
Inventory disclosures by Esprit Holdings

Real World

ESPRIT HOLDINGS LIMITED
Notes to the Financial Statements

Note 2: Summary of Significant Accounting Policies

(i) Inventories

Inventories are stated at the lower of cost and net realizable value with cost being determined on a weighted average basis. Cost comprises the direct costs of merchandise, charges that have been incurred in bringing inventories to their current location and condition and the transfer from equity of any gains and losses on qualifying cash flow hedges relating to purchase of inventories. Net realizable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

As indicated in this note, Esprit Holdings values its inventories at the lower-of-cost-or-net realizable value using average-cost.

Analysis

The amount of inventory carried by a company has significant economic consequences. And inventory management is a double-edged sword that requires constant attention. On the one hand, management wants to have a great variety and quantity on hand so that customers have a wide selection and items are always in stock. But, such a policy may incur high carrying costs (e.g., investment, storage, insurance, obsolescence, and damage). On the other hand, low inventory levels lead to stock-outs and lost sales. Common ratios used to manage and evaluate inventory levels are inventory turnover and a related measure, days in inventory.

Inventory turnover measures the number of times on average the inventory is sold during the period. Its purpose is to measure the liquidity of the inventory. The inventory turnover is computed by dividing cost of goods sold by the average inventory during the period. Unless seasonal factors are significant, average inventory can be computed from the beginning and ending inventory balances. For example, Esprit Holdings (HKG) reported in a recent annual report a beginning inventory of HK$3,209 million, an ending inventory of HK$3,254 million, and cost of goods sold for the year ended of HK$12,071 million. The inventory turnover formula and computation for Esprit Holdings are shown below.

Cost of Goods Sold	÷	Average Inventory	=	Inventory Turnover
HK$12,071	÷	$\frac{\text{HK\$3,209} + \text{HK\$3,254}}{2}$	=	3.7 times

Illustration 6-17
Inventory turnover formula and computation for Esprit Holdings (in millions)

A variant of the inventory turnover is **days in inventory**. This measures the average number of days inventory is held. It is calculated as 365 divided by the inventory turnover. For example, Esprit Holdings' inventory turnover of 3.7 times divided into 365 is approximately 99 days. This is the approximate time that it takes a company to sell the inventory once it arrives at the store.

There are typical levels of inventory in every industry. Companies that are able to keep their inventory at lower levels and higher turnovers and still satisfy customer needs are the most successful.

Accounting Across the Organization **Improving Inventory Control with RFID**

© Jaap Hart/iStockphoto

Many large retailers have improved their inventory control with the introduction of radio frequency identification (RFID). Much like bar codes, which tell a retailer the number of boxes of a specific product it has, RFID goes an additional step, helping to distinguish one box of a specific product from another. RFID uses technology similar to that used by keyless remotes that unlock car doors.

Companies currently use RFID to track shipments from supplier to distribution center to store. Other potential uses include monitoring product expiration dates and acting quickly on product recalls. Many companies also anticipate faster returns and warranty processing using RFID. This technology will further assist managers in their efforts to ensure that their store has just the right type of inventory, in just the right amount, in just the right place.

Q Why is inventory control important to managers at retailers, such as those at Carrefour (FRA) and Metro (DEU)? (See page 325.)

DO IT!

Inventory Turnover

Early in 2017, Seoul Company switched to a just-in-time inventory system. Its sales, cost of goods sold, and inventory amounts for 2016 and 2017 are shown below.

	2016	2017
Sales revenue	₩2,000,000	₩1,800,000
Cost of goods sold	1,000,000	910,000
Beginning inventory	290,000	210,000
Ending inventory	210,000	50,000

Determine the inventory turnover and days in inventory for 2016 and 2017. Discuss the changes in the amount of inventory, the inventory turnover and days in inventory, and the amount of sales across the two years.

Action Plan

✔ To find the inventory turnover, divide cost of goods sold by average inventory.

✔ To determine days in inventory, divide 365 days by the inventory turnover.

✔ Just-in-time inventory reduces the amount of inventory on hand, which reduces carrying costs. Reducing inventory levels by too much has potential negative implications for sales.

Solution

	2016	2017
Inventory turnover	$\frac{\text{₩}1{,}000{,}000}{(\text{₩}290{,}000 + \text{₩}210{,}000)/2} = 4$	$\frac{\text{₩}910{,}000}{(\text{₩}210{,}000 + \text{₩}50{,}000)/2} = 7$
Days in inventory	365 ÷ 4 = 91.3 days	365 ÷ 7 = 52.1 days

The company experienced a very significant decline in its ending inventory as a result of the just-in-time inventory. This decline improved its inventory turnover and its days in inventory. However, its sales declined by 10%. It is possible that this decline was caused by the dramatic reduction in the amount of inventory that was on hand, which increased the likelihood of "stock-outs." To determine the optimal inventory level, management must weigh the benefits of reduced inventory against the potential lost sales caused by stock-outs.

Related exercise material: BE6-7, E6-12, E6-13, and DO IT! 6-4.

✔ The Navigator

APPENDIX 6A Inventory Cost Flow Methods in Perpetual Inventory Systems

Learning Objective *7

Apply the inventory cost flow methods to perpetual inventory records.

What inventory cost flow methods do companies employ if they use a perpetual inventory system? Simple—they can use one of the inventory cost flow methods described in the chapter. To illustrate the application of the two assumed cost flow methods (FIFO and average-cost), we will use the data shown in Illustration 6A-1 and in this chapter for Lin Electronics' Astro condenser.

Illustration 6A-1
Inventoriable units and costs

LIN ELECTRONICS
Astro Condensers

Date	Explanation	Units	Unit Cost	Total Cost	Balance in Units
1/1	Beginning inventory	10	HK$100	HK$ 1,000	10
4/15	Purchases	20	110	2,200	30
8/24	Purchases	30	120	3,600	60
9/10	Sale	55			5
11/27	Purchases	40	130	5,200	45
				HK$12,000	

First-In, First-Out (FIFO)

Under perpetual FIFO, the company charges to cost of goods sold the cost of the earliest goods on hand **prior to each sale**. Therefore, the cost of goods sold on September 10 consists of the units on hand January 1 and the units purchased April 15 and August 24. Illustration 6A-2 shows the inventory under a FIFO method perpetual system.

Illustration 6A-2
Perpetual system—FIFO

Date	Purchases		Cost of Goods Sold	Balance (in units and cost)	
January 1				(10 @ HK$100)	HK$1,000
April 15	(20 @ HK$110)	HK$2,200		(10 @ HK$100) (20 @ HK$110)	HK$3,200
August 24	(30 @ HK$120)	HK$3,600		(10 @ HK$100) (20 @ HK$110) (30 @ HK$120)	HK$6,800
September 10			(10 @ HK$100) (20 @ HK$110) (25 @ HK$120)	(5 @ HK$120)	HK$ 600
			HK$6,200 — Cost of goods sold		
November 27	(40 @ HK$130)	HK$5,200		(5 @ HK$120) (40 @ HK$130)	HK$5,800 — Ending inventory

The ending inventory in this situation is HK$5,800, and the cost of goods sold is HK$6,200 [(10 @ HK$100) + (20 @ HK$110) + (25 @ HK$120)].

Compare Illustrations 6-6 (page 285) and 6A-2. You can see that the results under FIFO in a perpetual system are the **same as in a periodic system**. In both cases, the ending inventory is HK$5,800 and cost of goods sold is HK$6,200. Regardless of the system, the first costs in are the costs assigned to cost of goods sold.

Average-Cost

The average-cost method in a perpetual inventory system is called the **moving-average method**. Under this method, the company computes a new average **after each purchase** by dividing the cost of goods available for sale by the units on hand. The average cost is then applied to (1) the units sold, to determine the cost of goods sold, and (2) the remaining units on hand, to determine the ending inventory amount. Illustration 6A-3 shows the application of the moving-average cost method by Lin Electronics (computations of the moving-average unit cost are shown after Illustration 6A-3).

Illustration 6A-3
Perpetual system—average-cost method

Date	Purchases		Cost of Goods Sold	Balance (in units and cost)	
January 1				(10 @ HK$100)	HK$ 1,000
April 15	(20 @ HK$110)	HK$2,200		(30 @ HK$106.667)	HK$ 3,200
August 24	(30 @ HK$120)	HK$3,600		(60 @ HK$113.333)	HK$ 6,800
September 10			(55 @ HK$113.333)	(5 @ HK$113.333)	HK$ 567
			HK$6,233 — Cost of goods sold		
November 27	(40 @ HK$130)	HK$5,200		(45 @ HK$128.156)	HK$5,767 — Ending inventory

As indicated, Lin Electronics computes **a new average each time it makes a purchase**.

1. On April 15, after it buys 20 units for HK$2,200, a total of 30 units costing HK$3,200 (HK$1,000 + HK$2,200) are on hand. The average unit cost is HK$106.667 (HK$3,200 ÷ 30).

2. On August 24, after Lin Electronics buys 30 units for HK$3,600, a total of 60 units costing HK$6,800 (HK$1,000 + HK$2,200 + HK$3,600) are on hand. The average cost per unit is HK$113.333 (HK$6,800 ÷ 60).
3. On September 10, to compute cost of goods sold, Lin Electronics uses this unit cost of HK$113.333 in costing sales until it makes another purchase, when the company computes a new unit cost. Accordingly, the unit cost of the 55 units sold (on September 10) is HK$113.333, and the total cost of goods sold is HK$6,233.
4. On November 27, following the purchase of 40 units for HK$5,200, there are 45 units on hand costing HK$5,767 (HK$567 + HK$5,200) with a new average cost of HK$128.156 (HK$5,767 ÷ 45).

Compare this moving-average cost under the perpetual inventory system to Illustration 6-9 (on page 286) showing the average-cost method under a periodic inventory system. Unlike FIFO, which results in the same cost for ending inventory under the perpetual and periodic systems, the moving-average method produces different costs.

APPENDIX 6B Estimating Inventories

Learning Objective *8

Describe the two methods of estimating inventories.

In the chapter, we assumed that a company would be able to physically count its inventory. What if it cannot? What if the inventory were destroyed by fire or flood, for example? In that case, the company would use an estimate.

Two circumstances explain why companies sometimes estimate inventories. First, a casualty such as fire, flood, or earthquake may make it impossible to take a physical inventory. Second, managers may want monthly or quarterly financial statements, but a physical inventory is taken only annually. The need for estimating inventories occurs primarily with a periodic inventory system because of the absence of perpetual inventory records.

There are two widely used methods of estimating inventories: (1) the gross profit method, and (2) the retail inventory method.

Gross Profit Method

The **gross profit method** estimates the cost of ending inventory by applying a gross profit rate to net sales. This method is relatively simple but effective. Accountants, auditors, and managers frequently use the gross profit method to test the reasonableness of the ending inventory amount. It will detect large errors.

To use this method, a company needs to know its net sales, cost of goods available for sale, and gross profit rate. The company then can estimate its gross profit for the period. Illustration 6B-1 shows the formulas for using the gross profit method.

Illustration 6B-1
Gross profit method formulas

Step 1:	**Net Sales**	**−**	**Estimated Gross Profit**	**=**	**Estimated Cost of Goods Sold**
Step 2:	**Cost of Goods Available for Sale**	**−**	**Estimated Cost of Goods Sold**	**=**	**Estimated Cost of Ending Inventory**

To illustrate, assume that Kishwaukee Company wishes to prepare an income statement for the month of January. Its records show net sales of $200,000, beginning inventory $40,000, and cost of goods purchased $120,000. In the preceding year, the company realized a 30% gross profit rate. It expects to earn the same rate this year. Given these facts and assumptions, Kishwaukee can compute the estimated cost of the ending inventory at January 31 under the gross profit method as follows.

Illustration 6B-2
Example of gross profit method

Step 1:	
Net sales	$ 200,000
Less: Estimated gross profit (30% × $200,000)	60,000
Estimated cost of goods sold	**$140,000**
Step 2:	
Beginning inventory	$ 40,000
Cost of goods purchased	120,000
Cost of goods available for sale	160,000
Less: Estimated cost of goods sold	140,000
Estimated cost of ending inventory	**$ 20,000**

The gross profit method is based on the assumption that the gross profit rate will remain constant. But, it may not remain constant due to a change in merchandising policies or in market conditions. In such cases, the company should adjust the rate to reflect current operating conditions. In some cases, companies can obtain a more accurate estimate by applying this method on a department or product-line basis.

Note that companies should not use the gross profit method to prepare financial statements at the end of the year. These statements should be based on a physical inventory count.

Retail Inventory Method

A retail store, such as President Chain Store (TWN), Marks and Spencer plc (GBR), or Wal-Mart (USA), has thousands of different types of merchandise at low unit costs. In such cases, it is difficult and time-consuming to apply unit costs to inventory quantities. An alternative is to use the **retail inventory method** to estimate the cost of inventory. Most retail companies can establish a relationship between cost and sales price. The company then applies the cost-to-retail percentage to the ending inventory at retail prices to determine inventory at cost.

Under the retail inventory method, a company's records must show both the cost and retail value of the goods available for sale. Illustration 6B-3 presents the formulas for using the retail inventory method.

Illustration 6B-3
Retail inventory method formulas

Step 1:	**Goods Available for Sale at Retail**	**−**	**Net Sales**	**=**	**Ending Inventory at Retail**
Step 2:	**Goods Available for Sale at Cost**	**÷**	**Goods Available for Sale at Retail**	**=**	**Cost-to-Retail Ratio**
Step 3:	**Ending Inventory at Retail**	**×**	**Cost-to-Retail Ratio**	**=**	**Estimated Cost of Ending Inventory**

We can demonstrate the logic of the retail method by using unit-cost data. Assume that Ortiz Inc. has marked 10 units purchased at \$7 to sell for \$10 per unit. Thus, the cost-to-retail ratio is 70% (\$70 ÷ \$100). If four units remain unsold, their retail value is \$40 (4 × \$10), and their cost is \$28 (\$40 × 70%). This amount agrees with the total cost of goods on hand on a per unit basis (4 × \$7).

Illustration 6B-4 shows application of the retail method for Valley West. Note that it is not necessary to take a physical inventory to determine the estimated cost of goods on hand at any given time.

Illustration 6B-4
Application of retail inventory method

	At Cost	At Retail
Beginning inventory	\$14,000	\$ 21,500
Goods purchased	61,000	78,500
Goods available for sale	\$75,000	100,000
Less: Net sales		70,000
Step (1) Ending inventory at retail =		**\$ 30,000**

Step (2) Cost-to-retail ratio = \$75,000 ÷ \$100,000 = 75%
Step (3) Estimated cost of ending inventory = \$30,000 × 75% = \$22,500

• HELPFUL HINT
In determining inventory at retail, companies use selling prices of the units.

The retail inventory method also facilitates taking a physical inventory at the end of the year. Valley West can value the goods on hand at the prices marked on the merchandise and then apply the cost-to-retail ratio to the goods on hand at retail to determine the ending inventory at cost.

The major disadvantage of the retail method is that it is an averaging technique. Thus, it may produce an incorrect inventory valuation if the mix of the ending inventory is not representative of the mix in the goods available for sale. Assume, for example, that the cost-to-retail ratio of 75% for Valley West consists of equal proportions of inventory items that have cost-to-retail ratios of 70%, 75%, and 80%. If the ending inventory contains only items with a 70% ratio, an incorrect inventory cost will result. Companies can minimize this problem by applying the retail method on a department or product-line basis.

APPENDIX 6C LIFO Inventory Method

Learning Objective *9
Apply the LIFO inventory costing method.

As indicated in the chapter, under IFRS, LIFO is not permitted for financial reporting purposes. In prohibiting LIFO, the IASB noted that use of LIFO results in inventories being recognized in the statement of financial position at amounts that bear little relationship to recent cost levels of inventories. Nonetheless, LIFO is used for financial reporting in the United States, and it is permitted for tax purposes in some countries. Its use can result in significant tax savings in a period of rising prices.

The **last-in, first-out (LIFO) method** assumes that the **latest goods** purchased are the first to be sold. LIFO seldom coincides with the actual physical flow of inventory. (Exceptions include goods stored in piles, such as coal or hay, where goods are removed from the top of the pile as they are sold.) Under the LIFO method, the **costs** of the latest goods purchased are the first to be recognized in determining cost of goods sold. Illustration 6C-1 shows the allocation of the cost of goods available for sale at Lin Electronics under LIFO. The number of units sold during November are 55 and therefore ending inventory is comprised of 45 units.

Illustration 6C-1
Allocation of costs—LIFO method

Cost of Goods Available for Sale

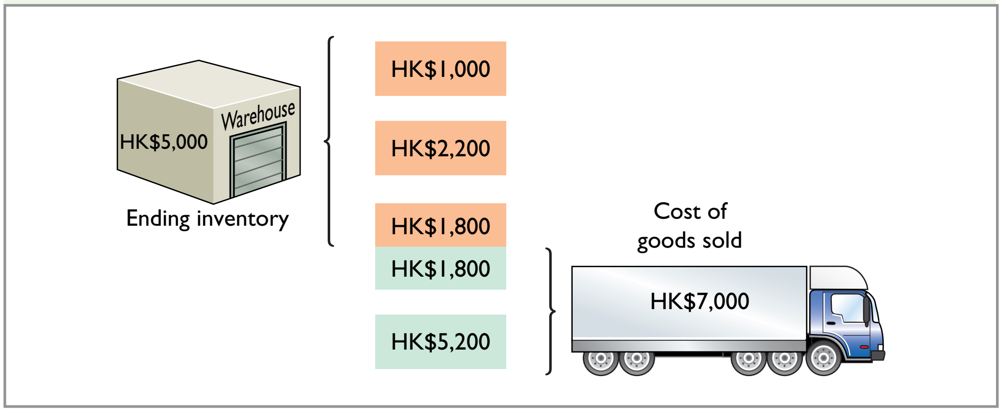
Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	10	HK$100	HK$ 1,000
Apr. 15	Purchase	20	110	2,200
Aug. 24	Purchase	30	120	3,600
Nov. 27	Purchase	40	130	5,200
	Total	100		**HK$12,000**

Step 1: Ending Inventory

Date	Units	Unit Cost	Total Cost
Jan. 1	10	HK$100	HK$ 1,000
Apr. 15	20	110	2,200
Aug. 24	15	120	1,800
Total	45		**HK$5,000**

Step 2: Cost of Goods Sold

Cost of goods available for sale	HK$12,000
Less: Ending inventory	5,000
Cost of goods sold	**HK$ 7,000**



• **HELPFUL HINT**
Another way of thinking about the calculation of LIFO ending inventory is the **FISH assumption**—first in still here.

Under LIFO, since it is assumed that the first goods sold were those that were most recently purchased, ending inventory is based on the prices of the oldest units purchased. That is, **under LIFO, companies obtain the cost of the ending inventory by taking the unit cost of the earliest goods available for sale and working forward until all units of inventory have been costed**. In this example, Lin Electronics prices the 45 units of ending inventory using the **earliest** prices. The first purchase was 10 units at HK$100 in the January 1 beginning inventory. Then, 20 units were purchased at HK$110. The remaining 15 units needed are priced at HK$120 per unit (August 24 purchase). Next, Lin Electronics calculates cost of goods sold by subtracting the cost of the units **not sold** (ending inventory) from the cost of all goods available for sale.

Illustration 6C-2 demonstrates that companies also can calculate cost of goods sold by pricing the 55 units sold using the prices of the last 55 units acquired. Note that of the 30 units purchased on August 24, only 15 units are assumed sold. This agrees with our calculation of the cost of ending inventory, where 15 of these units were assumed unsold and thus included in ending inventory.

Illustration 6C-2
Proof of cost of goods sold

Date	Units	Unit Cost	Total Cost
Nov. 27	40	HK$130	HK$ 5,200
Aug. 24	15	120	1,800
Total	55		**HK$7,000**

Under a periodic inventory system, which we are using here, **all goods purchased during the period are assumed to be available for the first sale, regardless of the date of purchase**.

A major disadvantage of the LIFO method is that in a period of rising prices, the costs allocated to ending inventory may be significantly understated in the statement of financial position. For example, Caterpillar (USA) has used LIFO for over 50 years. Its statement of financial position shows ending inventory of $8,781 million. But, the inventory's actual current cost if FIFO had been used is $11,964 million.

One reason why U.S. companies use LIFO relates to tax benefits. In a period of rising prices, companies using LIFO report lower income taxes (because of lower taxable income) and therefore higher cash flow.

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Discuss how to classify and determine inventory.** Manufacturers usually classify inventory into three categories: finished goods, work in process, and raw materials. The steps in determining inventory quantities are (1) take a physical inventory of goods on hand and (2) determine the ownership of goods in transit or on consignment.

2 **Explain the accounting for inventories and apply the inventory cost flow methods.** The primary basis of accounting for inventories is cost. Cost of goods available for sale includes (a) cost of beginning inventory and (b) cost of goods purchased. The inventory cost flow methods are specific identification and two assumed cost flow methods—FIFO and average-cost.

3 **Explain the financial effects of the inventory cost flow assumptions.** Companies may allocate the cost of goods available for sale to cost of goods sold and ending inventory by specific identification or by a method based on an assumed cost flow. When prices are rising, the first-in, first-out (FIFO) method results in lower cost of goods sold and higher net income than average-cost. The reverse is true when prices are falling. In the statement of financial position, FIFO results in an ending inventory that is closer to current value. Inventory under average-cost is further from current value. Average-cost results in lower income taxes.

4 **Explain the lower-of-cost-or-net realizable value basis of accounting for inventories.** Companies use the lower-of-cost-or-net realizable value (LCNRV) basis when the net realizable value is less than cost. Under LCNRV, companies recognize the loss in the period in which the price decline occurs.

5 **Indicate the effects of inventory errors on the financial statements.** In the income statement of the current year: (a) If beginning inventory is understated, net income is overstated. The reverse occurs if beginning inventory is overstated. (b) If ending inventory is overstated, net income is overstated. If ending inventory is understated, net income is understated. In the following period, its effect on net income for that period is reversed, and total net income for the two years will be correct.

In the statement of financial position: Ending inventory errors will have the same effect on total assets and total equity and no effect on liabilities.

6 **Discuss the presentation and analysis of inventory.** Inventory is classified in the statement of financial position as a current asset and is shown immediately above receivables. There also should be disclosure of (1) the major inventory classifications, (2) the basis of accounting, and (3) the cost method. The inventory turnover is cost of goods sold divided by average inventory. To convert it to average days in inventory, divide 365 days by the inventory turnover.

*7 **Apply the inventory cost flow methods to perpetual inventory records.** Under FIFO and a perpetual inventory system, companies charge to cost of goods sold the cost of the earliest goods on hand prior to each sale. Under the moving-average (average-cost) method and a perpetual system, companies compute a new average cost after each purchase.

*8 **Describe the two methods of estimating inventories.** The two methods of estimating inventories are the gross profit method and the retail inventory method. Under the gross profit method, companies apply a gross profit rate to net sales to determine estimated cost of goods sold. They then subtract estimated cost of goods sold from cost of goods available for sale to determine the estimated cost of the ending inventory.

Under the retail inventory method, companies compute a cost-to-retail ratio by dividing the cost of goods available for sale by the retail value of the goods available for sale. They then apply this ratio to the ending inventory at retail to determine the estimated cost of the ending inventory.

*9 **Apply the LIFO inventory costing method.** The LIFO (last-in, first-out) method assumes that the latest goods purchased are the first to be sold. LIFO seldom coincides with the actual physical flow of goods. This method matches costs of the most recently purchased items with revenues in the period. In periods of rising prices, use of the LIFO method results in lower income taxes and higher cash flow.

GLOSSARY REVIEW

Average-cost method Inventory costing method that uses the weighted-average unit cost to allocate to ending inventory and cost of goods sold the cost of goods available for sale. (p. 286).

Consigned goods Goods held for sale by one party although ownership of the goods is retained by another party. (p. 281).

Consistency concept Dictates that a company use the same accounting principles and methods from year to year. (p. 289).

Days in inventory Measure of the average number of days inventory is held; calculated as 365 divided by inventory turnover. (p. 293).

Finished goods inventory Manufactured items that are completed and ready for sale. (p. 278).

First-in, first-out (FIFO) method Inventory costing method that assumes that the costs of the earliest goods purchased are the first to be recognized as cost of goods sold. (p. 284).

FOB (free on board) destination Freight terms indicating that ownership of the goods remains with the seller until the goods reach the buyer. (p. 280).

FOB (free on board) shipping point Freight terms indicating that ownership of the goods passes to the buyer when the public carrier accepts the goods from the seller. (p. 280).

***Gross profit method** A method for estimating the cost of the ending inventory by applying a gross profit rate to net sales and subtracting estimated cost of goods sold from cost of goods available for sale. (p. 296).

Inventory turnover A ratio that measures the number of times on average the inventory sold during the period; computed by dividing cost of goods sold by the average inventory during the period. (p. 293).

Just-in-time (JIT) inventory Inventory system in which companies manufacture or purchase goods just in time for use. (p. 278).

***Last-in, first-out (LIFO) method** Inventory costing method that assumes the costs of the latest units purchased are the first to be allocated to cost of goods sold. (p. 298).

Lower-of-cost-or-net realizable value (LCNRV) basis A basis whereby inventory is stated at the lower of either its cost or its net realizable value. (p. 289).

Net realizable value Net amount that a company expects to realize (receive) from the sale of inventory. Specifically, it is the estimated selling price in the normal course of business, less estimated costs to complete and sell. (p. 289).

Prudence Concept that dictates that when in doubt, choose the method that will be least likely to overstate assets and net income. (p. 289).

Raw materials Basic goods that will be used in production but have not yet been placed into production. (p. 278).

***Retail inventory method** A method for estimating the cost of the ending inventory by applying a cost-to-retail ratio to the ending inventory at retail. (p. 297).

Specific identification method An actual physical flow costing method in which items still in inventory are specifically costed to arrive at the total cost of the ending inventory. (p. 283).

Weighted-average unit cost Average cost that is weighted by the number of units purchased at each unit cost. (p. 286).

Work in process That portion of manufactured inventory that has been placed into the production process but is not yet complete. (p. 278).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Which of the following should **not** be included in the physical inventory of a company?
(a) Goods held on consignment from another company.
(b) Goods shipped on consignment to another company.
(c) Goods in transit from another company shipped FOB shipping point.
(d) All of the above should be included.

(LO 1) **2.** As a result of a thorough physical inventory, Railway Company Ltd. determined that it had inventory worth €180,000 at December 31, 2017. This count did not take into consideration the following facts. Rogers Consignment store currently has goods worth €35,000 on its sales floor that belong to Railway but are being sold on consignment by Rogers. The selling price of these goods is €50,000. Railway purchased €13,000 of goods that were shipped on December 27, FOB destination, that will be received by Railway on January 3. Determine the correct amount of inventory that Railway should report.
(a) €230,000.
(b) €215,000.
(c) €228,000.
(d) €193,000.

3. Cost of goods available for sale consists of two elements: beginning inventory and: (LO 2)
(a) ending inventory.
(b) cost of goods purchased.
(c) cost of goods sold.
(d) All of the answers are correct.

4. Tinker Bell Company has the following: (LO 2)

	Units	Unit Cost
Inventory, Jan. 1	8,000	£11
Purchase, June 19	13,000	12
Purchase, Nov. 8	5,000	13

If Tinker Bell has 9,000 units on hand at December 31, the cost of the ending inventory under FIFO is:
(a) £99,000. (c) £113,000.
(b) £108,000. (d) £117,000.

(LO 2) **5.** Davidson Electronics has the following:

	Units	Unit Cost
Inventory, Jan. 1	5,000	£ 8
Purchase, April 2	15,000	£10
Purchase, Aug. 28	20,000	£12

If Davidson has 7,000 units on hand at December 31, the cost of ending inventory under the average-cost method is:
(a) £84,000. (c) £56,000.
(b) £70,000. (d) £75,250.

(LO 3) **6.** In periods of rising prices, average-cost will produce:
(a) higher net income than FIFO.
(b) the same net income as FIFO.
(c) lower net income than FIFO.
(d) net income equal to the specific identification method.

(LO 3) **7.** Factors that affect the selection of an inventory costing method do **not** include:
(a) tax effects.
(b) statement of financial position effects.
(c) income statement effects.
(d) perpetual vs. periodic inventory system.

(LO 4) **8.** Rickety Company purchased 1,000 widgets and has 200 widgets in its ending inventory at a cost of HK$91 each and a net realizable value of HK$80 each. The ending inventory under LCNRV is:
(a) HK$91,000.
(b) HK$80,000.
(c) HK$18,200.
(d) HK$16,000.

(LO 5) **9.** Atlantis Company's ending inventory is understated NT$122,000. The effects of this error on the current year's cost of goods sold and net income, respectively, are:
(a) understated, overstated.
(b) overstated, understated.
(c) overstated, overstated.
(d) understated, understated.

10. Lee Company overstated its inventory by NT$500,000 at December 31, 2016. It did not correct the error in 2016 or 2017. As a result, Lee's equity was: (LO 5)
(a) overstated at December 31, 2016, and understated at December 31, 2017.
(b) overstated at December 31, 2016, and properly stated at December 31, 2017.
(c) understated at December 31, 2016, and understated at December 31, 2017.
(d) overstated at December 31, 2016, and overstated at December 31, 2017.

11. Which of these would cause the inventory turnover to increase the most? (LO 6)
(a) Increasing the amount of inventory on hand.
(b) Keeping the amount of inventory on hand constant but increasing sales.
(c) Keeping the amount of inventory on hand constant but decreasing sales.
(d) Decreasing the amount of inventory on hand and increasing sales.

12. Carlos Company SLU had beginning inventory of €80,000, ending inventory of €110,000, cost of goods sold of €285,000, and sales of €475,000. Carlos' days in inventory is: (LO 6)
(a) 73 days. (c) 102.5 days.
(b) 121.7 days. (d) 84.5 days.

***13.** Songbird Company has sales of £150,000 and cost of goods available for sale of £135,000. If the gross profit rate is 30%, the estimated cost of the ending inventory under the gross profit method is: (LO 8)
(a) £15,000. (c) £45,000.
(b) £30,000. (d) £75,000.

***14.** In a perpetual inventory system: (LO 7)
(a) specific identification is always used.
(b) average costs are computed as a simple average of unit costs incurred.
(c) a new average is computed under the average-cost method after each sale.
(d) FIFO cost of goods sold will be the same as in a periodic inventory system.

***15.** Using the data in Question 4, the cost of the ending inventory under LIFO is: (LO 9)
(a) £113,000. (c) £99,000.
(b) £108,000. (d) £100,000.

Solutions

1. (a) Goods held on consignment should not be included because another company has title (ownership) to the goods. The other choices are incorrect because (b) goods shipped on consignment to another company and (c) goods in transit from another company shipped FOB shipping point should be included in a company's ending inventory. Choice (d) is incorrect as there is a correct answer for this question.

2. (b) The inventory held on consignment by Rogers should be included in Railway's inventory balance at cost (€35,000). The purchased goods of €13,000 should not be included in inventory until January 3 because the goods are shipped FOB destination. Therefore, the correct amount of inventory is €215,000 (€180,000 + €35,000), not (a) €230,000, (c) €228,000, or (d) €193,000.

3. (b) Cost of goods available for sale consists of beginning inventory and cost of goods purchased, not (a) ending inventory or (c) cost of goods sold. Therefore, choice (d) is also incorrect.

4. (c) Under FIFO, ending inventory will consist of 5,000 units from the Nov. 8 purchase and 4,000 units from the June 19 purchase. Therefore, ending inventory is (5,000 × £13) + (4,000 × £12) = £113,000, not (a) £99,000, (b) £108,000, or (d) £117,000.

5. (d) Under the average-cost method, total cost of goods available for sale needs to be calculated in order to determine average cost per unit. The total cost of goods available is £430,000 = (5,000 × £8) + (15,000 × £10) + (20,000 × £12). The average cost per unit = (£430,000/40,000 total units available for sale) = £10.75. Therefore, ending inventory is (£10.75 × 7,000) = £75,250, not (a) £84,000, (b) £70,000, or (c) £56,000.

6. (c) In periods of rising prices, average-cost will produce lower net income than FIFO, not (a) higher than FIFO or (b) the same as FIFO. Choice (d) is incorrect because, except by extraordinary coincidence, average-cost will not produce the same results as specific identification.

7. (d) Perpetual vs. periodic inventory system is not one of the factors that affect the selection of an inventory costing method. The other choices are incorrect because (a) tax effects, (b) statement of financial position effects, and (c) income statement effects all affect the selection of an inventory costing method.

8. (d) Under the LCNRV basis, net realizable value is defined as the estimated selling price in the normal course of business, less estimated costs to complete and sell. Therefore, ending inventory would be valued at 200 widgets × HK$80 each = HK$16,000, not (a) HK$91,000, (b) HK$80,000, or (c) HK$18,200.

9. (b) Because ending inventory is too low, cost of goods sold will be too high (overstated) and since cost of goods sold (an expense) is too high, net income will be too low (understated). Therefore, the other choices are incorrect.

10. (b) Equity is overstated by NT$500,000 at December 31, 2016, and is properly stated at December 31, 2017. An ending inventory error in one period will have an equal and opposite effect on cost of goods sold and net income in the next period; after two years, the errors have offset each other. The other choices are incorrect because equity (a) is properly stated, not understated, at December 31, 2017; (c) is overstated, not understated, by NT$500,000 at December 31, 2016, and is properly stated, not understated, at December 31, 2017; and (d) is properly stated at December 31, 2017, not overstated.

11. (d) Decreasing the amount of inventory on hand will cause the denominator to decrease, causing inventory turnover to increase. Increasing sales will cause the numerator of the ratio to increase (higher sales means higher COGS), thus causing inventory turnover to increase even more. The other choices are incorrect because (a) increasing the amount of inventory on hand causes the denominator of the ratio to increase while the numerator stays the same, causing inventory turnover to decrease; (b) keeping the amount of inventory on hand constant but increasing sales will cause inventory turnover to increase because the numerator of the ratio will increase (higher sales means higher COGS) while the denominator stays the same, which will result in a lesser inventory increase than decreasing amount of inventory on hand and increasing sales; and (c) keeping the amount of inventory on hand constant but decreasing sales will cause inventory turnover to decrease because the numerator of the ratio will decrease (lower sales means lower COGS) while the denominator stays the same.

12. (b) Carlos' days in inventory = 365/Inventory turnover = 365/[€285,000/(€80,000 + €110,000)/2)] = 121.7 days, not (a) 73 days, (c) 102.5 days, or (d) 84.5 days.

***13. (b)** COGS = Sales (£150,000) − Gross profit (£150,000 × 30%) = £105,000. Ending inventory = Cost of goods available for sale (£135,000) − COGS (£105,000) = £30,000, not (a) £15,000, (c) £45,000, or (d) £75,000.

***14. (d)** FIFO cost of goods sold is the same under both a periodic and a perpetual inventory system. The other choices are incorrect because (a) specific identification is not always used; (b) average costs are based on a moving average of unit costs, not an average of unit costs; and (c) a new average is computed under the average-cost method after each purchase, not sale.

***15. (d)** Under LIFO, ending inventory will consist of 8,000 units from the inventory at Jan. 1 and 1,000 units from the June 19 purchase. Therefore, ending inventory is (8,000 × £11) + (1,000 × £12) = £100,000, not (a) £113,000, (b) £108,000, or (c) £99,000.

PRACTICE EXERCISES

Determine the correct inventory amount.
(LO 1)

1. Mika Sorbino, an auditor with Martinez Chartered Accountants, is performing a review of Sergei Company's inventory account. Sergei's did not have a good year and top management is under pressure to boost reported income. According to its records, the inventory balance at year-end was €650,000. However, the following information was not considered when determining that amount.

1. Included in the company's count were goods with a cost of €200,000 that the company is holding on consignment. The goods belong to Bosnia Corporation.
2. The physical count did not include goods purchased by Sergei with a cost of €40,000 that were shipped FOB shipping point on December 28 and did not arrive at Sergei's warehouse until January 3.
3. Included in the inventory account was €15,000 of office supplies that were stored in the warehouse and were to be used by the company's supervisors and managers during the coming year.
4. The company received an order on December 28 that was boxed and was sitting on the loading dock awaiting pick-up on December 31. The shipper picked up the goods on January 1 and delivered them on January 6. The shipping terms were FOB shipping point. The goods had a selling price of €40,000 and a cost of €30,000. The goods were not included in the count because they were sitting on the dock.

5. On December 29, Sergei shipped goods with a selling price of €80,000 and a cost of €60,000 to Oman Sales Corporation FOB shipping point. The goods arrived on January 3. Oman Sales had only ordered goods with a selling price of €10,000 and a cost of €8,000. However, a Sergei's sales manager had authorized the shipment and said that if Oman wanted to ship the goods back next week, it could.
6. Included in the count was €30,000 of goods that were parts for a machine that the company no longer made. Given the high-tech nature of Sergei's products, it was unlikely that these obsolete parts had any other use. However, management would prefer to keep them on the books at cost, "since that is what we paid for them, after all."

Instructions

Prepare a schedule to determine the correct inventory amount. Provide explanations for each item above, saying why you did or did not make an adjustment for each item.

Solution

1. Ending inventory—as reported	€650,000
1. Subtract from inventory: The goods belong to Bosnia Corporation. Sergei is merely holding them as a consignee.	(200,000)
2. Add to inventory: The goods belong to Sergei when they were shipped.	40,000
3. Subtract from inventory: Office supplies should be carried in a separate account. They are not considered inventory held for resale.	(15,000)
4. Add to inventory: The goods belong to Sergei until they are shipped (Jan. 1).	30,000
5. Add to inventory: Oman Sales ordered goods with a cost of €8,000. Sergei should record the corresponding sales revenue of €10,000. Sergei's decision to ship extra "unordered" goods does not constitute a sale. The manager's statement that Oman could ship the goods back indicates that Sergei knows this overshipment is not a legitimate sale. The manager acted unethically in an attempt to improve Sergei's reported income by overshipping.	52,000
6. Subtract from inventory: IFRS requires that inventory be valued at the lower-of-cost-or-net realizable value. Obsolete parts should be adjusted from cost to zero if they have no other use.	(30,000)
Correct inventory	€527,000

Determine effects of inventory errors.

(LO 5)

2. Tainan City Hardware reported cost of goods sold as follows.

	2016	2017
Beginning inventory	NT$ 200,000	NT$ 300,000
Cost of goods purchased	1,500,000	1,750,000
Cost of goods available for sale	1,700,000	2,050,000
Ending inventory	(300,000)	(350,000)
Cost of goods sold	NT$1,400,000	NT$1,700,000

Tainan City Hardware made two errors: (1) 2016 ending inventory was overstated NT$25,000, and (2) 2017 ending inventory was understated NT$55,000.

Instructions

Compute the correct cost of goods sold for each year.

Solution

2.

	2016	2017
Beginning inventory	NT$ 200,000	NT$ 275,000
Cost of goods purchased	1,500,000	1,750,000
Cost of goods available for sale	1,700,000	2,025,000
Corrected ending inventory	(275,000)[a]	(405,000)[b]
Coat of goods sold	NT$1,425,000	NT$1,620,000

[a]NT$300,000 − NT$25,000 = NT$275,000; [b]NT$350,000 + NT$55,000 = NT$405,000

PRACTICE PROBLEMS

Compute inventory and cost of goods sold using two cost flow methods in a periodic inventory system.

(LO 2)

1. Gerald D. Englehart Company has the following inventory, purchases, and sales data for the month of March.

Inventory:	March 1	200 units @ €4.00	€ 800
Purchases:	March 10	500 units @ €4.50	2,250
	March 20	400 units @ €4.75	1,900
	March 30	300 units @ €5.00	1,500
Sales:	March 15	500 units	
	March 25	400 units	

The physical inventory count on March 31 shows 500 units on hand.

Instructions

Under a **periodic inventory system**, determine the cost of inventory on hand at March 31 and the cost of goods sold for March under (a) FIFO and (b) average-cost.

Solution

1. The cost of goods available for sale is €6,450, as follows.

Inventory:	March 1	200 units @ €4.00	€ 800
Purchases:	March 10	500 units @ €4.50	2,250
	March 20	400 units @ €4.75	1,900
	March 30	300 units @ €5.00	1,500
Total:		1,400	€6,450

Under a **periodic inventory system**, the cost of goods sold under each cost flow method is as follows.

(a) **FIFO Method**

Ending inventory:

Date	Units	Unit Cost	Total Cost	
March 30	300	€5.00	€1,500	
March 20	200	4.75	950	€2,450

Cost of goods sold: €6,450 − €2,450 = €4,000

(b) **Average-Cost Method**

Average unit cost: €6,450 ÷ 1,400 = €4.607
Ending inventory: 500 × €4.607 = €2,303.50

Cost of goods sold: €6,450 − €2,303.50 = €4,146.50

Compute inventory and cost of goods sold using two cost flow methods in a perpetual inventory system.

(LO 7)

***2. Practice Problem 1** showed cost of goods sold computations under a periodic inventory system. Now let's assume that Gerald D. Englehart Company uses a perpetual inventory system. The company has the same inventory, purchases, and sales data for the month of March as shown earlier:

Inventory:	March 1	200 units @ €4.00	€ 800
Purchases:	March 10	500 units @ €4.50	2,250
	March 20	400 units @ €4.75	1,900
	March 30	300 units @ €5.00	1,500
Sales:	March 15	500 units	
	March 25	400 units	

The physical inventory count on March 31 shows 500 units on hand.

Instructions

Under a **perpetual inventory system**, determine the cost of inventory on hand at March 31 and the cost of goods sold for March under (a) FIFO and (b) average-cost.

Solution

2. The cost of goods available for sale is €6,450, as follows.

Inventory:	March 1	200 units @ €4.00	€ 800
Purchases:	March 10	500 units @ €4.50	2,250
	March 20	400 units @ €4.75	1,900
	March 30	300 units @ €5.00	1,500
Total:		1,400	€6,450

Under a **perpetual inventory system**, the cost of goods sold under each cost flow method is as follows.

(a) **FIFO Method**

Date	Purchases	Cost of Goods Sold	Balance	
March 1			(200 @ €4.00)	€ 800
March 10	(500 @ €4.50) €2,250		(200 @ €4.00) (500 @ €4.50)	€3,050
March 15		(200 @ €4.00) (300 @ €4.50) €2,150	(200 @ €4.50)	€ 900
March 20	(400 @ €4.75) €1,900		(200 @ €4.50) (400 @ €4.75)	€2,800
March 25		(200 @ €4.50) (200 @ €4.75) €1,850	(200 @ €4.75)	€ 950
March 30	(300 @ €5.00) €1,500		(200 @ €4.75) (300 @ €5.00)	€2,450

Ending inventory €2,450 Cost of goods sold: €2,150 + €1,850 = €4,000

(b) **Moving-Average Cost Method**

Date	Purchases	Cost of Goods Sold	Balance	
March 1			(200 @ €4.00)	€ 800
March 10	(500 @ €4.50) €2,250		(700 @ €4.357)	€3,050
March 15		(500 @ €4.357) € 2,179	(200 @ €4.357)	€ 871
March 20	(400 @ €4.75) €1,900		(600 @ €4.618)	€2,771
March 25		(400 @ €4.618) € 1,847	(200 @ €4.618)	€ 924
March 30	(300 @ €5.00) €1,500		(500 @ €4.848)	€2,424

Ending inventory €2,424 Cost of goods sold: €2,179 + €1,847 = €4,026

WileyPLUS Brief Exercises, DO IT! Review, Exercises, and Problems, and many additional resources are available for practice in WileyPLUS.

NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendices to the chapter.

QUESTIONS

1. "The key to successful business operations is effective inventory management." Do you agree? Explain.
2. An item must possess two characteristics to be classified as inventory by a merchandiser. What are these two characteristics?
3. Your friend Art Mega has been hired to help take the physical inventory in Jaegar Hardware Store. Explain to Art Mega what this job will entail.
4. (a) Girard Company ships merchandise to Liu Company on December 30. The merchandise reaches the buyer on January 6. Indicate the terms of sale that will result in the goods being included in (1) Girard's December 31 inventory, and (2) Liu's December 31 inventory.
   (b) Under what circumstances should Girard Company include consigned goods in its inventory?
5. Topp Hat Shop received a shipment of hats for which it paid the wholesaler £2,970. The price of the hats was £3,000, but Topp was given a £30 cash discount and required to pay freight charges of £80. In addition, Topp paid £130 to cover the travel expenses of an employee who negotiated the purchase of the hats. What amount will Topp record for inventory? Why?

6. Explain the difference between the terms FOB shipping point and FOB destination.
7. Min-jun believes that the allocation of inventoriable costs should be based on the actual physical flow of the goods. Explain to Min-jun why this may be both impractical and inappropriate.
8. What is a major advantage and a major disadvantage of the specific identification method of inventory costing?
9. "The selection of an inventory cost flow method is a decision made by accountants." Do you agree? Explain. Once a method has been selected, what accounting requirement applies?
10. Which assumed inventory cost flow method:
    (a) usually parallels the actual physical flow of merchandise?
    (b) assumes that goods available for sale during an accounting period are identical?
    (c) assumes that the first units purchased are the first to be sold?
11. Beatriz Diaz is studying for the next accounting midterm examination. What should Beatriz know about (a) departing from the cost basis of accounting for inventories and (b) the meaning of "net realizable value" in the lower-of-cost-or-net realizable value method?
12. Beethovan Music Center has 5 televisions on hand at the statement of financial position date. Each cost €100. The net realizable value is €90 per unit. Under the lower-of-cost-or-net realizable value basis of accounting for inventories, what value should be reported for the televisions on the statement of financial position? Why?
13. Maggie Stores has 20 toasters on hand at the statement of financial position date. Each cost £28. The net realizable value is £30 per unit. Under the lower-of-cost-or-net realizable value basis of accounting for inventories, what value should Maggie report for the toasters on the statement of financial position? Why?
14. Bakkar Company discovers in 2017 that its ending inventory at December 31, 2016, was €7,600 understated. What effect will this error have on (a) 2016 net income, (b) 2017 net income, and (c) the combined net income for the 2 years?
15. Xu Company's statement of financial position shows Inventory HK$1,628,000. What additional disclosures should be made?
16. Under what circumstances might inventory turnover be too high? That is, what possible negative consequences might occur?

*17. How does the average-cost method of inventory costing differ between a perpetual inventory system and a periodic inventory system?

*18. When is it necessary to estimate inventories?

*19. Both the gross profit method and the retail inventory method are based on averages. For each method, indicate the average used, how it is determined, and how it is applied.

*20. Szabo Company has net sales of €400,000 and cost of goods available for sale of €300,000. If the gross profit rate is 40%, what is the estimated cost of the ending inventory? Show computations.

*21. Park Shoe Shop, Ltd. had goods available for sale in 2017 with a retail price of £120,000. The cost of these goods was £84,000. If sales during the period were £90,000, what is the estimated cost of ending inventory using the retail inventory method?

*22. In a period of rising prices, the inventory reported in Kanth Company's statement of financial position is close to the current cost of the inventory. Phelan Company's inventory is considerably below its current cost. Identify the inventory cost flow method being used by each company. Which company has probably been reporting the higher gross profit?

*23. "When perpetual inventory records are kept, the results under the FIFO and LIFO methods are the same as they would be in a periodic inventory system." Do you agree? Explain.

*24. Why might the use of the LIFO method for costing inventories result in lower income taxes?

BRIEF EXERCISES

BE6-1 Lazio Company, SpA identifies the following items for possible inclusion in the taking of a physical inventory. Indicate whether each item should be included or excluded from the inventory taking.

Identify items to be included in taking a physical inventory.

(LO 1)

(a) Goods shipped on consignment by Lazio to another company.
(b) Goods in transit from a supplier shipped FOB destination.
(c) Goods sold but being held for customer pickup.
(d) Goods held on consignment from another company.

BE6-2 Stallman Company took a physical inventory on December 31 and determined that goods costing €200,000 were on hand. Not included in the physical count were €25,000 of goods purchased from Pelzer Corporation, FOB shipping point, and €22,000 of goods sold to Alvarez Company for €30,000, FOB destination. Both the Pelzer purchase and the Alvarez sale were in transit at year-end. What amount should Stallman report as its December 31 inventory?

Determine ending inventory amount.

(LO 1)

BE6-3 In its first month of operations, Tatung Company made three purchases of merchandise in the following sequence: (1) 300 units at NT$180, (2) 400 units at NT$210, and

Compute ending inventory using FIFO and average-cost.

(LO 2)

(3) 200 units at NT$240. Assuming there are 420 units on hand, compute the cost of the ending inventory under the (a) FIFO method and (b) average-cost method. Tatung uses a periodic inventory system. (Round average unit cost to two decimal places.)

Explain the financial statement effect of inventory cost flow assumptions.
(LO 3)

BE6-4 The management of Muni Corp. is considering the effects of inventory-costing methods on its financial statements and its income tax expense. Assuming that the price the company pays for inventory is increasing, which method will:

(a) Provide the higher net income?
(b) Provide the higher ending inventory?
(c) Result in the lower income tax expense?
(d) Result in the more stable earnings over a number of years?

Determine the LCNRV valuation using inventory categories.
(LO 4)

BE6-5 Blackburn Appliance Center accumulates the following cost and net realizable value data at December 31.

Inventory Categories	Cost Data	Net Realizable Value Data
Cameras	£12,000	£12,100
Camcorders	9,420	9,200
Blu-ray players	14,000	12,800

Compute the lower-of-cost-or-net realizable value valuation for the company's total inventory.

Determine correct income statement amounts.
(LO 5)

BE6-6 Zammit Company reports net income of €90,000 in 2017. However, ending inventory was understated €5,000. What is the correct net income for 2017? What effect, if any, will this error have on total assets as reported in the statement of financial position at December 31, 2017?

Compute inventory turnover and days in inventory.
(LO 6)

BE6-7 At December 31, 2017, the following information was available for Tai Lin Company: ending inventory HK$400,000, beginning inventory HK$580,000, cost of goods sold HK$2,842,000, and sales revenue HK$3,800,000. Calculate inventory turnover and days in inventory for Tai Lin Company, Ltd.

Apply cost flow methods to perpetual inventory records.
(LO 7)

***BE6-8** Abbott's Department Store, Ltd. uses a perpetual inventory system. Data for product E2-D2 include the following purchases.

Date	Number of Units	Unit Price
May 7	50	£11
July 28	30	13

On June 1, Abbott's sold 30 units, and on August 27, 35 more units. Prepare the perpetual inventory schedule for the above transactions using (a) FIFO and (b) moving-average cost.

Apply the gross profit method.
(LO 8)

***BE6-9** At May 31, Chang Company has net sales of ¥330,000 and cost of goods available for sale of ¥230,000. Compute the estimated cost of the ending inventory, assuming the gross profit rate is 45%.

Apply the retail inventory method.
(LO 8)

***BE6-10** On June 30, Lyon Fabrics, SA has the following data pertaining to the retail inventory method: goods available for sale: at cost €35,000 and at retail €50,000, net sales €42,000, and ending inventory at retail €8,000. Compute the estimated cost of the ending inventory using the retail inventory method.

Compute the ending inventory using LIFO (periodic).
(LO 9)

***BE6-11** Data for Tatung Company are presented in BE6-3. Compute the cost of the ending inventory under the LIFO method, assuming there are 420 units on hand.

> DO IT! REVIEW

Apply rules of ownership to determine inventory cost.
(LO 1)

DO IT! 6-1 Recife Company just took its physical inventory. The count of inventory items on hand at the company's business locations resulted in a total inventory cost of R$300,000. In reviewing the details of the count and related inventory transactions, you have discovered the following.

1. Recife has sent inventory costing R$18,000 on consignment to Rio Company. All of this inventory was at Rio's showrooms on December 31.

2. The company did not include in the inventory count (cost, R$20,000) that was purchased on December 28, terms FOB shipping point. The goods were in transit on December 31.
3. The company did not include in the inventory count (cost, R$17,000) that was sold with terms of FOB shipping point. The goods were in transit on December 31.

Compute the correct December 31 inventory.

DO IT! 6-2 The accounting records of Connor Electronics, Ltd. show the following data.

Compute cost of goods sold under different cost flow methods.

(LO 2)

Beginning inventory	3,000 units at £5
Purchases	8,000 units at £7
Sales	9,400 units at £10

Determine cost of goods sold during the period under a periodic inventory system using (a) the FIFO method and (b) the average-cost method. (Round unit cost to nearest tenth of a cent.)

DO IT! 6-3 (a) Guo Company, Ltd. sells three different categories of tools (small, medium, and large). The cost and net realizable value of its inventory of tools are as follows.

Compute inventory value under LCNRV.

(LO 4)

	Cost	Net Realizable Value
Small	HK$ 640,000	HK$ 730,000
Medium	2,900,000	2,600,000
Large	1,520,000	1,485,000

Determine the value of the company's inventory under the lower-of-cost-or-net realizable value approach.

(b) Sun Company, Ltd. understated its 2016 ending inventory by HK$284,000. Determine the impact this error has on ending inventory, cost of goods sold, and equity in 2016 and 2017.

DO IT! 6-4 Early in 2017, Lausanne Company AG switched to a just-in-time inventory system. Its sales, cost of goods sold, and inventory amounts for 2016 and 2017 are shown below.

Compute inventory turnover and assess inventory level.

(LO 6)

	2016	2017
Sales	CHF3,120,000	CHF3,713,000
Cost of goods sold	1,200,000	1,425,000
Beginning inventory	180,000	220,000
Ending inventory	220,000	100,000

Determine the inventory turnover and days in inventory for 2016 and 2017. Discuss the changes in the amount of inventory, the inventory turnover and days in inventory, and the amount of sales across the two years.

EXERCISES

E6-1 Premier Bank and Trust is considering giving Alou Company a loan. Before doing so, management decides that further discussions with Alou's accountant may be desirable. One area of particular concern is the inventory account, which has a year-end balance of £297,000. Discussions with the accountant reveal the following.

Determine the correct inventory amount.

(LO 1)

1. Alou sold goods costing £38,000 to Comerico Company, FOB shipping point, on December 28. The goods are not expected to arrive at Comerico until January 12. The goods were not included in the physical inventory because they were not in the warehouse.
2. The physical count of the inventory did not include goods costing £91,000 that were shipped to Alou FOB destination on December 27 and were still in transit at year-end.

3. Alou received goods costing £25,000 on January 2. The goods were shipped FOB shipping point on December 26 by Grant Co. The goods were not included in the physical count.
4. Alou sold goods costing £35,000 to Emerick Co., FOB destination, on December 30. The goods were received at Emerick on January 8. They were not included in Alou's physical inventory.
5. Alou received goods costing £44,000 on January 2 that were shipped FOB shipping point on December 29. The shipment was a rush order that was supposed to arrive December 31. This purchase was included in the ending inventory of £297,000.

Instructions
Determine the correct inventory amount on December 31.

Determine the correct inventory amount.
(LO 1)

E6-2 Kale Wilson, an auditor with Sneed Chartered Accountants, is performing a review of Platinum Company's inventory account. Platinum did not have a good year, and top management is under pressure to boost reported income. According to its records, the inventory balance at year-end was £740,000. However, the following information was not considered when determining that amount.

1. Included in the company's count were goods with a cost of £250,000 that the company is holding on consignment. The goods belong to Superior, Ltd.
2. The physical count did not include goods purchased by Platinum with a cost of £40,000 that were shipped FOB destination on December 28 and did not arrive at Platinum's warehouse until January 3.
3. Included in the inventory account was £17,000 of office supplies that were stored in the warehouse and were to be used by the company's supervisors and managers during the coming year.
4. The company received an order on December 29 that was boxed and sitting on the loading dock awaiting pick-up on December 31. The shipper picked up the goods on January 1 and delivered them on January 6. The shipping terms were FOB shipping point. The goods had a selling price of £49,000 and a cost of £33,000. The goods were not included in the count because they were sitting on the dock.
5. Included in the count was £48,000 of goods that were parts for a machine that the company no longer made. Given the high-tech nature of Platinum's products, it was unlikely that these obsolete parts had any other use. However, management would prefer to keep them on the books at cost, "since that is what we paid for them, after all."

Instructions
Prepare a schedule to determine the correct inventory amount. Provide explanations for each item above, saying why you did or did not make an adjustment for each item.

Calculate cost of goods sold using specific identification and FIFO.
(LO 2, 3)

E6-3 On December 1, Discount Electronics Ltd. has three DVD players left in stock. All are identical, all are priced to sell at NT$4,500. One of the three DVD players left in stock, with serial #1012, was purchased on June 1 at a cost of NT$3,000. Another, with serial #1045, was purchased on November 1 for NT$2,760. The last player, serial #1056, was purchased on November 30 for NT$2,520.

Instructions
(a) Calculate the cost of goods sold using the FIFO periodic inventory method assuming that two of the three players were sold by the end of December, Discount Electronics' year-end.
(b) If Discount Electronics used the specific identification method instead of the FIFO method, how might it alter its earnings by "selectively choosing" which particular players to sell to the two customers? What would Discount's cost of goods sold be if the company wished to minimize earnings? Maximize earnings?
(c) Which of the two inventory methods do you recommend that Discount use? Explain why.

Compute inventory and cost of goods sold using FIFO and average-cost.
(LO 2)

E6-4 Zhu Boards sells a snowboard, Xpert, that is popular with snowboard enthusiasts. Information relating to Zhu's purchases of Xpert snowboards during September is shown on the next page. During the same month, 121 Xpert snowboards were sold. Zhu's uses a periodic inventory system.

Date	Explanation	Units	Unit Cost	Total Cost
Sept. 1	Inventory	23	HK$ 970	HK$ 22,310
Sept. 12	Purchases	45	1,020	45,900
Sept. 19	Purchases	20	1,040	20,800
Sept. 26	Purchases	44	1,050	46,200
	Totals	132		HK$135,210

Instructions

(a) Compute the ending inventory at September 30 and cost of goods sold using the FIFO and average-cost methods. Prove the amount allocated to cost of goods sold under each method.

(b) For both FIFO and average-cost, calculate the sum of ending inventory and cost of goods sold. What do you notice about the answers you found for each method?

E6-5 Zambian Co. uses a periodic inventory system. Its records show the following for the month of May, in which 68 units were sold.

Compute inventory and cost of goods sold using FIFO and average-cost.

(LO 2)

		Units	Unit Cost	Total Cost
May 1	Inventory	30	€ 9	€270
15	Purchases	22	11	242
24	Purchases	38	12	456
	Totals	90		€968

Instructions

Compute the ending inventory at May 31 and cost of goods sold using the FIFO and average-cost methods. Prove the amount allocated to cost of goods sold under each method.

E6-6 Howsham Company, Ltd. reports the following for the month of June.

Compute inventory and cost of goods sold using FIFO and average-cost.

(LO 2, 3)

		Units	Unit Cost	Total Cost
June 1	Inventory	200	£5	£1,000
12	Purchase	300	6	1,800
23	Purchase	500	7	3,500
30	Inventory	160		

Instructions

(a) Compute the cost of the ending inventory and the cost of goods sold under (1) FIFO and (2) average-cost.

(b) Which costing method gives the higher ending inventory? Why?

(c) Which method results in the higher cost of goods sold? Why?

E6-7 Thaam Company Ltd. had 100 units in beginning inventory at a total cost of NT$300,000. The company purchased 200 units at a total cost of NT$680,000. At the end of the year, Thaam had 75 units in ending inventory.

Compute inventory under FIFO and average-cost.

(LO 2, 3)

Instructions

(a) Compute the cost of the ending inventory and the cost of goods sold under (1) FIFO and (2) average-cost.

(b) Which cost flow method would result in the higher net income?

(c) Which cost flow method would result in inventories approximating current cost in the statement of financial position?

(d) Which cost flow method would result in Thaam paying fewer taxes in the first year?

E6-8 Kinshasa Camera Shop uses the lower-of-cost-or-net realizable value basis for its inventory. The following data are available at December 31.

Determine ending inventory under LCNRV.

(LO 4)

Item	Units	Unit Cost	Net Realizable Value
Cameras:			
Minolta	8	₩170,000	₩156,000
Canon	6	150,000	152,000
Light meters:			
Vivitar	12	125,000	115,000
Kodak	14	115,000	135,000

Instructions
Determine the amount of the ending inventory by applying the lower-of-cost-or-net realizable value basis.

Compute lower-of-cost-or-net realizable value.
(LO 4)

E6-9 Banovic Company OAO applied FIFO to its inventory and got the following results for its ending inventory.

Tennis shoes	100 units at a cost per unit of €68
Running shoes	150 units at a cost per unit of €75
Basketball shoes	125 units at a cost per unit of €80

The net realizable value per unit at year-end was tennis shoes €70, running shoes €71, and basketball shoes €74.

Instructions
Determine the amount of ending inventory at lower-of-cost-or-net realizable value.

Determine effects of inventory errors.
(LO 5)

E6-10 Bamburgh Hardware reported cost of goods sold as follows.

	2016	2017
Beginning inventory	€ 20,000	€ 30,000
Cost of goods purchased	150,000	175,000
Cost of goods available for sale	170,000	205,000
Ending inventory	30,000	35,000
Cost of goods sold	€140,000	€170,000

Bamburgh made two errors: (1) 2016 ending inventory was overstated €2,000, and (2) 2017 ending inventory was understated €6,000.

Instructions
Compute the correct cost of goods sold for each year.

Prepare correct income statements.
(LO 5)

E6-11 Wu Watch Company, Ltd. reported the following income statement data for a 2-year period.

	2016	2017
Sales revenue	HK$2,100,000	HK$2,500,000
Cost of goods sold		
Beginning inventory	320,000	440,000
Cost of goods purchased	1,730,000	2,040,000
Cost of goods available for sale	2,050,000	2,480,000
Ending inventory	440,000	520,000
Cost of goods sold	1,610,000	1,960,000
Gross profit	HK$ 490,000	HK$ 540,000

Wu uses a periodic inventory system. The inventories at January 1, 2016, and December 31, 2017, are correct. However, the ending inventory at December 31, 2016, was understated HK$60,000.

Instructions
(a) Prepare correct income statement data for the 2 years.
(b) What is the cumulative effect of the inventory error on total gross profit for the 2 years?
(c) Explain in a letter to the president of Wu Watch Company, Ltd. what has happened, i.e., the nature of the error and its effect on the financial statements.

Compute inventory turnover, days in inventory, and gross profit rate.
(LO 6)

E6-12 This information is available for Sepia Photo Ltd. for 2015, 2016, and 2017.

	2015	2016	2017
Beginning inventory	£ 100,000	£ 330,000	£ 400,000
Ending inventory	330,000	400,000	480,000
Cost of goods sold	900,000	1,120,000	1,300,000
Sales revenue	1,200,000	1,600,000	1,900,000

Instructions
Calculate inventory turnover, days in inventory, and gross profit rate (from Chapter 5) for Sepia Photo for 2015, 2016, and 2017. Comment on any trends.

E6-13 The cost of goods sold computations for Gouda Company NV and Edam Company NV are shown below.

Compute inventory turnover and days in inventory.
(LO 6)

	Gouda Company	Edam Company
Beginning inventory	€ 47,000	€ 71,000
Cost of goods purchased	200,000	290,000
Cost of goods available for sale	247,000	361,000
Ending inventory	58,000	69,000
Cost of goods sold	€189,000	€292,000

Instructions
(a) Compute inventory turnover and days in inventory for each company.
(b) Which company moves its inventory more quickly?

***E6-14** Roselle Appliance SA uses a perpetual inventory system. For its flat-screen television sets, the January 1 inventory was 3 sets at €600 each. On January 10, Roselle purchased 6 units at €648 each. The company sold 2 units on January 8 and 4 units on January 15.

Apply cost flow methods to perpetual records.
(LO 7)

Instructions
Compute the ending inventory under (1) FIFO and (2) moving-average cost. (Round the unit cost to the nearest cent.)

***E6-15** Howsham Company, Ltd. reports the following for the month of June.

Calculate inventory and cost of goods sold using two cost flow methods in a perpetual inventory system.
(LO 7)

Date	Explanation	Units	Unit Cost	Total Cost
June 1	Inventory	200	£5	£1,000
12	Purchase	300	6	1,800
23	Purchase	500	7	3,500
30	Inventory	160		

Instructions
(a) Calculate the cost of the ending inventory and the cost of goods sold for (1) FIFO and (2) moving-average cost, using a perpetual inventory system. Assume a sale of 400 units occurred on June 15 for a selling price of £8 and a sale of 440 units on June 27 for £9.
(b) How do the results differ from E6-6?
(c) Why is the average unit cost not £6 [(£5 + £6 + £7) ÷ 3 = £6]?

***E6-16** Information about Zhu Boards is presented in E6-4. Additional data regarding Zhu's sales of Xpert snowboards are provided below. Assume that Zhu uses a perpetual inventory system.

Apply cost flow methods to perpetual records.
(LO 7)

Date	Explanation	Units	Unit Price	Total Revenue
Sept. 5	Sale	12	HK$1,990	HK$ 23,880
Sept. 16	Sale	50	2,030	101,500
Sept. 29	Sale	59	2,090	123,310
	Totals	121		HK$248,690

Instructions
(a) Compute ending inventory at September 30 using FIFO and moving-average cost.
(b) Compare ending inventory using a perpetual inventory system to ending inventory using a periodic inventory system (from E6-4).
(c) Which inventory cost flow method (FIFO, moving-average cost) gives the same ending inventory value under both periodic and perpetual? Which method gives different ending inventory values?

***E6-17** Punjab Company, Ltd. reported the following information for November and December 2017.

Use the gross profit method to estimate inventory.
(LO 8)

	November	December
Cost of goods purchased	Rs5,000,000	Rs 6,000,000
Inventory, beginning-of-month	1,000,000	1,200,000
Inventory, end-of-month	1,200,000	?
Sales revenue	7,500,000	10,000,000

Punjab's ending inventory at December 31 was destroyed in a fire.

Instructions

(a) Compute the gross profit rate for November.
(b) Using the gross profit rate for November, determine the estimated cost of inventory lost in the fire.

Determine merchandise lost using the gross profit method of estimating inventory.
(LO 8)

***E6-18** The inventory of Ipswich Company Ltd. was destroyed by fire on March 1. From an examination of the accounting records, the following data for the first 2 months of the year are obtained: Sales Revenue £51,000, Sales Returns and Allowances £1,000, Purchases £31,200, Freight-In £1,200, and Purchase Returns and Allowances £1,800.

Instructions

Determine the merchandise lost by fire, assuming:

(a) A beginning inventory of £20,000 and a gross profit rate of 40% on net sales.
(b) A beginning inventory of £30,000 and a gross profit rate of 32% on net sales.

Determine ending inventory at cost using retail method.
(LO 8)

***E6-19** Zapatos, SLU uses the retail inventory method for its two departments, Women's Shoes and Men's Shoes. The following information for each department is obtained.

Item	Women's Shoes	Men's Shoes
Beginning inventory at cost	€ 36,500	€ 45,000
Cost of goods purchased at cost	150,000	136,300
Net sales	178,000	185,000
Beginning inventory at retail	46,000	60,000
Cost of goods purchased at retail	187,000	185,000

Instructions

Compute the estimated cost of the ending inventory for each department under the retail inventory method.

Apply the LIFO cost method (periodic).
(LO 9)

***E6-20** Using the data in E6-6, compute the cost of the ending inventory and the cost of goods sold using LIFO periodic.

Apply the LIFO cost method (periodic).
(LO 9)

***E6-21** (a) Using the data in E6-7, compute the cost of the ending inventory and cost of goods sold using LIFO periodic. In addition, answer instructions (b), (c), and (d) from E6-7 as it relates to the three cost flow methods.

PROBLEMS: SET A

Determine items and amounts to be recorded in inventory.
(LO 1)

P6-1A Anatolia Limited is trying to determine the value of its ending inventory at February 28, 2017, the company's year-end. The accountant counted everything that was in the warehouse as of February 28, which resulted in an ending inventory valuation of ₺48,000. However, she didn't know how to treat the following transactions so she didn't record them.

(a) On February 26, Anatolia shipped to a customer goods costing ₺800. The goods were shipped FOB shipping point, and the receiving report indicates that the customer received the goods on March 2.
(b) On February 26, Shira Inc. shipped goods to Anatolia FOB destination. The invoice price was ₺350. The receiving report indicates that the goods were received by Anatolia on March 2.
(c) Anatolia had ₺620 of inventory at a customer's warehouse "on approval." The customer was going to let Anatolia know whether it wanted the merchandise by the end of the week, March 4.
(d) Anatolia also had ₺400 of inventory on consignment at a Palletine craft shop.
(e) On February 26, Anatolia ordered goods costing ₺780. The goods were shipped FOB shipping point on February 27. Anatolia received the goods on March 1.
(f) On February 28, Anatolia packaged goods and had them ready for shipping to a customer FOB destination. The invoice price was ₺350; the cost of the items was ₺220. The receiving report indicates that the goods were received by the customer on March 2.
(g) Anatolia had damaged goods set aside in the warehouse because they are no longer saleable. These goods cost ₺400 and Anatolia originally expected to sell these items for ₺600.

Instructions

For each of the preceding transactions, specify whether the item in question should be included in ending inventory and, if so, at what amount. For each item that is not included in ending inventory, indicate who owns it and what account, if any, it should have been recorded in.

P6-2A Dyna Distribution, Ltd. markets CDs of the performing artist King James. At the beginning of March, Dyna had in beginning inventory 1,500 King James CDs with a unit cost of €7. During March, Dyna made the following purchases of King James CDs.

Determine cost of goods sold and ending inventory using FIFO and average-cost with analysis.

(LO 2, 3)

March 5	3,500 @ €8	March 21	2,000 @ €10
March 13	4,000 @ €9	March 26	2,000 @ €11

During March, 10,000 units were sold. Dyna uses a periodic inventory system.

Instructions

(a) Determine the cost of goods available for sale.

(b) Determine (1) the ending inventory and (2) the cost of goods sold under the two assumed cost flow methods (FIFO and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and average-cost methods.

(b)(2) Cost of goods sold:
FIFO €84,500
Average €89,615

(c) Which cost flow method results in (1) the higher inventory amount for the statement of financial position and (2) the higher cost of goods sold for the income statement?

P6-3A Marlow Company, Ltd. had a beginning inventory of 400 units of Product Kimbo at a cost of £8 per unit. During the year, purchases were:

Determine cost of goods sold and ending inventory using FIFO and average-cost with analysis.

(LO 2, 3)

Feb. 20	200 units at £9	Aug. 12	600 units at £11
May 5	500 units at £10	Dec. 8	300 units at £12

Marlow Company uses a periodic inventory system. Sales totaled 1,500 units.

Instructions

(a) Determine the cost of goods available for sale.

(b) Determine (1) the ending inventory and (2) the cost of goods sold under the two assumed cost flow methods (FIFO and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and average-cost methods.

(b) Cost of goods sold:
FIFO £14,400
Average £15,150

(c) Which cost flow method results in (1) the lower ending inventory amount for the statement of financial position, and (2) the lower cost of goods sold for the income statement?

P6-4A The management of Gisel Co., SA is reevaluating the appropriateness of using its present inventory cost flow method. They request your help in determining the results of operations for 2017 if either the FIFO method or the average-cost method had been used. For 2017, the accounting records show the following data.

Compute ending inventory, prepare income statements, and answer questions using FIFO and average-cost.

(LO 2, 3)

Inventories		Purchases and Sales	
Beginning (10,000 units)	€22,800	Total net sales (225,000 units)	€865,000
Ending (15,000 units)		Total cost of goods purchased (230,000 units)	578,500

Purchases were made quarterly as follows.

Quarter	Units	Unit Cost	Total Cost
1	60,000	€2.30	€138,000
2	50,000	2.50	125,000
3	50,000	2.60	130,000
4	70,000	2.65	185,500
	230,000		€578,500

Operating expenses were €147,000, and the company's income tax rate is 32%.

Instructions

(a) Prepare comparative condensed income statements for 2017 under FIFO and average-cost. (Show computations of ending inventory.)

(a) Net income:
FIFO €106,386
Average €104,907

(b) Answer the following questions for management.

(1) Which cost flow method (FIFO or average-cost) produces the more meaningful inventory amount for the statement of financial position? Why?

(2) Which cost flow method (FIFO or average-cost) is more likely to approximate actual physical flow of the goods? Why?

(b)(3) €696

(3) How much additional cash will be available for management under average-cost than under FIFO? Why?

Calculate ending inventory, cost of goods sold, gross profit, and gross profit rate under periodic method; compare results.

(LO 2, 3)

P6-5A You are provided with the following information for Senta Ltd. for the month ended October 31, 2017. Senta uses a periodic method for inventory.

Date	Description	Units	Unit Cost or Selling Price
October 1	Beginning inventory	60	€24
October 9	Purchase	120	26
October 11	Sale	100	35
October 17	Purchase	70	27
October 22	Sale	65	40
October 25	Purchase	80	28
October 29	Sale	120	40

(a)(iii) Gross profit:
FIFO €3,470
Average €3,395

Instructions

(a) Calculate (i) ending inventory, (ii) cost of goods sold, (iii) gross profit, and (iv) gross profit rate under each of the following methods.
  (1) FIFO.
  (2) Average-cost.

(b) Compare results for the two cost flow assumptions.

Compare specific identification, FIFO and average-cost under periodic method; use cost flow assumption to influence earnings.

(LO 2, 3)

P6-6A You have the following information for Greco Diamonds SLU. Greco Diamonds uses the periodic method of accounting for its inventory transactions. Greco only carries one brand and size of diamonds—all are identical. Each batch of diamonds purchased is carefully coded and marked with its purchase cost.

March 1	Beginning inventory 150 diamonds at a cost of €310 per diamond.
March 3	Purchased 200 diamonds at a cost of €350 each.
March 5	Sold 180 diamonds for €600 each.
March 10	Purchased 350 diamonds at a cost of €380 each.
March 25	Sold 400 diamonds for €650 each.

(a) Gross profit:
(1) Maximum €164,100
(2) Minimum €155,700

Instructions

(a) Assume that Greco Diamonds uses the specific identification method.
  (1) Demonstrate how Greco Diamonds could maximize its gross profit for the month by specifically selecting which diamonds to sell on March 5 and March 25.
  (2) Demonstrate how Greco Diamonds could minimize its gross profit for the month by selecting which diamonds to sell on March 5 and March 25.

(b) Assume that Greco Diamonds uses the FIFO cost flow assumption. Calculate cost of goods sold. How much gross profit would Greco Diamonds report under this cost flow assumption?

(c) Assume that Greco Diamonds uses the average-cost cost flow assumption. Calculate cost of goods sold. How much gross profit would the company report under this cost flow assumption?

(d) Which method should Greco Diamonds select? Explain.

Compute ending inventory, prepare income statements, and answer questions using FIFO and average-cost.

(LO 2, 3)

P6-7A The management of Tudor Ltd. asks your help in determining the comparative effects of the FIFO and average-cost inventory cost flow methods. For 2017, the accounting records provide the data shown below.

Inventory, January 1 (10,000 units)	£ 35,000
Cost of 120,000 units purchased	501,000
Selling price of 105,000 units sold	695,000
Operating expenses	130,000

Units purchased consisted of 40,000 units at £4.00 on May 10; 60,000 units at £4.20 on August 15; and 20,000 units at £4.45 on November 20. Income taxes are 28%.

(a) Gross profit:
FIFO £269,000
Average £262,075

Instructions

(a) Prepare comparative condensed income statements for 2017 under FIFO and average-cost. (Show computations of ending inventory.)

(b) Answer the following questions for management in the form of a business letter.
   (1) Which inventory cost flow method produces the more meaningful inventory amount for the statement of financial position? Why?
   (2) Which inventory cost flow method is more likely to approximate the actual physical flow of the goods? Why?
   (3) How much more cash will be available for management under average-cost than under FIFO? Why?

***P6-8A** Tempo Ltd. is a retailer operating in Dartmouth, Nova Scotia. Tempo uses the perpetual inventory method. All sales returns from customers result in the goods being returned to inventory; the inventory is not damaged. Assume that there are no credit transactions; all amounts are settled in cash. You are provided with the following information for Tempo Ltd. for the month of January 2017.

Calculate cost of goods sold and ending inventory for FIFO and moving-average cost under the perpetual system; compare gross profit under each assumption.

(LO 7)

Date	Description	Quantity	Unit Cost or Selling Price
December 31	Ending inventory	150	£19
January 2	Purchase	100	21
January 6	Sale	150	40
January 9	Sale return	10	40
January 9	Purchase	75	24
January 10	Purchase return	15	24
January 10	Sale	50	45
January 23	Purchase	100	26
January 30	Sale	160	50

Instructions

(a) For each of the following cost flow assumptions, calculate (i) cost of goods sold, (ii) ending inventory, and (iii) gross profit.
   (1) FIFO. (2) Moving-average cost.
(b) Compare results for the two cost flow assumptions.

(a)(iii) Gross profit:
FIFO £8,420
Average £8,266

***P6-9A** Dominican Appliance Mart began operations on May 1. It uses a perpetual inventory system. During May, the company had the following purchases and sales for its Model 25 Sureshot camera.

Determine ending inventory under a perpetual inventory system.

(LO 7)

	Purchases		
Date	**Units**	**Unit Cost**	**Sales Units**
May 1	7	NT$4,600	
4			4
8	8	NT$5,100	
12			5
15	6	NT$5,520	
20			3
25			5

Instructions

(a) Determine the ending inventory under a perpetual inventory system using (1) FIFO and (2) moving-average cost.
(b) Which costing method produces (1) the higher ending inventory valuation and (2) the lower ending inventory valuation?

(a) FIFO NT$22,080
Average NT$20,967

***P6-10A** Lisbon Company SA lost 70% of its inventory in a fire on March 25, 2017. The accounting records showed the following gross profit data for February and March.

Estimate inventory loss using gross profit method.

(LO 8)

	February	March (to 3/25)
Net sales	€300,000	€260,000
Net purchases	197,800	191,000
Freight-in	2,900	4,000
Beginning inventory	4,500	25,200
Ending inventory	25,200	?

Lisbon Company is fully insured for fire losses but must prepare a report for the insurance company.

Instructions

(a) Gross profit rate 40%

(a) Compute the gross profit rate for the month of February.
(b) Using the gross profit rate for February, determine both the estimated total inventory and inventory lost in the fire in March.

Compute ending inventory using retail method.
(LO 8)

***P6-11A** Terzi Department Store SA uses the retail inventory method to estimate its monthly ending inventories. The following information is available for two of its departments at August 31, 2017.

	Sporting Goods		Jewelry and Cosmetics	
	Cost	**Retail**	**Cost**	**Retail**
Net sales		€1,010,000		€1,150,000
Purchases	€675,000	1,066,000	€639,000	1,158,000
Purchase returns	(26,000)	(40,000)	(10,000)	(20,000)
Purchase discounts	(12,360)	—	(8,860)	—
Freight-in	9,000	—	7,000	—
Beginning inventory	47,360	74,000	32,860	62,000

At December 31, Terzi Department Store takes a physical inventory at retail. The actual retail values of the inventories in each department are Sporting Goods €85,000, and Jewelry and Cosmetics €52,000.

Instructions

(a) Sporting Goods €56,700

(a) Determine the estimated cost of the ending inventory for each department on August 31, 2017, using the retail inventory method.
(b) Compute the ending inventory at cost for each department at December 31, assuming the cost-to-retail ratios are 60% for Sporting Goods and 54% for Jewelry and Cosmetics.

Apply the LIFO cost method (periodic).
(LO 9)

***P6-12A** Using the data in P6-5A, compute the cost of the ending inventory using the LIFO cost flow assumption. Assume that Senta Ltd. uses the periodic inventory system.

PROBLEMS: SET B

Determine items and amounts to be recorded in inventory.
(LO 1)

P6-1B Banff Limited is trying to determine the value of its ending inventory as of February 28, 2017, the company's year-end. The following transactions occurred, and the accountant asked your help in determining whether they should be recorded or not.

(a) On February 26, Banff shipped goods costing £800 to a customer and charged the customer £1,000. The goods were shipped with terms FOB shipping point and the receiving report indicates that the customer received the goods on March 2.
(b) On February 26, Vendor Inc. shipped goods to Banff under terms FOB shipping point. The invoice price was £450 plus £30 for freight. The receiving report indicates that the goods were received by Banff on March 2.
(c) Banff had £860 of inventory isolated in the warehouse. The inventory is designated for a customer who has requested that the goods be shipped on March 10.
(d) Also included in Banff's warehouse is £700 of inventory that Jasper Producers shipped to Banff on consignment.
(e) On February 26, Banff issued a purchase order to acquire goods costing £900. The goods were shipped with terms FOB destination on February 27. Banff received the goods on March 2.
(f) On February 26, Banff shipped goods to a customer under terms FOB destination. The invoice price was £350; the cost of the items was £200. The receiving report indicates that the goods were received by the customer on February 28.

Instructions

For each of the above transactions, specify whether the item in question should be included in ending inventory, and if so, at what amount.

Determine cost of goods sold and ending inventory using FIFO and average-cost with analysis.
(LO 2, 3)

P6-2B Doom's Day Distribution markets CDs of the performing artist Marilynn. At the beginning of October, Doom's Day had in beginning inventory 2,000 of Marilynn's CDs with a unit cost of £7. During October, Doom's Day made the following purchases of Marilynn's CDs.

Oct. 3	3,000 @ £8	Oct. 19	4,000 @ £10
Oct. 9	5,500 @ £9	Oct. 25	2,000 @ £11

During October, 13,500 units were sold. Doom's Day uses a periodic inventory system.

Instructions

(a) Determine the cost of goods available for sale.

(b) Determine (1) the ending inventory and (2) the cost of goods sold under the two assumed cost flow methods (FIFO and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and average-cost methods.

(b)(2) Cost of goods sold:
FIFO £117,500
Average £122,318

(c) Which cost flow method results in (1) the higher inventory amount for the statement of financial position and (2) the higher cost of goods sold for the income statement?

Determine cost of goods sold and ending inventory, using FIFO and average-cost with analysis.

(LO 2, 3)

P6-3B Kam Company Ltd. had a beginning inventory on January 1 of 100 units of Product 4-18-15 at a cost of HK$210 per unit. During the year, the following purchases were made.

Mar. 15	300 units at HK$240	Sept. 4	300 units at HK$270
July 20	200 units at HK$250	Dec. 2	100 units at HK$290

700 units were sold. Kam Company uses a periodic inventory system.

Instructions

(a) Determine the cost of goods available for sale.

(b) Determine (1) the ending inventory, and (2) the cost of goods sold under the two assumed cost flow methods (FIFO and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and average-cost methods.

(b)(2) Cost of goods sold:
FIFO HK$170,000
Average HK$177,100

(c) Which cost flow method results in (1) the higher ending inventory amount for the statement of financial position, and (2) the higher cost of goods sold for the income statement?

Compute ending inventory, prepare income statements, and answer questions using FIFO and average-cost.

(LO 2, 3)

P6-4B The management of Munich Company SE is reevaluating the appropriateness of using its present inventory cost flow method. The company requests your help in determining the results of operations for 2017 if either the FIFO or the average-cost method had been used. For 2017, the accounting records show these data:

Inventories		Purchases and Sales	
Beginning (8,000 units)	€16,000	Total net sales (188,000 units)	€780,000
Ending (15,000 units)		Total cost of goods purchased (195,000 units)	480,500

Purchases were made quarterly as follows.

Quarter	Units	Unit Cost	Total Cost
1	50,000	€2.20	€110,000
2	40,000	2.40	96,000
3	45,000	2.50	112,500
4	60,000	2.70	162,000
	195,000		€480,500

Operating expenses were €130,000, and the company's income tax rate is 36%.

Instructions

(a) Prepare comparative condensed income statements for 2017 under FIFO and average-cost. (Show computations of ending inventory.)

(a) Gross profit:
FIFO €324,000
Average €320,190

(b) Answer the following questions for management.

(1) Which cost flow method (FIFO or average-cost) produces the more meaningful inventory amount for the statement of financial position? Why?

(2) Which cost flow method (FIFO or average-cost) is more likely to approximate the actual physical flow of goods? Why?

(3) How much more cash will be available for management under average-cost than under FIFO? Why?

Calculate ending inventory, cost of goods sold, gross profit, and gross profit rate under periodic method; compare results.

(LO 2, 3)

P6-5B You are provided with the following information for Lahti Ltd. for the month ended June 30, 2017. Lahti uses the periodic method for inventory.

Date	Description	Quantity	Unit Cost or Selling Price
June 1	Beginning inventory	40	£40
June 4	Purchase	135	43
June 10	Sale	110	70
June 11	Sale return	15	70
June 18	Purchase	55	46
June 18	Purchase return	10	46
June 25	Sale	60	75
June 28	Purchase	30	50

Instructions

(a)(iii) Gross profit:
FIFO £4,605
Average £4,345.50

(a) Calculate (i) ending inventory, (ii) cost of goods sold, (iii) gross profit, and (iv) gross profit rate of the two following methods.
 (1) FIFO. (2) Average-cost.

(b) Compare results for the two cost flow assumptions.

Compare specific identification, FIFO, and average-cost under periodic method; use cost flow assumption to justify price increase.

(LO 2, 3)

P6-6B You are provided with the following information for Petro Pushers. Petro Pushers uses the periodic method of accounting for its inventory transactions.

March 1	Beginning inventory 2,200 liters at a cost of £0.60 per liter.
March 3	Purchased 2,500 liters at a cost of £0.65 per liter.
March 5	Sold 2,200 liters for £1.05 per liter.
March 10	Purchased 4,000 liters at a cost of £0.72 per liter.
March 20	Purchased 2,500 liters at a cost of £0.80 per liter.
March 30	Sold 5,500 liters for £1.25 per liter.

Instructions

(a) Prepare partial income statements through gross profit, and calculate the value of ending inventory that would be reported on the statement of financial position, under each of the following assumptions. (Round ending inventory and cost of goods sold to the nearest pound.)

(a)(1) Gross profit:
Specific identification
£3,860

 (1) Specific identification method assuming:
  (i) The March 5 sale consisted of 1,100 liters from the March 1 beginning inventory and 1,100 liters from the March 3 purchase; and
  (ii) The March 30 sale consisted of the following number of units sold from beginning inventory and each purchase: 450 liters from March 1; 850 liters from March 3; 2,900 liters from March 10; 1,300 liters from March 20.

(2) FIFO £4,080
(3) Average £3,810

 (2) FIFO.
 (3) Average-cost.

(b) How can companies use these methods to justify price increases? Which method would best support an argument to increase prices?

Compute ending inventory, prepare income statements, and answer questions using FIFO and average-cost.

(LO 2, 3)

P6-7B The management of Aar Co. SA asks your help in determining the comparative effects of the FIFO and average-cost inventory cost flow methods. For 2017, the accounting records provide the data shown below.

Inventory, January 1 (10,000 units)	CHF 47,000
Cost of 100,000 units purchased	532,000
Selling price of 85,000 units sold	750,000
Operating expenses	160,000

Units purchased consisted of 35,000 units at CHF5.10 on May 10; 35,000 units at CHF5.30 on August 15; and 30,000 units at CHF5.60 on November 20. Income taxes are 30%.

Instructions

(a) Net income:
FIFO CHF105,700
Average CHF99,820

(a) Prepare comparative condensed income statements for 2017 under FIFO and average-cost. (Show computations of ending inventory.)

(b) Answer the following questions for management.
 (1) Which inventory cost flow method produces the more meaningful inventory amount for the statement of financial position? Why?

(2) Which inventory cost flow method is more likely to approximate actual physical flow of the goods? Why?
(3) How much additional cash will be available for management under average-cost than under FIFO? Why?

***P6-8B** Yuan Li Ltd. is a retailer that uses the perpetual inventory method. All sales returns from customers result in the goods being returned to inventory; the inventory is not damaged. Assume that there are no credit transactions; all amounts are settled in cash. You are provided with the following information for Yuan Li Ltd. for the month of January 2017.

Calculate cost of goods sold and ending inventory under FIFO and moving-average cost under the perpetual system; compare gross profit under each assumption.

(LO 7)

Date	Description	Quantity	Unit Cost or Selling Price
January 1	Beginning inventory	100	£14
January 5	Purchase	150	17
January 8	Sale	110	28
January 10	Sale return	10	28
January 15	Purchase	55	19
January 16	Purchase return	5	19
January 20	Sale	80	32
January 25	Purchase	30	22

Instructions

(a) For each of the following cost flow assumptions, calculate (i) cost of goods sold, (ii) ending inventory, and (iii) gross profit.
(1) FIFO. (2) Moving-average cost.
(b) Compare results for the two cost flow assumptions.

(a)(iii) Gross profit:
FIFO £2,600
Average £2,452

***P6-9B** Ying Co. Ltd. began operations on July 1. It uses a perpetual inventory system. During July, the company had the following purchases and sales.

Determine ending inventory under a perpetual inventory system.

(LO 7)

	Purchases		
Date	Units	Unit Cost	Sales Units
July 1	5	HK$120	
July 6			3
July 11	7	HK$136	
July 14			6
July 21	8	HK$147	
July 27			6

Instructions

(a) Determine the ending inventory under a perpetual inventory system using (1) FIFO and (2) moving-average cost.
(b) Which costing method produces the higher ending inventory valuation?

(a) Ending inventory:
FIFO HK$735
Average HK$715

***P6-10B** Bristol Company lost all of its inventory in a fire on December 26, 2017. The accounting records showed the following gross profit data for November and December.

Compute gross profit rate and inventory loss using gross profit method.

(LO 8)

	November	December (to 12/26)
Net sales	£600,000	£700,000
Beginning inventory	30,000	33,000
Purchases	368,000	420,000
Purchase returns and allowances	13,300	14,900
Purchase discounts	8,500	9,500
Freight-in	4,800	5,900
Ending inventory	33,000	?

Bristol is fully insured for fire losses but must prepare a report for the insurance company.

Instructions

(a) Compute the gross profit rate for November.
(b) Using the gross profit rate for November, determine the estimated cost of the inventory lost in the fire.

(a) 42%

Compute ending inventory using retail method.
(LO 8)

***P6-11B** Fond du Lac Books SA uses the retail inventory method to estimate its monthly ending inventories. The following information is available for two of its departments at October 31, 2017.

	Hardcovers		Paperbacks	
	Cost	**Retail**	**Cost**	**Retail**
Beginning inventory	€ 440,000	€ 700,000	€ 280,000	€ 360,000
Purchases	2,168,000	3,200,000	1,155,000	1,540,000
Freight-in	20,000		12,000	
Purchase discounts	54,000		22,000	
Net sales		3,100,000		1,570,000

At December 31, Fond du Lac Books takes a physical inventory at retail. The actual retail values of the inventories in each department are Hardcovers €790,000 and Paperbacks €333,000.

Instructions

(a) Hardcovers €528,000

(a) Determine the estimated cost of the ending inventory for each department at October 31, 2017, using the retail inventory method.
(b) Compute the ending inventory at cost for each department at December 31, assuming the cost-to-retail ratios for the year are 65% for Hardcovers and 77% for Paperbacks.

Apply the LIFO cost method (periodic).
(LO 9)

***P6-12B** Using the data in P6-5B, compute the cost of the ending inventory using the LIFO cost flow assumption. Assume that Lahti Ltd. uses the periodic inventory system.

COMPREHENSIVE PROBLEM

CP6 On December 1, 2017, Cambridge Company, Ltd. had the account balances shown below.

	Debit		Credit
Cash	£ 4,650	Accumulated Depreciation—Equipment	£ 1,500
Accounts Receivable	3,900	Accounts Payable	3,000
Inventory	1,950*	Share Capital—Ordinary	20,000
Equipment	21,000	Retained Earnings	7,000
	£31,500		£31,500

*(3,000 × £0.65)

The following transactions occurred during December.

Dec. 3 Purchased 4,000 units of inventory on account at a cost of £0.72 per unit.
5 Sold 4,400 units of inventory on account for £0.92 per unit. (It sold 3,000 of the £0.65 units and 1,400 of the £0.72.)
7 Granted the December 5 customer £184 credit for 200 units of inventory returned costing £144. These units were returned to inventory.
17 Purchased 2,200 units of inventory for cash at £0.78 each.
22 Sold 2,000 units of inventory on account for £0.95 per unit. (It sold 2,000 of the £0.72 units.)

Adjustment data:
1. Accrued salaries payable £400.
2. Depreciation £200 per month.

Instructions
(a) Journalize the December transactions and adjusting entries, assuming Cambridge uses the perpetual inventory method.
(b) Enter the December 1 balances in the ledger T-accounts and post the December transactions. In addition to the accounts mentioned above, use the following additional accounts: Cost of Goods Sold, Depreciation Expense, Salaries and Wages Expense, Salaries and Wages Payable, Sales Revenue, and Sales Returns and Allowances.
(c) Prepare an adjusted trial balance as of December 31, 2017.
(d) Prepare an income statement for December 2017 and a classified statement of financial position at December 31, 2017.

(e) Compute ending inventory and cost of goods sold under FIFO, assuming Cambridge Company uses the periodic inventory system.
(f) Compute ending inventory and cost of goods sold under average-cost, assuming Cambridge Company uses the periodic inventory system.

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–5.)

MC6 Mei-ling is busy establishing both divisions of her business (cookie classes and mixer sales) and completing her business degree. Her goals for the next 11 months are to sell one mixer per month and to give two to three classes per week.

The cost of the fine European mixers is expected to increase. Mei-ling has just negotiated new terms with Kzinski that include shipping costs in the negotiated purchase price (mixers will be shipped FOB destination). Mei-ling must choose a cost flow assumption for her mixer inventory.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP6-1 The notes that accompany a company's financial statements provide informative details that would clutter the amounts and descriptions presented in the statements. Refer to the financial statements of TSMC in Appendix A and the 2013 annual report's Notes to the Consolidated Financial Statements, available in the Investors section of the company's website, *www.tsmc.com*.

Instructions

Answer the following questions. Complete the requirements in millions of new Taiwan dollars, as shown in TSMC's annual report.

(a) What did TSMC report for the amount of inventories in its consolidated statement of financial position at December 31, 2013? At December 31, 2012?
(b) Compute the new Taiwan dollar amount of change and the percentage change in inventories between 2012 and 2013. Compute inventory as a percentage of current assets at December 31, 2013.
(c) How does TSMC value its inventories? Which inventory cost flow method does TSMC use? (See Notes to the Consolidated Financial Statements.)
(d) What is the cost of sales (cost of goods sold) reported by TSMC for 2013 and 2012? Compute the percentage of cost of sales to net sales in 2013.

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP6-2 Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C.

Instructions

(a) Based on the information contained in these financial statements, compute the following ratios for each company for the most recent year shown.
    (1) Inventory turnover. (Round to one decimal.)
    (2) Days in inventory. (Round to nearest day.)
(b) What conclusions concerning the management of the inventory can you draw from these data?

Real-World Focus

BYP6-3 A company's annual report usually will identify the inventory method used. Knowing that, you can analyze the effects of the inventory method on the income statement and statement of financial position.

Address: **www.cisco.com,** or go to **www.wiley.com/college/weygandt**

Instructions

Answer the following questions based on the current year's annual report on Cisco's (USA) website.

(a) At Cisco's fiscal year-end, what was the inventory on the balance sheet (statement of financial position)?
(b) How has this changed from the previous fiscal year-end?
(c) How much of the inventory was finished goods?
(d) What inventory method does Cisco use?

Critical Thinking

Decision-Making Across the Organization

BYP6-4 On April 10, 2017, fire damaged the office and warehouse of Ehlert Company, Ltd. Most of the accounting records were destroyed, but the following account balances were determined as of March 31, 2017: Inventory (January 1, 2017), £80,000; Sales Revenue (January 1–March 31, 2017), £180,000; Purchases (January 1–March 31, 2017), £94,000.

The company's fiscal year ends on December 31. It uses a periodic inventory system.

From an analysis of the April bank statement, you discover cancelled checks of £4,200 for cash purchases during the period April 1–10. Deposits during the same period totaled £20,500. Of that amount, 60% were collections on accounts receivable, and the balance was cash sales.

Correspondence with the company's principal suppliers revealed £12,400 of purchases on account from April 1 to April 10. Of that amount, £1,900 was for merchandise in transit on April 10 that was shipped FOB destination.

Correspondence with the company's principal customers produced acknowledgments of credit sales totaling £37,000 from April 1 to April 10. It was estimated that £5,600 of credit sales will never be acknowledged or recovered from customers.

Ehlert Company reached an agreement with the insurance company that its fire-loss claim should be based on the average of the gross profit rates for the preceding 2 years. The financial statements for 2015 and 2016 showed the following data.

	2016	**2015**
Net sales	£600,000	£480,000
Cost of goods purchased	404,000	346,400
Beginning inventory	60,000	40,000
Ending inventory	80,000	60,000

Inventory with a cost of £17,000 was salvaged from the fire.

Instructions

With the class divided into groups, answer the following.

(a) Determine the balances in (1) Sales Revenue and (2) Purchases at April 10.
*(b) Determine the average gross profit rate for the years 2015 and 2016. (*Hint:* Find the gross profit rate for each year and divide the sum by 2.)
*(c) Determine the inventory loss as a result of the fire, using the gross profit method.

Communication Activity

BYP6-5 You are the controller of Classic Toys Ltd. Kathy McDonnell, the president, recently mentioned to you that she found an error in the 2016 financial statements, which she believes has corrected itself. She determined, in discussions with the Purchasing Department, that 2016 ending inventory was overstated by €1 million. Kathy says that the 2017 ending inventory is correct. Thus, she assumes that 2017 income is correct. Kathy says to you, "What happened has happened—there's no point in worrying about it anymore."

Instructions

You conclude that Kathy is incorrect. Write a brief, tactful memo to Kathy, clarifying the situation.

Answers to Insight and Accounting Across the Organization Questions

p. 279 A Big Hiccup Q: What steps might the companies take to avoid such a serious disruption in the future? **A:** The manufacturer of the piston rings should spread its manufacturing facilities across a few locations that are far enough apart that they would not all be at risk at once. In addition, the automakers might consider becoming less dependent on a single supplier.
p. 280 Falsifying Inventory to Boost Income Q: What effect does an overstatement of inventory have on a company's financial statements? **A:** The statement of financial position looks stronger because inventory and retained earnings are overstated. The income statement looks better because cost of goods sold is understated and income is overstated.
p. 289 Is LIFO Fair? Q: What are the arguments for and against the use of LIFO? **A:** Proponents of LIFO argue that it is conceptually superior because it matches the most recent cost with the most recent selling price. Critics contend that it artificially understates the company's net income and consequently reduces tax payments. Also, because mostly only U.S. companies are allowed to use LIFO, its use reduces the ability of investors to compare U.S. companies with non-U.S. companies.
p. 293 Improving Inventory Control with RFID Q: Why is inventory control important to managers at retailers, such as those at Carrefour (FRA) and Metro (DEU)? **A:** In the very competitive environment of retailing, where Carrefour and Metro are major players, small differences in price matter to the customer. These companies sell a high volume of inventory at a low gross profit rate. When operating in a high-volume, low-margin environment, small cost savings can mean the difference between being profitable or going out of business.

A Look at U.S. GAAP

Learning Objective 10

Compare the accounting for inventories under IFRS and U.S. GAAP.

The major GAAP requirements related to accounting and reporting for inventories are the same as IFRS. The major differences are that GAAP permits the use of the LIFO cost flow assumption and uses market in the lower-of-cost-or-net realizable value inventory valuation differently.

Key Points

- The requirements for accounting for and reporting inventories are more principles-based under IFRS. That is, GAAP provides more detailed guidelines in inventory accounting.
- IFRS requires companies to use the same cost flow assumption for all goods of a similar nature. GAAP has no specific requirement in this area.

Similarities

- The definitions for inventory are essentially similar under GAAP and IFRS. Both define inventory as assets held-for-sale in the ordinary course of business, in the process of production for sale (work in process), or to be consumed in the production of goods or services (e.g., raw materials).
- Who owns the goods—goods in transit or consigned goods—as well as the costs to include in inventory, are accounted for the same under GAAP and IFRS.

Differences

- Both GAAP and IFRS permit specific identification where appropriate. IFRS actually requires that the specific identification method be used where the inventory items are not interchangeable (i.e., can be specifically identified). If the inventory items are not specifically identifiable, a cost flow assumption is used. GAAP does not specify situations in which specific identification must be used.
- A major difference between GAAP and IFRS relates to the LIFO cost flow assumption. GAAP permits the use of LIFO for inventory valuation. IFRS prohibits its use. FIFO and average-cost are the only two acceptable cost flow assumptions permitted under IFRS.
- When testing to see if the value of inventory has fallen below its cost, IFRS defines market as net realizable value. Net realizable value is the estimated selling price in the ordinary course of

business, less the estimated costs to complete and sell. In other words, net realizable value is the best estimate of the net amounts that inventories are expected to realize. GAAP, on the other hand, defines market as essentially replacement cost. The GAAP method of inventory valuation is often referred to as the lower-of-cost-or-market (LCM).

- Under GAAP, if inventory is written down under the lower-of-cost-or-market valuation, the new basis is now considered its cost. As a result, the inventory may not be written back up to its original cost in a subsequent period. Under IFRS, the write-down may be reversed in a subsequent period up to the amount of the previous write-down. Both the write-down and any subsequent reversal should be reported on the income statement.
- An example of the use of lower-of-cost-or-market under GAAP follows.

Mendel Company has the following four items in its ending inventory as of December 31, 2017. The company uses the lower-of-cost-or-market approach for inventory valuation following GAAP.

Item No.	Cost	Market
1320	$3,600	$3,400
1333	4,000	4,100
1428	2,800	2,100
1510	5,000	4,700

The computation of the ending inventory value to be reported in the financial statements at December 31, 2017, is as follows.

Item No.	Cost	Market	LCM
1320	$ 3,600	$ 3,400	$ 3,400
1333	4,000	4,100	4,000
1428	2,800	2,100	2,100
1510	5,000	4,700	4,700
Total	$15,400	$14,300	$14,200

- IFRS generally requires pre-harvest inventories of agricultural products (e.g., growing crops and farm animals) to be reported at fair value less cost of disposal. GAAP generally requires these items to be recorded at cost.

Looking to the Future

One convergence issue that will be difficult to resolve relates to the use of the LIFO cost flow assumption. As indicated, IFRS specifically prohibits its use. Conversely, the LIFO cost flow assumption is widely used in the United States because of its favorable tax advantages. In addition, many argue that LIFO from a financial reporting point of view provides a better matching of current costs against revenue and, therefore, enables companies to compute a more realistic income.

GAAP Practice

GAAP Self-Test Questions

1. Which of the following should **not** be included in the inventory of a company using GAAP?
   (a) Goods held on consignment from another company.
   (b) Goods shipped on consignment to another company.
   (c) Goods in transit from another company shipped FOB shipping point.
   (d) None of the above.
2. Which method of inventory costing is prohibited under IFRS?
   (a) Specific identification.
   (b) LIFO.
   (c) FIFO.
   (d) Average-cost.

3. Yang Company purchased 2,000 widgets and has 400 widgets in its ending inventory at a cost of $90 each and a current replacement cost of $70 each. The net realizable value of each unit in the ending inventory is $80. The ending inventory under lower-of-cost-or-market is:
   (a) $36,000.
   (b) $32,000.
   (c) $28,000.
   (d) None of the above.
4. Specific identification:
   (a) must be used under IFRS if the inventory items are not interchangeable.
   (b) cannot be used under IFRS.
   (c) cannot be used under GAAP.
   (d) must be used under IFRS if it would result in the most conservative net income.
5. GAAP requires the following:
   (a) Ending inventory is written up and down to market value each reporting period.
   (b) Ending inventory is written down to market value but cannot be written up.
   (c) Ending inventory is written down to market value and may be written up in future periods to its market value but not above its original cost.
   (d) Ending inventory is written down to market value and may be written up in future periods to its market value.

GAAP Exercises

GAAP6-1 Briefly describe some of the similarities and differences between GAAP and IFRS with respect to the accounting for inventories.

GAAP6-2 LaTour Inc. is based in France and prepares its financial statements in accordance with IFRS. In 2017, it reported cost of goods sold of €578 million and average inventory of €154 million. Briefly discuss how analysis of LaTour's inventory turnover (and comparisons to a company using GAAP) might be affected by differences in inventory accounting between IFRS and GAAP.

GAAP6-3 Franklin Company has the following four items in its ending inventory as of December 31, 2017. The company uses the lower-of-cost-or-market approach for inventory valuation following GAAP.

Item No.	Cost	Market
AB	$1,700	$1,400
TRX	2,200	2,300
NWA	7,800	7,100
SGH	3,000	3,700

Compute the lower-of-cost-or-market.

GAAP Financial Reporting Problem: Apple Inc.

GAAP6-4 The financial statements of Apple are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions

Answer the following questions. (Give the amounts in thousands of dollars, as shown in Apple's annual report.)

(a) What did Apple report for the amount of inventories in its consolidated balance sheet at September 28, 2013? At September 29, 2012?
(b) Compute the dollar amount of change and the percentage change in inventories between 2012 and 2013. Compute inventory as a percentage of current assets for 2013.
(c) How does Apple value its inventory, and what cost flow assumption does it use?
(d) What are the (product) cost of goods sold reported by Apple for 2013, 2012, and 2011? Compute the ratio of (product) cost of goods sold to net (product) sales in 2013.

Answers to GAAP Self-Test Questions

1. a **2.** b **3.** c **4.** a **5.** b

✔ The Navigator

✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER 7

Fraud, Internal Control, and Cash

FEATURE STORY Minding the Money at Nick's

Nick Petros, the founder of Nick's Steakhouse and Pizza (CAN) in Calgary, came to Canada from Greece at age 17 with no money and speaking no English. For 25 years, he worked his way up the ranks in the restaurant industry, as a dishwasher, busboy, waiter, maître d', and then manager. In 1979, he combined his industry experience with a collection of his mother's homemade recipes to open his own restaurant. Nick's son Mark took over the business in 2000.

Over the course of a busy Friday or Saturday evening, up to 11 servers and three bartenders serve as many as 1,200 people in the 650-square-meter restaurant and bar. Mark Petros says his point-of-sale (POS) system helps him keep track of the orders, inventory, and money.

After taking a table's order, servers enter the items they require into one of six computer terminals located throughout the restaurant. The computer is preprogrammed with the item and its price so that the server simply presses a labelled button, for example, "Caesar salad" or "lasagna," to enter an order. The POS system sends the order information to the bar, salad station, or line cooks, and uses the information to track inventory. The servers collect payment from their tables. At the end of a shift, the POS system provides an employee report that itemizes the credit card, debit card, and cash sales that the server owes.

The bartenders and servers have a cash float of $400. The hosting staff also has a float to use for pickup orders and in case the servers need change for large bills. Mr. Petros explains, "When an employee with a float starts the shift, he or she makes sure that the cash on hand is equal to the float plus any orders taken so far that day. At the end of their shift, the same calculation is done to see if it balances out, or else they are responsible for the missing money."

Similarly, before the bartenders start their shift, they have to count the beer in the fridges and note the levels in partially full bottles of alcohol. Everything must correspond to the POS system. For example, if three beers are missing from the fridge, three beers should have been entered in the system. If they weren't, the bartender is responsible.

"There's never a discrepancy," says Mr. Petros. If there ever is one, he adds, it's easy to find the problem, usually an error in pushing a button or entering information. ■

✔ The Navigator

- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 356–361
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Define fraud and internal control.
2. Identify the principles of internal control activities.
3. Explain the applications of internal control principles to cash receipts.
4. Explain the applications of internal control principles to cash disbursements.
5. Describe the operation of a petty cash fund.
6. Indicate the control features of a bank account.
7. Prepare a bank reconciliation.
8. Explain the reporting of cash.

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PREVIEW OF CHAPTER 7

As the Feature Story about recording sales at Nick's Steakhouse and Pizza indicates, control of cash is important to ensure that fraud does not occur. Companies also need controls to safeguard other types of assets. For example, Nick's undoubtedly has controls to prevent the theft of food and supplies, and controls to prevent the theft of tableware and dishes from its kitchen.

In this chapter, we explain the essential features of an internal control system and how it prevents fraud. We also describe how those controls apply to a specific asset—cash. The applications include some controls with which you may be already familiar, such as the use of a bank.

The content and organization of Chapter 7 are as follows.

FRAUD, INTERNAL CONTROL, AND CASH

Fraud and Internal Control	Cash Controls	Control Features: Use of a Bank	Reporting Cash
• Fraud • Internal control • Principles of internal control activities • Limitations	• Cash receipts controls • Cash disbursements controls • Petty cash fund controls	• Making bank deposits • Writing checks • Bank statements • Reconciling the bank account • Electronic funds transfer (EFT) system	• Cash equivalents • Restricted cash

✔ The Navigator

Fraud and Internal Control

Learning Objective 1
Define fraud and internal control.

The Feature Story describes many of the internal control procedures used by Nick's Steakhouse and Pizza (CAN). These procedures are necessary to discourage employees from fraudulent activities.

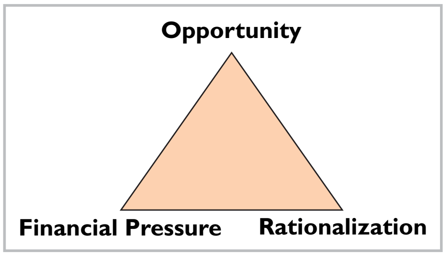
Fraud

A **fraud** is a dishonest act by an employee that results in personal benefit to the employee at a cost to the employer. Examples of fraud reported in the financial press include the following.

- A bookkeeper in a small company diverted $750,000 of bill payments to a personal bank account over a three-year period.
- A shipping clerk with 28 years of service shipped $125,000 of merchandise to himself.
- A computer operator embezzled $21 million from a major bank over a two-year period.
- A church treasurer "borrowed" $150,000 of church funds to finance a friend's business dealings.

Why does fraud occur? The three main factors that contribute to fraudulent activity are depicted by the **fraud triangle** in Illustration 7-1 (in the margin).

Illustration 7-1
Fraud triangle



The most important element of the fraud triangle is **opportunity**. For an employee to commit fraud, the workplace environment must provide opportunities that an employee can take advantage of. Opportunities occur when the workplace lacks sufficient controls to deter and detect fraud. For example, inadequate monitoring of employee actions can create opportunities for theft and can embolden employees because they believe they will not be caught.

A second factor that contributes to fraud is **financial pressure**. Employees sometimes commit fraud because of personal financial problems caused by too much debt. Or, they might commit fraud because they want to lead a lifestyle that they cannot afford on their current salary.

The third factor that contributes to fraud is **rationalization**. In order to justify their fraud, employees rationalize their dishonest actions. For example, employees sometimes justify fraud because they believe they are underpaid while the employer is making lots of money. Employees feel justified in stealing because they believe they deserve to be paid more.

Internal Control

Internal control is a process designed to provide reasonable assurance regarding the achievement of objectives related to operations, reporting, and compliance. In more detail, it consists of all the related methods and measures adopted within an organization to safeguard assets, enhance the reliability of accounting records, increase efficiency of operations, and ensure compliance with laws and regulations. Internal control systems have five primary components as listed below.[1]

- **A control environment.** It is the responsibility of top management to make it clear that the organization values integrity and that unethical activity will not be tolerated. This component is often referred to as the "tone at the top."
- **Risk assessment.** Companies must identify and analyze the various factors that create risk for the business and must determine how to manage these risks.

[1]The Committee of Sponsoring Organizations of the Treadway Commission, "Internal Control—Integrated Framework," *www.coso.org/documents/990025P_executive_summary_final_may20_e.pdf.*

- **Control activities.** To reduce the occurrence of fraud, management must design policies and procedures to address the specific risks faced by the company.
- **Information and communication.** The internal control system must capture and communicate all pertinent information both down and up the organization, as well as communicate information to appropriate external parties.
- **Monitoring.** Internal control systems must be monitored periodically for their adequacy. Significant deficiencies need to be reported to top management and/or the board of directors.

People, Planet, and Profit Insight **And the Controls Are . . .**

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Internal controls are important for an effective financial reporting system. The same is true for sustainability reporting. An effective system of internal controls for sustainability reporting will help in the following ways: (1) prevent the unauthorized use of data; (2) provide reasonable assurance that the information is accurate, valid, and complete; and (3) report information that is consistent with the overall sustainability accounting policies. With these types of controls, users will have the confidence that they can use the sustainability information effectively.

Some regulators are calling for even more assurance through audits of this information. Companies that potentially can cause environmental damage through greenhouse gases, as well as companies in the mining and extractive industries, are subject to reporting requirements. And, as demand for more information in the sustainability area expands, the need for audits of this information will grow.

Q Why is sustainability information important to investors? (See page 379.)

Principles of Internal Control Activities

Learning Objective 2
Identify the principles of internal control activities.

Each of the five components of an internal control system is important. Here, we will focus on one component, the control activities. The reason? These activities are the backbone of the company's efforts to address the risks it faces, such as fraud. The specific control activities used by a company will vary, depending on management's assessment of the risks faced. This assessment is heavily influenced by the size and nature of the company.

The six principles of control activities are as follows.

- Establishment of responsibility
- Segregation of duties
- Documentation procedures
- Physical controls
- Independent internal verification
- Human resource controls

We explain these principles in the following sections. You should recognize that they apply to most companies and are relevant to both manual and computerized accounting systems.

ESTABLISHMENT OF RESPONSIBILITY

An essential principle of internal control is to assign responsibility to specific employees. **Control is most effective when only one person is responsible for a given task.**

Transfer of Cash Drawers

To illustrate, assume that the cash on hand at the end of the day in a Citysuper (HKG) supermarket in Taipei, Taiwan is NT$300 short of the cash entered in the cash register. If only one person has operated the register, the shift manager can quickly determine responsibility for the shortage. If two or more individuals have worked the register, it may be impossible to determine who is responsible for the error. In the Feature Story, the principle of establishing responsibility is applied at Nick's Steakhouse and Pizza for operating a terminal in the point-of-sale system in any given shift.

Establishing responsibility often requires limiting access only to authorized personnel, and then identifying those personnel. For example, the automated systems used by many companies have mechanisms such as identifying pass-codes that keep track of who made a journal entry, who entered a sale, or who went into an inventory storeroom at a particular time. Use of identifying pass-codes enables the company to establish responsibility by identifying the particular employee who carried out the activity.

ANATOMY OF A FRAUD

Maureen Frugali was a training supervisor for claims processing at Colossal Healthcare. As a standard part of the claims-processing training program, Maureen created fictitious claims for use by trainees. These fictitious claims were then sent to the accounts payable department. After the training claims had been processed, she was to notify Accounts Payable of all fictitious claims, so that they would not be paid. However, she did not inform Accounts Payable about every fictitious claim. She created some fictitious claims for entities that she controlled (that is, she would receive the payment), and she let Accounts Payable pay her.

Total take: $11 million

THE MISSING CONTROL

Establishment of responsibility. The healthcare company did not adequately restrict the responsibility for authorizing and approving claims transactions. The training supervisor should not have been authorized to create claims in the company's "live" system.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 61–70.

SEGREGATION OF DUTIES

Segregation of duties is indispensable in an internal control system. There are two common applications of this principle:

1. Different individuals should be responsible for related activities.
2. The responsibility for recordkeeping for an asset should be separate from the physical custody of that asset.

The rationale for segregation of duties is this: **The work of one employee should, without a duplication of effort, provide a reliable basis for evaluating the work of another employee.** For example, the personnel that design and program computerized systems should not be assigned duties related to day-to-day use of the system. Otherwise, they could design the system to benefit them personally and conceal the fraud through day-to-day use.

SEGREGATION OF RELATED ACTIVITIES **Making one individual responsible for related activities increases the potential for errors and irregularities.** Instead, companies should, for example, assign related **purchasing activities** to different individuals. Related purchasing activities include ordering merchandise, order approval, receiving goods, authorizing payment, and paying for goods or services. Various frauds are possible when one person handles related purchasing activities:

- If a purchasing agent is allowed to order goods without obtaining supervisory approval, the likelihood of the purchasing agent receiving kickbacks from suppliers increases.
- If an employee who orders goods also handles the invoice and receipt of the goods, as well as payment authorization, he or she might authorize payment for a fictitious invoice.

These abuses are less likely to occur when companies divide the purchasing tasks.

Similarly, companies should assign related **sales activities** to different individuals. Related selling activities include making a sale, shipping (or delivering) the goods to the customer, billing the customer, and receiving payment. Various frauds are possible when one person handles related sales transactions:

- If a salesperson can make a sale without obtaining supervisory approval, he or she might make sales at unauthorized prices to increase sales commissions.
- A shipping clerk who also has access to accounting records could ship goods to himself.
- A billing clerk who handles billing and receipt could understate the amount billed for sales made to friends and relatives.

These abuses are less likely to occur when companies divide the sales tasks. The salespeople make the sale, the shipping department ships the goods on the basis of the sales order, and the billing department prepares the sales invoice after comparing the sales order with the report of goods shipped.

ANATOMY OF A FRAUD

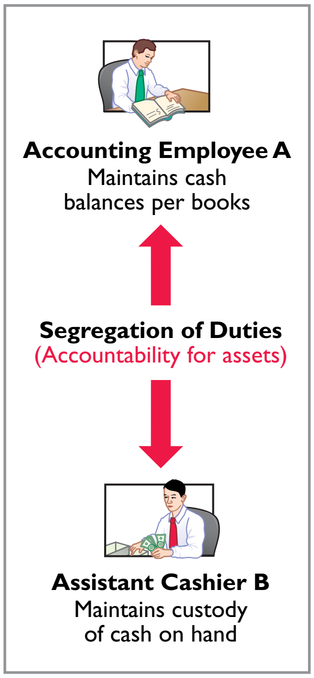
Lawrence Fairbanks, the assistant vice-chancellor of communications at Aesop University, was allowed to make purchases of under $2,500 for his department without external approval. Unfortunately, he also sometimes bought items for himself, such as expensive antiques and other collectibles. How did he do it? He replaced the vendor invoices he received with fake vendor invoices that he created. The fake invoices had descriptions that were more consistent with the communications department's purchases. He submitted these fake invoices to the accounting department as the basis for their journal entries and to the accounts payable department as the basis for payment.

Total take: $475,000

THE MISSING CONTROL

Segregation of duties. The university had not properly segregated related purchasing activities. Lawrence was ordering items, receiving the items, and receiving the invoice. By receiving the invoice, he had control over the documents that were used to account for the purchase and thus was able to substitute a fake invoice.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 3–15.



SEGREGATION OF RECORDKEEPING FROM PHYSICAL CUSTODY The accountant should have neither physical custody of the asset nor access to it. Likewise, the custodian of the asset should not maintain or have access to the accounting records. **The custodian of the asset is not likely to convert the asset to personal use when one employee maintains the record of the asset, and a different employee has physical custody of the asset.** The separation of accounting responsibility from the custody of assets is especially important for cash and inventories because these assets are very vulnerable to fraud.

ANATOMY OF A FRAUD

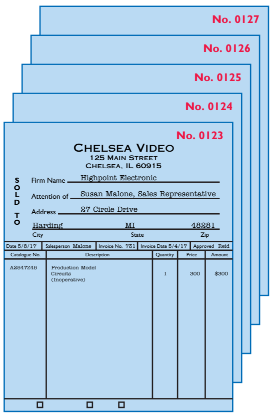
Angela Bauer was an accounts payable clerk for Aggasiz Construction Company. She prepared and issued checks to vendors and reconciled bank statements. Angela perpetrated a fraud in this way: She wrote checks for costs that the company had not actually incurred (e.g., fake taxes). A supervisor then approved and signed the checks. Before issuing the check, though, Angela would "white-out" the payee line on the check and change it to personal accounts that she controlled. She was able to conceal the theft because she also reconciled the bank account. That is, nobody else ever saw that the checks had been altered.

Total take: $570,000

THE MISSING CONTROL

Segregation of duties. Aggasiz Construction Company did not properly segregate recordkeeping from physical custody. Angela had physical custody of the checks, which essentially was control of the cash. She also had recordkeeping responsibility because she prepared the bank reconciliation.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 100–107.



Prenumbered Invoices

DOCUMENTATION PROCEDURES

Documents provide evidence that transactions and events have occurred. At Nick's Steakhouse and Pizza, the point-of-sale system provides the restaurant's documentation for the sale and the amount of cash received. Similarly, for other businesses, a shipping document indicates that the goods have been shipped, and a sales invoice indicates that the company has billed the customer for the goods. By requiring signatures (or initials) on the documents, the company can identify the individual(s) responsible for the transaction or event. Companies should document transactions when they occur.

Companies should establish procedures for documents. First, whenever possible, companies should use **prenumbered documents, and all documents should be accounted for**. Prenumbering helps to prevent a transaction from being recorded more than once, or conversely, from not being recorded at all. Second, the control system should require that employees **promptly forward source documents for accounting entries to the accounting department. This control measure helps to ensure timely recording of the transaction** and contributes directly to the accuracy and reliability of the accounting records.

ANATOMY OF A FRAUD

To support their reimbursement requests for travel costs incurred, employees at Mod Fashions Corporation's design center were required to submit receipts. The receipts could include the detailed bill provided for a meal, or the credit card receipt provided when the credit card payment is made, or a copy of the employee's monthly credit card bill that listed the item. A number of the designers who frequently traveled together came up with a fraud scheme: They submitted claims for the same expenses. For example, if they had a meal together that cost $200, one person submitted the detailed meal bill, another submitted the credit card receipt, and a third submitted a monthly credit card bill showing the meal as a line item. Thus, all three received a $200 reimbursement.

Total take: $75,000

THE MISSING CONTROL

Documentation procedures. Mod Fashions should require the original, detailed receipt. It should not accept photocopies, and it should not accept credit card statements. In addition, documentation procedures could be further improved by requiring the use of a corporate credit card (rather than a personal credit card) for all business expenses.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 79–90.

PHYSICAL CONTROLS

Use of physical controls is essential. **Physical controls** relate to the safeguarding of assets and enhance the accuracy and reliability of the accounting records. Illustration 7-2 shows examples of these controls.

Illustration 7-2
Physical controls

Physical Controls

Safes, vaults, and safety deposit boxes for cash and business papers

Locked warehouses and storage cabinets for inventories and records

Computer facilities with pass-key access or fingerprint or eyeball scans

Alarms to prevent break-ins

Security monitors and garment sensors to deter theft

Time clocks for recording time worked

ANATOMY OF A FRAUD

At Centerstone Health, a large insurance company, the mailroom each day received insurance applications from prospective customers. Mailroom employees scanned the applications into electronic documents before the applications were processed. Once the applications were scanned, they could be accessed online by authorized employees.

Insurance agents at Centerstone Health earn commissions based upon successful applications. The sales agent's name is listed on the application. However, roughly 15% of the applications are from customers who did not work with a sales agent. Two friends—Alex, an employee in recordkeeping, and Parviz, a sales agent—thought up a way to perpetrate a fraud. Alex identified scanned applications that did not list a sales agent. After business hours, he entered the mailroom and found the hard-copy applications that did not show a sales agent. He wrote in Parviz's name as the sales agent and then rescanned the application for processing. Parviz received the commission, which the friends then split.

Total take: $240,000

THE MISSING CONTROL

Physical controls. Centerstone Health lacked two basic physical controls that could have prevented this fraud. First, the mailroom should have been locked during non-business hours, and access during business hours should have been tightly controlled. Second, the scanned applications supposedly could be accessed only by authorized employees using their passwords. However, the password for each employee was the same as the employee's user ID. Since employee user-ID numbers were available to all other employees, all employees knew all other employees' passwords. Unauthorized employees could access the scanned applications. Thus, Alex could enter the system using another employee's password and access the scanned applications.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 316–326.

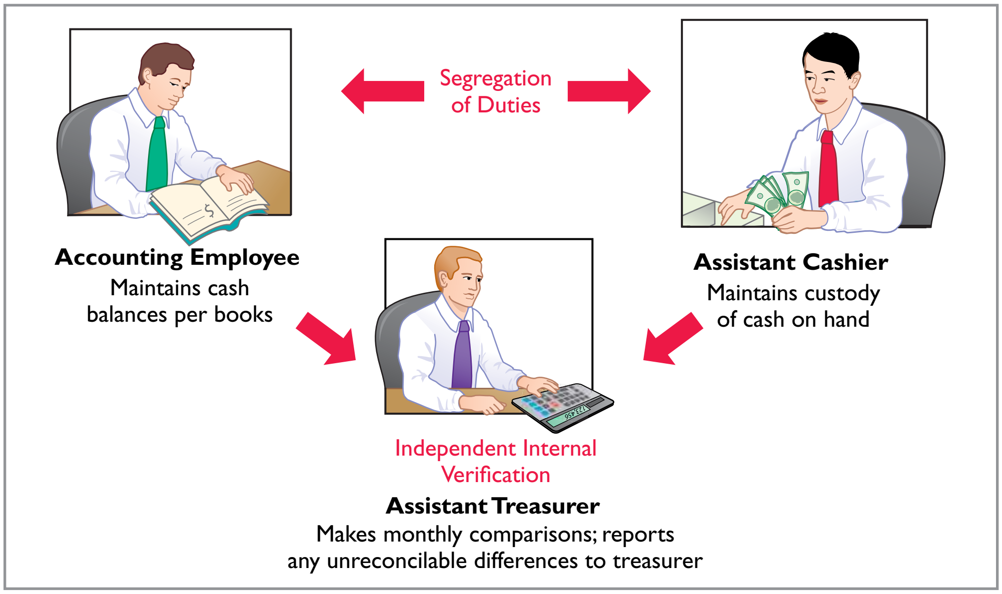
INDEPENDENT INTERNAL VERIFICATION

Most internal control systems provide for **independent internal verification**. This principle involves the review of data prepared by employees. To obtain maximum benefit from independent internal verification:

1. Companies should verify records periodically or on a surprise basis.
2. An employee who is independent of the personnel responsible for the information should make the verification.
3. Discrepancies and exceptions should be reported to a management level that can take appropriate corrective action.

Independent internal verification is especially useful in comparing recorded accountability with existing assets. The reconciliation of the amount of cash recorded by the point-of-sale system with the cash in a particular terminal at Nick's Steakhouse and Pizza is an example of this internal control principle. Other common examples are the reconciliation of a company's cash balance per books with the cash balance per bank, and the verification of the perpetual inventory records through a count of physical inventory. Illustration 7-3 shows the relationship between this principle and the segregation of duties principle.

Illustration 7-3
Comparison of segregation of duties principle with independent internal verification principle



ANATOMY OF A FRAUD

Bobbi Jean Donnelly, the office manager for Mod Fashions Corporation's design center, was responsible for preparing the design center budget and reviewing expense reports submitted by design center employees. Her desire to upgrade her wardrobe got the better of her, and she enacted a fraud that involved filing expense-reimbursement requests for her own personal clothing purchases. Bobbi Jean was able to conceal the fraud because she was responsible for reviewing all expense reports, including her own. In addition, she sometimes was given ultimate responsibility for signing off on the expense reports when her boss was "too busy." Also, because she controlled the budget, when she submitted her expenses, she coded them to budget items that she knew were running under budget, so that they would not catch anyone's attention.

Total take: $275,000

THE MISSING CONTROL

Independent internal verification. Bobbi Jean's boss should have verified her expense reports. When asked what he thought her expenses for a year were, the boss said about $10,000. At $115,000 per year, her actual expenses were more than 10 times what would have been expected. However, because he was "too busy" to verify her expense reports or to review the budget, he never noticed.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 79–90.

Large companies often assign independent internal verification to internal auditors. **Internal auditors** are company employees who continuously evaluate the effectiveness of the company's internal control systems. They review the activities of departments and individuals to determine whether prescribed internal controls are being followed. They also recommend improvements when needed. In fact, most fraud is discovered by the company through internal mechanisms such as existing internal controls and internal audits. For example, the fraud at WorldCom (USA), involving billions of dollars, was uncovered by an internal auditor.

HUMAN RESOURCE CONTROLS

Human resource control activities include the following.

1. **Bond employees who handle cash.** **Bonding** involves obtaining insurance protection against theft by employees. It contributes to the safeguarding of cash in two ways. First, the insurance company carefully screens all individuals before adding them to the policy and may reject risky applicants. Second, bonded employees know that the insurance company will vigorously prosecute all offenders.
2. **Rotate employees' duties and require employees to take vacations.** These measures deter employees from attempting thefts since they will not be able to permanently conceal their improper actions. Many banks, for example, have discovered employee thefts when the employee was on vacation or assigned to a new position.
3. **Conduct thorough background checks.** Many believe that the most important and inexpensive measure any business can take to reduce employee theft and fraud is for the human resources department to conduct thorough background checks. Two tips: (1) Check to see whether job applicants actually graduated from the schools they list. (2) Never use the telephone numbers for previous employers provided by the applicant. Always look them up yourself.

ANATOMY OF A FRAUD

Ellen Lowry was the desk manager and Josephine Rodriguez was the head of housekeeping at the Excelsior Inn, a luxury hotel. The two best friends were so dedicated to their jobs that they never took vacations, and they frequently filled in for other employees. In fact, Ms. Rodriguez, whose job as head of housekeeping did not include cleaning rooms, often cleaned rooms herself, "just to help the staff keep up." These two "dedicated" employees, working as a team, found a way to earn a little more cash. Ellen, the desk manager, provided significant discounts to guests who paid with cash. She kept the cash and did not register the guest in the hotel's computerized system. Instead, she took the room out of circulation "due to routine maintenance." Because the room did not show up as being used, it did not receive a normal housekeeping assignment. Instead, Josephine, the head of housekeeping, cleaned the rooms during the guests' stay.

Total take: $95,000

THE MISSING CONTROL

Human resource controls. Ellen, the desk manager, had been fired by a previous employer after being accused of fraud. If the Excelsior Inn had conducted a thorough background check, it would not have hired her. The hotel fraud was detected when Ellen missed work for a few days due to illness. A system of mandatory vacations and rotating days off would have increased the chances of detecting the fraud before it became so large.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 145–155.

Accounting Across the Organization

Internal Control and the Role of Human Resources

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Companies need to keep track of employees' degrees and certifications to ensure that employees continue to meet the specified requirements of a job. Also, to ensure proper employee supervision and proper separation of duties, companies must develop and monitor an organizational chart. When one corporation went through this exercise, it found that out of 17,000 employees, there were 400 people who did not report to anyone. The corporation also had 35 people who reported to each other. In addition, if an employee complains of an unfair firing and mentions financial issues at the company, human resources should refer the case to the company audit committee and possibly to its legal counsel.

Q Why would unsupervised employees or employees who report to each other represent potential internal control threats? (See page 379.)

Limitations of Internal Control

Companies generally design their systems of internal control to provide **reasonable assurance** of proper safeguarding of assets and reliability of the accounting records. The concept of reasonable assurance rests on the premise that the costs of establishing control procedures should not exceed their expected benefit.

• HELPFUL HINT
Controls may vary with the risk level of the activity. For example, management may consider cash to be high risk and maintaining inventories in the stockroom as low risk. Thus, management would have stricter controls for cash.

To illustrate, consider shoplifting losses in retail stores. Stores could eliminate such losses by having a security guard stop and search customers as they leave the store. But store managers have concluded that the negative effects of such a procedure cannot be justified. Instead, they have attempted to control shoplifting losses by less costly procedures. They post signs saying, "We reserve the right to inspect all packages" and "All shoplifters will be prosecuted." They use hidden cameras and store detectives to monitor customer activity, and they install sensor equipment at exits.

The **human element** is an important factor in every system of internal control. A good system can become ineffective as a result of employee fatigue, carelessness, or indifference. For example, a receiving clerk may not bother to count goods received and may just "fudge" the counts. Occasionally, two or more individuals may work together to get around prescribed controls. Such **collusion** can significantly reduce the effectiveness of a system, eliminating the protection offered by segregation of duties. No system of internal control is perfect.

The **size of the business** also may impose limitations on internal control. Small companies often find it difficult to segregate duties or to provide for independent internal verification.

> DO IT!

Control Activities

Identify which control activity is violated in each of the following situations, and explain how the situation creates an opportunity for a fraud.

1. The person with primary responsibility for reconciling the bank account and making all bank deposits is also the company's accountant.
2. Wellstone Company's treasurer received an award for distinguished service because he had not taken a vacation in 30 years.
3. In order to save money spent on order slips and to reduce time spent keeping track of order slips, a local bar/restaurant does not buy prenumbered order slips.

Action Plan

✔ Familiarize yourself with each of the control activities listed on page 331.

✔ Understand the nature of the frauds that each control activity is intended to address.

Solution

1. Violates the control activity of segregation of duties. Recordkeeping should be separate from physical custody. As a consequence, the employee could embezzle cash and make journal entries to hide the theft.
2. Violates the control activity of human resource controls. Key employees must take vacations. Otherwise, the treasurer, who manages the company's cash, might embezzle cash and use his position to conceal the theft.
3. Violates the control activity of documentation procedures. If prenumbered documents are not used, then it is virtually impossible to account for the documents. As a consequence, an employee could write up a dinner sale, receive the cash from the customer, and then throw away the order slip and keep the cash.

Related exercise material: **BE7-3, E7-1, and DO IT! 7-1.**

✔ The Navigator

Cash Controls

Learning Objective 3

Explain the applications of internal control principles to cash receipts.

Cash is the one asset that is readily convertible into any other type of asset. It also is easily concealed and transported, and is highly desired. Because of these characteristics, **cash is the asset most susceptible to fraudulent activities**. In addition, because of the large volume of cash transactions, numerous errors may occur in executing and recording them. To safeguard cash and to ensure the accuracy of the accounting records for cash, effective internal control over cash is critical.

Cash Receipts Controls

Illustration 7-4 (page 340) shows how the internal control principles explained earlier apply to cash receipts transactions. As you might expect, companies vary considerably in how they apply these principles. To illustrate internal control over cash receipts, we will examine control activities for a retail store with both over-the-counter and mail receipts.

OVER-THE-COUNTER RECEIPTS

In retail businesses, control of over-the-counter receipts centers on cash registers that are visible to customers. A cash sale is entered in a cash register (or point-of-sale terminal), with the amount clearly visible to the customer. This activity prevents the sales clerk from entering a lower amount and pocketing the difference. The customer receives an itemized cash register receipt slip and is expected to count the change received. The cash register's tape is locked in the register until a supervisor removes it. This tape accumulates the daily transactions and totals.

At the end of the clerk's shift, the clerk counts the cash and sends the cash and the count to the cashier. The cashier counts the cash, prepares a deposit slip, and deposits the cash at the bank. The cashier also sends a duplicate of the deposit slip to the accounting department to indicate cash received. The supervisor removes the cash register tape and sends it to the accounting department as the basis for a journal entry to record the cash received. (For point-of-sale systems, the accounting department receives information on daily transactions

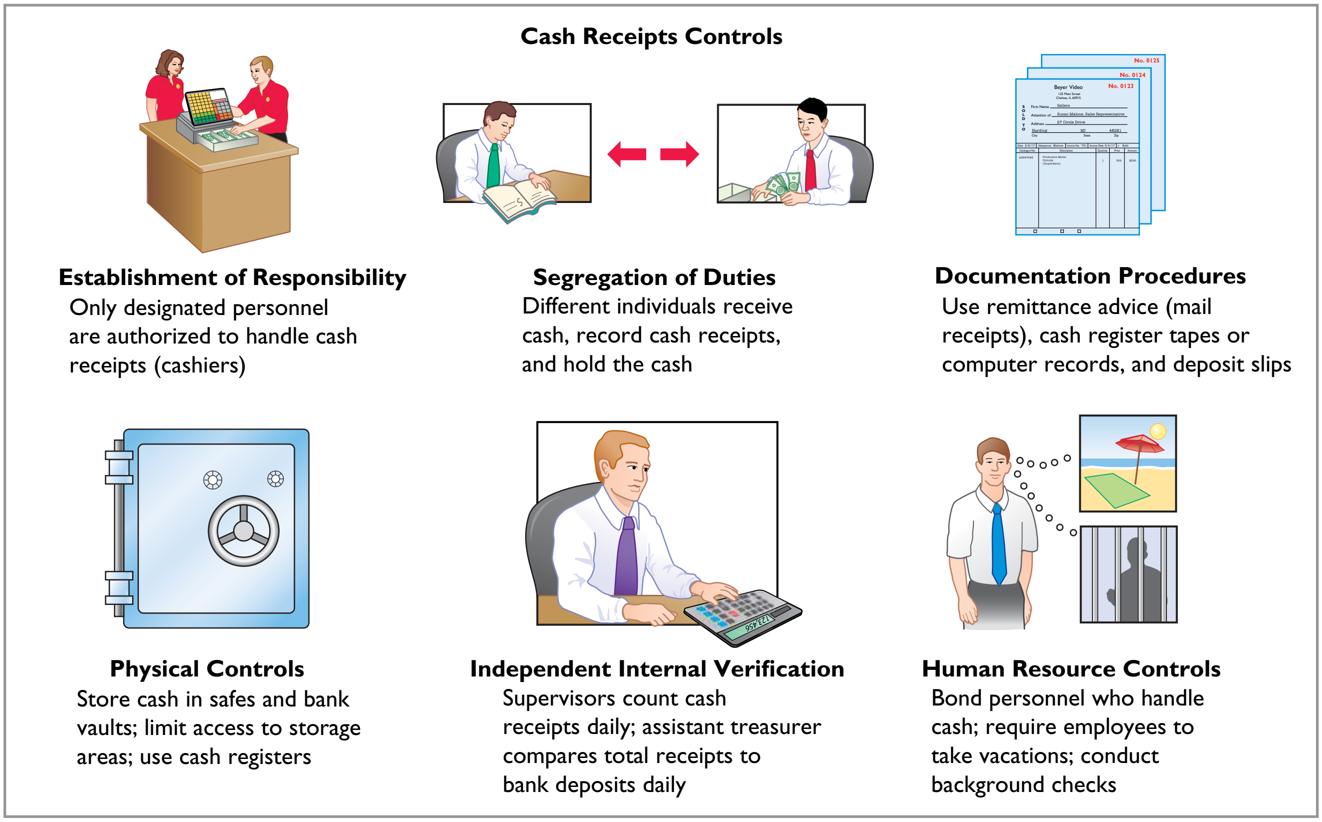


Illustration 7-4
Application of internal control principles to cash receipts

and totals through the computer network.) Illustration 7-5 summarizes this process.

This system for handling cash receipts uses an important internal control principle—segregation of recordkeeping from physical custody. The supervisor has access to the cash register tape but **not** to the cash. The clerk and the cashier have access to the cash but **not** to the register tape. In addition, the cash register tape provides documentation and enables independent internal verification. Use of these three principles of internal control (segregation of recordkeeping from physical custody, documentation, and independent internal verification) provides an effective system of internal control. Any attempt at fraudulent activity should be detected unless there is collusion among the employees.

In some instances, the amount deposited at the bank will not agree with the cash recorded in the accounting records based on the cash register tape. These differences often result because the clerk hands incorrect change back to the retail customer. In this case, the difference between the actual cash and the amount reported on the cash register tape is reported in a Cash Over and Short account. For example, suppose that the cash register tape indicated sales of $6,956.20 but the amount of cash was only $6,946.10. A cash shortfall of $10.10 exists. To account for this cash shortfall and related cash, the company makes the following entry.

A	= L +	E
+6,946.10		
		−10.10
		+6,956.20

Cash Flows
+6,946.10

Cash	6,946.10	
Cash Over and Short	10.10	
Sales Revenue		6,956.20
(To record cash shortfall)		

Cash Over and Short is an income statement item. It is reported as miscellaneous expense when there is a cash shortfall, and as miscellaneous revenue when there is an overage. Clearly, the amount should be small. Any material amounts in this account should be investigated.

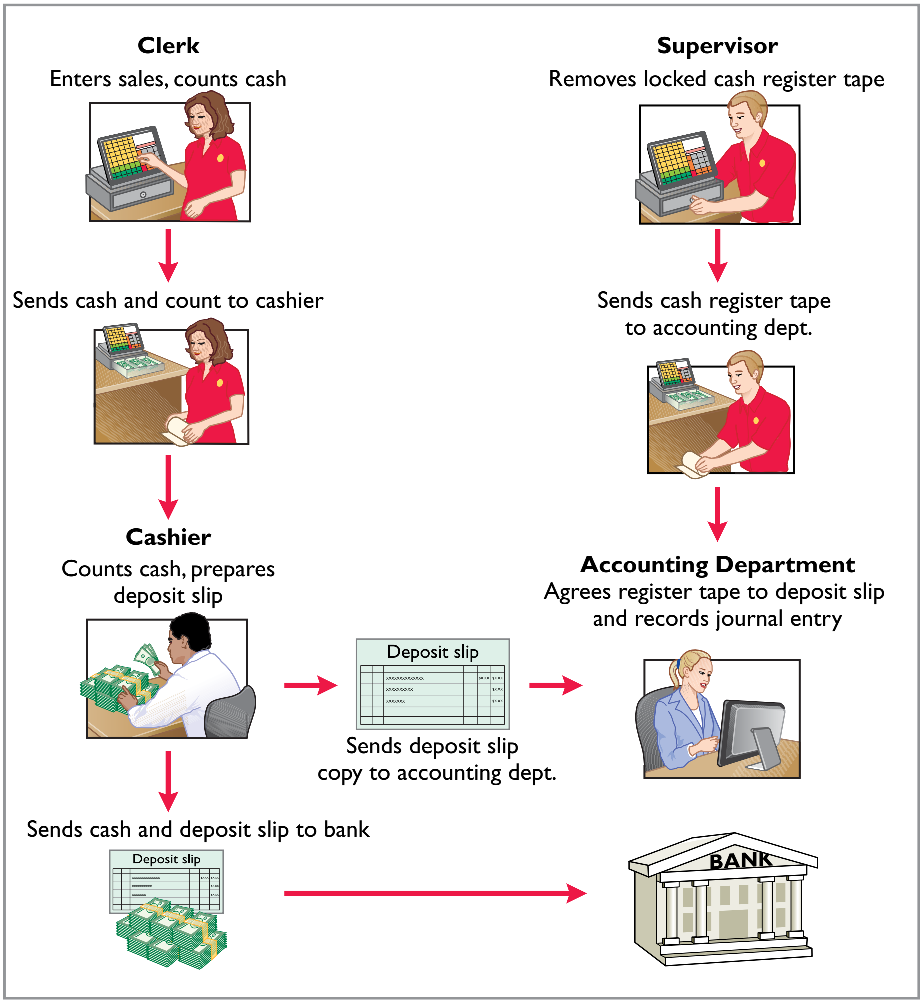


Illustration 7-5
Control of over-the-counter receipts

• HELPFUL HINT
Flowcharts such as this one enhance the understanding of the flow of documents, the processing steps, and the internal control procedures.

MAIL RECEIPTS

All mail receipts should be opened in the presence of at least two mail clerks. These receipts are generally in the form of checks. A mail clerk should endorse each check "For Deposit Only." This restrictive endorsement reduces the likelihood that someone could divert the check to personal use. Banks will not give an individual cash when presented with a check that has this type of endorsement.

The mail clerks prepare, in triplicate, a list of the checks received each day. This list shows the name of the check issuer, the purpose of the payment, and the amount of the check. Each mail clerk signs the list to establish responsibility for the data. The original copy of the list, along with the checks, is then sent to the cashier's department. A copy of the list is sent to the accounting department for recording in the accounting records. The clerks also keep a copy.

This process provides excellent internal control for the company. By employing at least two clerks, the chance of fraud is reduced. Each clerk knows he or she is being observed by the other clerk(s). To engage in fraud, they would have to collude. The customers who submit payments also provide control because they will contact the company with a complaint if they are not properly credited for payment. Because the cashier has access to the cash but not the records, and the accounting department has access to the records but not the cash, neither can engage in undetected fraud.

> DO IT!

Control over Cash Receipts

L. R. Cortez is concerned about the control over cash receipts in his fast-food restaurant, The Big Cheese. The restaurant has two cash registers. At no time do more than two employees take customer orders and enter sales. Work shifts for employees range from 4 to 8 hours. Cortez asks your help in installing a good system of internal control over cash receipts.

Action Plan

✔ Differentiate among the internal control principles of (1) establishing responsibility, (2) using physical controls, and (3) independent internal verification.

✔ Design an effective system of internal control over cash receipts.

Solution

Cortez should assign a cash register to each employee at the start of each work shift, with register totals set at zero. Each employee should have access to only the assigned register drawer to enter all sales. Each customer should be given a receipt. At the end of the shift, the employee should do a cash count. A separate employee should compare the cash count with the register tape to be sure they agree. In addition, Cortez should install an automated system that would enable the company to compare orders entered in the register to orders processed by the kitchen.

Related exercise material: **BE7-5, E7-2, and DO IT! 7-2.**

✔ The Navigator

Cash Disbursements Controls

Learning Objective 4

Explain the applications of internal control principles to cash disbursements.

Companies disburse cash for a variety of reasons, such as to pay expenses and liabilities or to purchase assets. **Generally, internal control over cash disbursements is more effective when companies pay by check or electronic funds transfer (EFT) rather than by cash.** One exception is **payments for incidental amounts that are paid out of petty cash**.[2]

Companies generally issue checks only after following specified control procedures. Illustration 7-6 shows how principles of internal control apply to cash disbursements.

VOUCHER SYSTEM CONTROLS

Most medium and large companies use vouchers as part of their internal control over cash disbursements. A **voucher system** is a network of approvals by authorized individuals, acting independently, to ensure that all disbursements by check are proper.

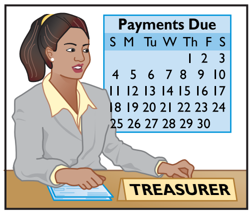
The system begins with the authorization to incur a cost or expense. It ends with the issuance of a check for the liability incurred. A **voucher** is an authorization form prepared for each expenditure. Companies require vouchers for all types of cash disbursements except those from petty cash.

The starting point in preparing a voucher is to fill in the appropriate information about the liability on the face of the voucher. The vendor's invoice provides most of the needed information. Then, an employee in the accounts payable department records the voucher (in a journal called a **voucher register**) and files it according to the date on which it is to be paid. The company issues and sends a check on that date, and stamps the voucher "paid." The paid voucher is sent to the accounting department for recording (in a journal called the **check register**). A voucher system involves two journal entries, one to record the liability when the voucher is issued and a second to pay the liability that relates to the voucher.

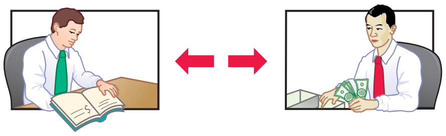
The use of a voucher system, whether done manually or electronically, improves internal control over cash disbursements. First, the authorization process inherent in a voucher system establishes responsibility. Each individual

[2]We explain the operation of a petty cash fund on pages 343–345.

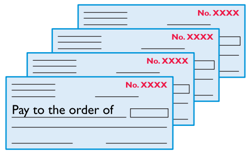
Cash Disbursements Controls



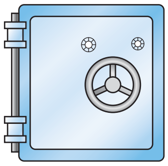
Establishment of Responsibility
Only designated personnel are authorized to sign checks (treasurer) and approve vendors



Segregation of Duties
Different individuals approve and make payments; check-signers do not record disbursements

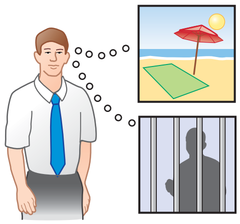


Documentation Procedures
Use prenumbered checks and account for them in sequence; each check must have an approved invoice; require employees to use corporate credit cards for reimbursable expenses; stamp invoices "paid"



Physical Controls
Store blank checks in safes, with limited access; print check amounts by machine in indelible ink

Independent Internal Verification
Compare checks to invoices; reconcile bank statement monthly



Human Resource Controls
Bond personnel who handle cash; require employees to take vacations; conduct background checks

Illustration 7-6
Application of internal control principles to cash disbursements

has responsibility to review the underlying documentation to ensure that it is correct. In addition, the voucher system keeps track of the documents that back up each transaction. By keeping these documents in one place, a supervisor can independently verify the authenticity of each transaction. Consider, for example, the case of Aesop University presented on page 333. Aesop did not use a voucher system for transactions under $2,500. As a consequence, there was no independent verification of the documents, which enabled the employee to submit fake invoices to hide his unauthorized purchases.

Petty Cash Fund Controls

Learning Objective 5
Describe the operation of a petty cash fund.

As you just learned, better internal control over cash disbursements is possible when companies make payments by check. However, using checks to pay small amounts is both impractical and a nuisance. For instance, a company would not want to write checks to pay for postage due, working lunches, or taxi fares. A common way of handling such payments, while maintaining satisfactory control, is to use a **petty cash fund** to pay relatively small amounts. The operation of a petty cash fund, often called an **imprest system**, involves (1) establishing the fund, (2) making payments from the fund, and (3) replenishing the fund.[3]

[3]The term "imprest" means an advance of money for a designated purpose.

Ethics Note

Petty cash funds are authorized and legitimate. In contrast, "slush" funds are unauthorized and hidden (under the table).

ESTABLISHING THE PETTY CASH FUND

Two essential steps in establishing a petty cash fund are (1) appointing a petty cash custodian who will be responsible for the fund, and (2) determining the size of the fund. Ordinarily, a company expects the amount in the fund to cover anticipated disbursements for a three- to four-week period.

To establish the fund, a company issues a check payable to the petty cash custodian for the stipulated amount. For example, if Zhū Ltd. decides to establish a NT$3,000 fund on March 1, the general journal entry is as follows.

A	=	L	+	E
+3,000				
−3,000				

Cash Flows
no effect

Mar. 1	Petty Cash	3,000	
	Cash		3,000
	(To establish a petty cash fund)		

The fund custodian cashes the check and places the proceeds in a locked petty cash box or drawer. Most petty cash funds are established on a fixed-amount basis. The company will make no additional entries to the Petty Cash account unless management changes the stipulated amount of the fund. For example, if Zhū Ltd. decides on July 1 to increase the size of the fund to NT$7,500, it would debit Petty Cash NT$4,500 and credit Cash NT$4,500.

• HELPFUL HINT
The petty cash receipt satisfies two internal control procedures: (1) establishing responsibility (signature of custodian), and (2) documentation procedures.

MAKING PAYMENTS FROM THE PETTY CASH FUND

The petty cash custodian has the authority to make payments from the fund that conform to prescribed management policies. Usually, management limits the size of expenditures that come from petty cash. Likewise, it may not permit use of the fund for certain types of transactions (such as making short-term loans to employees).

Each payment from the fund must be documented on a prenumbered petty cash receipt (or petty cash voucher), as shown in Illustration 7-7. The signatures of both the fund custodian and the person receiving payment are required on the receipt. If other supporting documents such as a freight bill or invoice are available, they should be attached to the petty cash receipt.

Illustration 7-7
Petty cash receipt

No. 7

ZHŪ LTD.
Petty Cash Receipt

Date 3/6/17

Paid to Acme Express

Amount NT$540

For Collect Express Charges

CHARGE TO Freight-In

Approved
T. Xū Custodian

Received Payment
L. Yáng

The petty cash custodian keeps the receipts in the petty cash box until the fund is replenished. The sum of the petty cash receipts and the money in the fund should equal the established total at all times. Management can (and should) make surprise counts at any time to determine whether the fund is being maintained correctly.

The company does not make an accounting entry to record a payment when it is made from petty cash. It is considered both inexpedient and unnecessary to do so. Instead, the company recognizes the accounting effects of each payment when it replenishes the fund.

Ethics Note

Internal control over a petty cash fund is strengthened by (1) having a supervisor make surprise counts of the fund to confirm whether the paid petty cash receipts and fund cash equal the imprest amount, and (2) canceling or mutilating the paid petty cash receipts so they cannot be resubmitted for reimbursement.

REPLENISHING THE PETTY CASH FUND

When the money in the petty cash fund reaches a minimum level, the company replenishes the fund. The petty cash custodian initiates a request for reimbursement. The individual prepares a schedule (or summary) of the payments that have been made and sends the schedule, supported by petty cash receipts and other documentation, to the treasurer's office. The treasurer's office examines the receipts and supporting documents to verify that proper payments from the fund were made. The treasurer then approves the request and issues a check to restore the fund to its established amount. At the same time, all supporting documentation is stamped "paid" so that it cannot be submitted again for payment.

To illustrate, assume that on March 15 Zhū Ltd.'s petty cash custodian requests a check for NT$2,610. The fund contains NT$390 cash and petty cash receipts for postage NT$1,320, freight-out NT$1,140, and miscellaneous expenses NT$150. The general journal entry to record the check is as follows.

Mar. 15	Postage Expense	1,320	
	Freight-Out	1,140	
	Miscellaneous Expense	150	
	Cash		2,610
	(To replenish petty cash fund)		

A	=	L	+	E
				−1,320 Exp
				−1,140 Exp
				−150 Exp
−2,610				

Cash Flows
−2,610

Note that the reimbursement entry does not affect the Petty Cash account. Replenishment changes the composition of the fund by replacing the petty cash receipts with cash. It does not change the balance in the fund.

Occasionally, in replenishing a petty cash fund, the company may need to recognize a cash shortage or overage. This results when the total of the cash plus receipts in the petty cash box does not equal the established amount of the petty cash fund. To illustrate, assume that Zhū's petty cash custodian has only NT$360 in cash in the fund plus the receipts as listed. The request for reimbursement would therefore be for NT$2,640, and Zhū would make the following entry.

Mar. 15	Postage Expense	1,320	
	Freight-Out	1,140	
	Miscellaneous Expense	150	
	Cash Over and Short	30	
	Cash		2,640
	(To replenish petty cash fund)		

A	=	L	+	E
				−1,320 Exp
				−1,140 Exp
				−150 Exp
				−30 Exp
−2,640				

Cash Flows
−2,640

Conversely, if the custodian has NT$420 in cash, the reimbursement request would be for NT$2,580. The company would credit Cash Over and Short for NT$30 (overage). A company reports a debit balance in Cash Over and Short in the income statement as miscellaneous expense. It reports a credit balance in the account as miscellaneous revenue. The company closes Cash Over and Short to Income Summary at the end of the year.

Companies should replenish a petty cash fund at the end of the accounting period, regardless of the cash in the fund. Replenishment at this time is necessary in order to recognize the effects of the petty cash payments on the financial statements.

• HELPFUL HINT

Cash over and short situations result from mathematical errors or from failure to keep accurate records.

Ethics Insight How Employees Steal

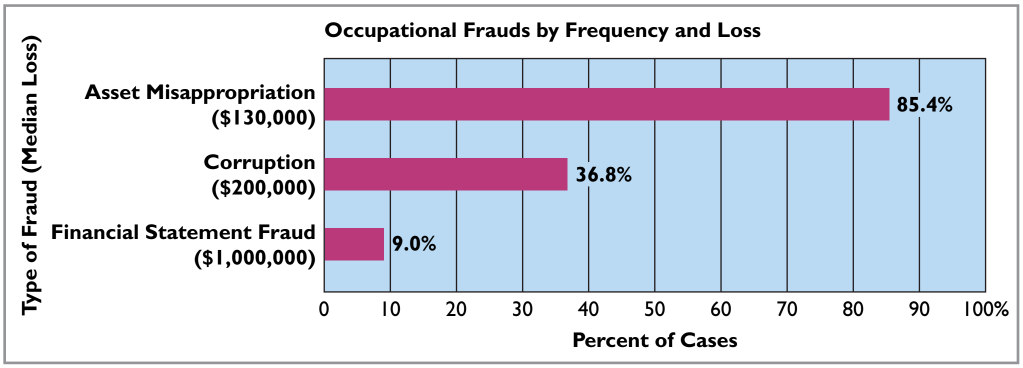
Chris Fernig/iStockphoto

Occupational fraud is using your own occupation for personal gain through the misuse or misapplication of the company's resources or assets. This type of fraud is one of three types:

1. **Asset misappropriation,** such as theft of cash on hand, fraudulent disbursements, false refunds, ghost employees, personal purchases, and fictitious employees. This fraud is the most common but the least costly.
2. **Corruption,** such as bribery, illegal gratuities, and economic extortion. This fraud generally falls in the middle between asset misappropriation and financial statement fraud as regards frequency and cost.
3. **Financial statement fraud,** such as fictitious revenues, concealed liabilities and expenses, improper disclosures, and improper asset values. This fraud occurs less frequently than other types of fraud but it is the most costly.

The graph below shows the frequency and the median loss for each type of occupational fraud.

Source: 2014 Report to the Nations on Occupational Fraud and Abuse, Association of Certified Fraud Examiners, pp. 10–12.



Q How can companies reduce the likelihood of occupational fraud? (See page 379.)

> DO IT!

Petty Cash Fund

Action Plan

✔ To establish the fund, set up a separate general ledger account.

✔ Determine how much cash is needed to replenish the fund: subtract the cash remaining from the petty cash fund balance.

✔ Total the petty cash receipts. Determine any cash over or short—the difference between the cash needed to replenish the fund and the total of the petty cash receipts.

✔ Record the expenses incurred according to the petty cash receipts when replenishing the fund.

Bateer SA established a R$50 petty cash fund on July 1. On July 30, the fund had R$12 cash remaining and petty cash receipts for postage R$14, office supplies R$10, and delivery expense R$15. Prepare journal entries to establish the fund on July 1 and to replenish the fund on July 30.

Solution

July	1	Petty Cash	50	
		Cash		50
		(To establish petty cash fund)		
	30	Postage Expense	14	
		Supplies	10	
		Delivery Expense	15	
		Cash Over and Short		1
		Cash (R$50 – R$12)		38
		(To replenish petty cash)		

Related exercise material: **BE7-9, E7-7, E7-8, and DO IT! 7-3.**

✔ The Navigator

Control Features: Use of a Bank

Learning Objective 6

Indicate the control features of a bank account.

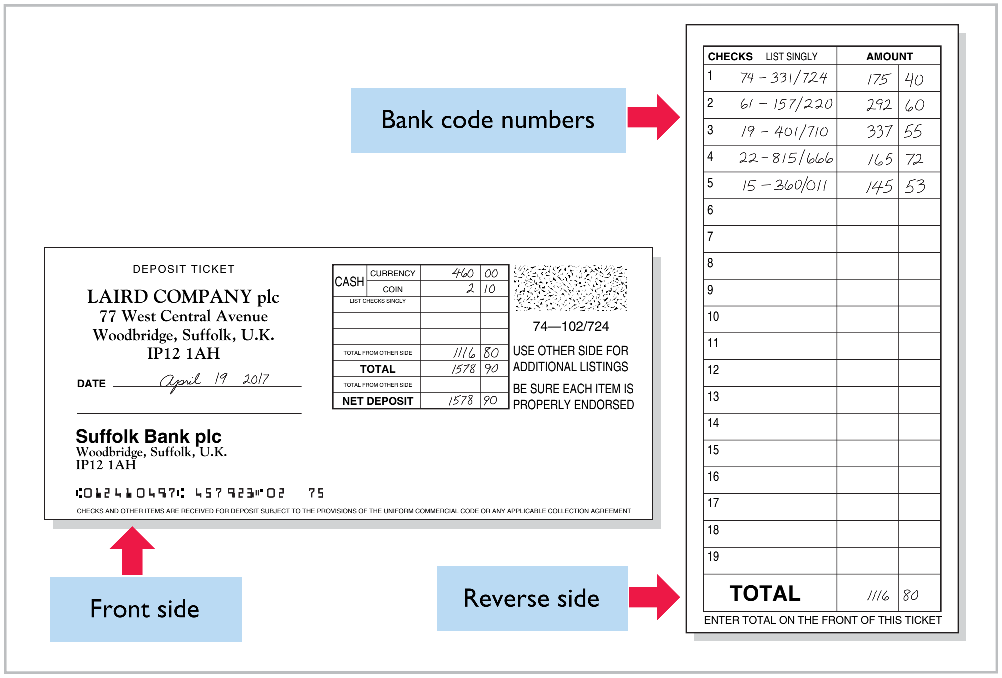
The use of a bank contributes significantly to good internal control over cash. A company safeguards its cash by using a bank as a depository and as a clearing house for checks received and written. Use of a bank minimizes the amount of currency that a company must keep on hand. Also, use of a bank facilitates the control of cash because it creates a double record of all bank transactions—one by the company and the other by the bank. The asset account Cash maintained by the company should have the same balance as the bank's liability account for that company. A **bank reconciliation** compares the bank's balance with the company's balance and explains any differences to make them agree.

Many companies have more than one bank account. For efficiency of operations and better control, national retailers like Marks and Spencer plc (GBR) may have regional bank accounts. Large companies, with tens of thousands of employees, may have a payroll bank account, as well as one or more general bank accounts. Also, a company may maintain several bank accounts in order to have more than one source for short-term loans when needed.

Making Bank Deposits

An authorized employee, such as the head cashier, should make a company's bank deposits. Each deposit must be documented by a deposit slip (ticket), as shown in Illustration 7-8.

Illustration 7-8
Deposit slip

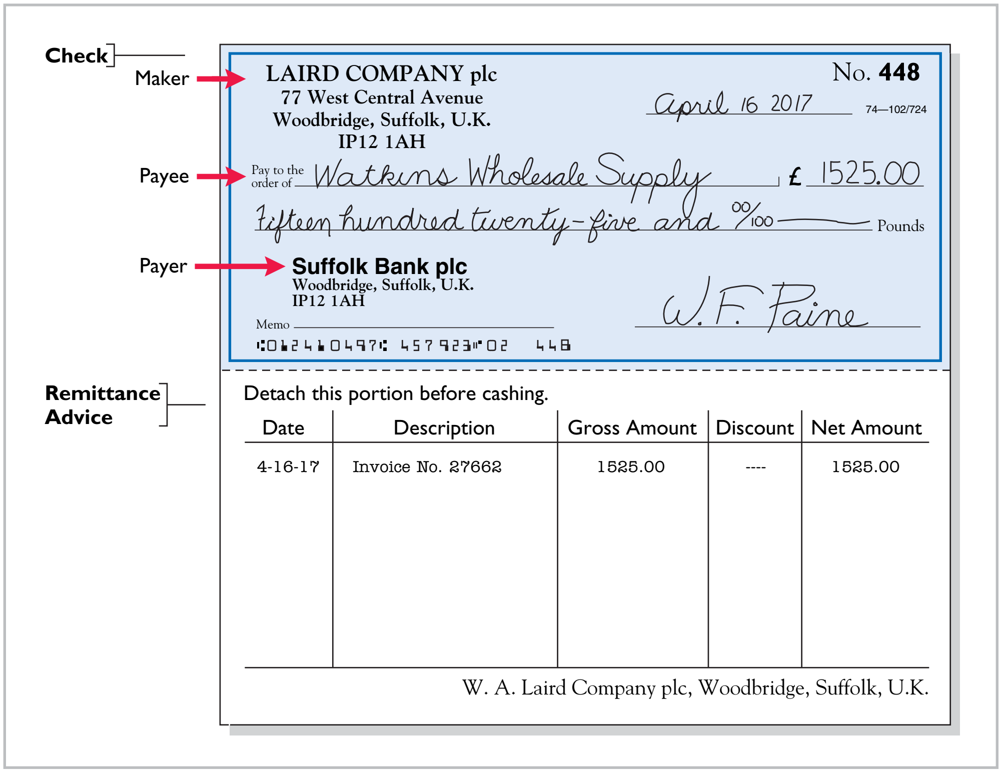


Deposit slips are prepared in duplicate. The bank retains the original; the depositor keeps the duplicate, machine-stamped by the bank to establish its authenticity.

Writing Checks

A **check** is a written order signed by the depositor directing the bank to pay a specified sum of money to a designated recipient. There are three parties to a check: (1) the **maker** (or drawer) who issues the check, (2) the **bank** (or payer) on which the check is drawn, and (3) the **payee** to whom the check is payable. A check is a **negotiable instrument** that one party can transfer to another party by endorsement. Each check should be accompanied by an explanation of its purpose. In many companies, a remittance advice attached to the check, as shown in Illustration 7-9, explains the check's purpose.

Illustration 7-9
Check with remittance advice


Check
Maker
Payee
Payer
Remittance Advice

LAIRD COMPANY plc
77 West Central Avenue
Woodbridge, Suffolk, U.K.
IP12 1AH

No. **448**

April 16 2017
74—102/724

Pay to the order of Watkins Wholesale Supply £ 1525.00

Fifteen hundred twenty-five and 00/100 Pounds

Suffolk Bank plc
Woodbridge, Suffolk, U.K.
IP12 1AH

Memo

W.F. Paine

Detach this portion before cashing.

Date	Description	Gross Amount	Discount	Net Amount
4-16-17	Invoice No. 27662	1525.00	----	1525.00

W. A. Laird Company plc, Woodbridge, Suffolk, U.K.

It is important to know the balance in the checking account at all times. To keep the balance current, the depositor should enter each deposit and check on running-balance memo forms (or online statements) provided by the bank or on the check stubs in the checkbook.

Bank Statements

• HELPFUL HINT
Essentially, the bank statement is a copy of the bank's records sent to the customer (or available online) for review.

If you have a personal checking account, you are probably familiar with bank statements. A **bank statement** shows the depositor's bank transactions and balances.[4] Each month, a depositor receives a statement from the bank. Illustration 7-10 presents a typical bank statement. It shows (1) checks paid and other debits (such as debit card transactions or direct withdrawals for bill payments) that reduce the balance in the depositor's account, (2) deposits and other credits that increase the balance in the depositor's account, and (3) the account balance after each day's transactions.

The bank statement lists in numerical sequence all "paid" checks, along with the date the check was paid and its amount. Upon paying a check, the bank stamps the check "paid"; a paid check is sometimes referred to as a **canceled** check. On the statement, the bank also includes memoranda explaining other debits and credits it made to the depositor's account.

[4]Our presentation assumes that the depositor makes all adjustments at the end of the month. In practice, a company may also make journal entries during the month as it reviews information from the bank regarding its account.

Illustration 7-10
Bank statement

Suffolk Bank plc
Woodbridge, Suffolk, U.K.
IP12 1AH

ACCOUNT STATEMENT

LAIRD COMPANY plc
77 WEST CENTRAL AVENUE
WOODBRIDGE, SUFFOLK, U.K.
IP12 1AH

Statement Date/Credit Line Closing Date
April 30, 2017

457923
ACCOUNT NUMBER

Balance Last Statement	Deposits and Credits		Checks and Debits		Balance This Statement
	No.	Total Amount	No.	Total Amount	
13,256.90	20	34,805.10	26	32,154.55	15,907.45

CHECKS AND DEBITS			DEPOSITS AND CREDITS		DAILY BALANCE	
Date	No.	Amount	Date	Amount	Date	Amount
4-2	435	644.95	4-2	4,276.85	4-2	16,888.80
4-5	436	3,260.00	4-3	2,137.50	4-3	18,249.65
4-4	437	1,185.79	4-5	1,350.47	4-4	17,063.86
4-3	438	776.65	4-7	982.46	4-5	15,154.33
4-8	439	1,781.70	4-8	1,320.28	4-7	14,648.89
4-7	440	1,487.90	4-9 CM	1,035.00	4-8	11,767.47
4-8	441	2,420.00	4-11	2,720.00	4-9	12,802.47
4-11	442	1,585.60	4-12	757.41	4-11	13,936.87
4-12	443	1,226.00	4-13	1,218.56	4-12	13,468.28
4-29	NSF	425.60	4-27	1,545.57	4-27	13,005.45
4-29	459	1,080.30	4-29	2,929.45	4-29	14,429.00
4-30	DM	30.00	4-30	2,128.60	4-30	15,907.45
4-30	461	620.15				

Symbols: **CM** Credit Memo **DM** Debit Memo **EC** Error Correction **INT** Interest Earned **NSF** Not Sufficient Funds **SC** Service Charge

Reconcile Your Account Promptly

• HELPFUL HINT
The bank *credits* to the customer's account every deposit it receives. The reverse occurs when the bank "pays" a check issued by a company on its checking account balance. Payment reduces the bank's liability. Thus, the bank *debits* check payments to the customer's account with the bank.

DEBIT MEMORANDUM

Some banks charge a monthly fee for their services. Often, they charge this fee only when the average monthly balance in a checking account falls below a specified amount. They identify the fee, called a **bank service charge**, on the bank statement by a symbol such as **SC**. The bank also sends with the statement a debit memorandum explaining the charge noted on the statement. Other debit memoranda may also be issued for other bank services such as the cost of printing checks, issuing traveler's checks, and wiring funds to other locations. The symbol **DM** is often used for such charges.

Banks also use a debit memorandum when a deposited check from a customer "bounces" because of insufficient funds. For example, assume that J. R. Baron, a customer of Laird Company plc, sends a check for £425.60 to Laird for services performed. Unfortunately, Baron does not have sufficient funds at its bank to pay for these services. In such a case, Baron's bank marks the check **NSF** (not sufficient funds) and returns it to Laird's (the depositor's) bank. Laird's bank then debits Laird's account, as shown by the symbol NSF on the bank statement in Illustration 7-10. The bank sends the NSF check and debit memorandum to Laird as notification of the charge. Laird then records an Account Receivable from J. R. Baron (the writer of the bad check) and reduces cash for the NSF check.

CREDIT MEMORANDUM

Sometimes a depositor asks the bank to collect its notes receivable. In such a case, the bank will credit the depositor's account for the cash proceeds of the note. This is illustrated by the symbol **CM** on the Laird Company bank statement. The bank issues and sends with the statement a credit memorandum to explain the entry. Many banks also offer interest on checking accounts. The interest earned may be indicated on the bank statement by the symbol **CM** or **INT**.

Reconciling the Bank Account

Learning Objective 7

Prepare a bank reconciliation.

The bank and the depositor maintain independent records of the depositor's checking account. People tend to assume that the respective balances will always agree. In fact, the two balances are seldom the same at any given time, and both balances differ from the "correct" or "true" balance. Therefore, it is necessary to make the balance per books and the balance per bank agree with the correct or true amount—a process called **reconciling the bank account**. The need for agreement has two causes:

1. **Time lags** that prevent one of the parties from recording the transaction in the same period as the other party.
2. **Errors** by either party in recording transactions.

Time lags occur frequently. For example, several days may elapse between the time a company mails a check to a payee and the date the bank pays the check. Similarly, when the depositor uses the bank's night depository to make its deposits, there will be a difference of at least one day between the time the depositor records the deposit and the time the bank does so. A time lag also occurs whenever the bank mails a debit or credit memorandum to the depositor.

The incidence of errors depends on the effectiveness of the internal controls of the depositor and the bank. Bank errors are infrequent. However, either party could accidentally record a £450 check as £45 or £540. In addition, the bank might mistakenly charge a check to a wrong account by keying in an incorrect account name or number.

RECONCILIATION PROCEDURE

The bank reconciliation should be prepared by an employee who has no other responsibilities pertaining to cash. If a company fails to follow this internal control principle of independent internal verification, cash embezzlements may go unnoticed. For example, a cashier who prepares the reconciliation can embezzle cash and conceal the embezzlement by misstating the reconciliation. Thus, the bank accounts would reconcile, and the embezzlement would not be detected.

In reconciling the bank account, it is customary to reconcile the balance per books and balance per bank to their adjusted (correct or true) cash balances. The starting point in preparing the reconciliation is to enter the balance per bank statement and the balance per books on the reconciliation schedule. The company then makes various adjustments, as shown in Illustration 7-11.

The following steps should reveal all the reconciling items that cause the difference between the two balances.

• HELPFUL HINT
Deposits in transit and outstanding checks are reconciling items because of time lags.

Step 1. Deposits in transit. Compare the individual deposits listed on the bank statement with deposits in transit from the preceding bank reconciliation and with the deposits per company records or duplicate deposit slips. Deposits recorded by the depositor that have not been recorded by the bank are the **deposits in transit**. Add these deposits to the balance per bank.

Step 2. Outstanding checks. Compare the paid checks shown on the bank statement with (a) checks outstanding from the previous bank reconciliation, and (b) checks issued by the company as recorded in the cash payments journal (or in the check register in your personal checkbook). Issued checks recorded by the company but that have not yet been paid by the bank are **outstanding checks**. Deduct outstanding checks from the balance per bank.

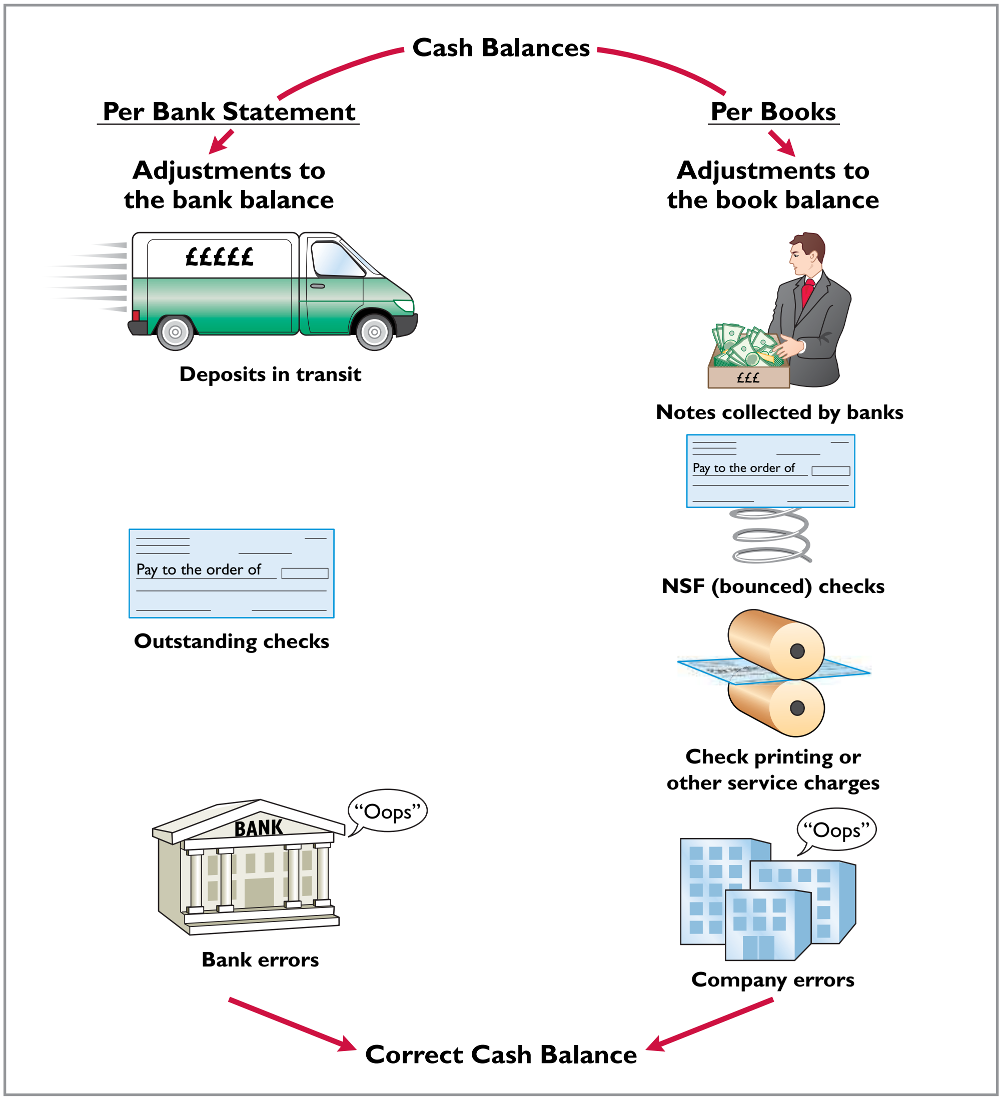


Illustration 7-11
Bank reconciliation adjustments

Step 3. Errors. Note any errors discovered in the foregoing steps and list them in the appropriate section of the reconciliation schedule. For example, if the company mistakenly recorded as £169 a paid check correctly written for £196, it would deduct the error of £27 from the balance per books. All errors made by the depositor are reconciling items in determining the adjusted cash balance per books. In contrast, all errors made by the bank are reconciling items in determining the adjusted cash balance per bank.

Step 4. Bank memoranda. Trace bank memoranda to the depositor's records. List in the appropriate section of the reconciliation schedule any unrecorded memoranda. For example, the company would deduct from the balance per books a £5 debit memorandum for bank service charges. Similarly, it would add to the balance per books £32 of interest earned.

• HELPFUL HINT
Note in the bank statement in Illustration 7-10 that checks no. 459 and 461 have been paid but check no. 460 is not listed. Thus, this check is outstanding. If a complete bank statement were shown, checks no. 453 and 457 would also not be listed. The amounts for these three checks are obtained from the company's cash payments records.

BANK RECONCILIATION ILLUSTRATED

The bank statement for Laird Company plc in Illustration 7-10 (page 349) shows a balance per bank of £15,907.45 on April 30, 2017. On this date the balance of cash per books is £11,589.45. Using the four reconciliation steps, Laird determines the following reconciling items.

Step 1. Deposits in transit: April 30 deposit (received by bank on May 1).	£2,201.40
Step 2. Outstanding checks: No. 453, £3,000.00; no. 457, £1,401.30; no. 460, £1,502.70.	5,904.00
Step 3. Errors: Laird wrote check no. 443 for £1,226.00 and the bank correctly paid that amount. However, Laird recorded the check as £1,262.00.	36.00
Step 4. Bank memoranda:	
a. Debit—NSF check from J. R. Baron for £425.60	425.60
b. Debit—Charge for printing company checks £30.00	30.00
c. Credit—Collection of note receivable for £1,000 plus interest earned £50, less bank collection fee £15.00	1,035.00

Illustration 7-12 shows Laird's bank reconciliation.

Illustration 7-12
Bank reconciliation

LAIRD COMPANY plc
Bank Reconciliation
April 30, 2017

Cash balance per bank statement		£ 15,907.45
Add: Deposits in transit		2,201.40
		18,108.85
Less: Outstanding checks		
No. 453	£3,000.00	
No. 457	1,401.30	
No. 460	1,502.70	5,904.00
Adjusted cash balance per bank		**£12,204.85**
Cash balance per books		£ 11,589.45
Add: Collection of note receivable £1,000, plus interest earned £50, less collection fee £15	£1,035.00	
Error in recording check no. 443	36.00	1,071.00
		12,660.45
Less: NSF check	425.60	
Bank service charge	30.00	455.60
Adjusted cash balance per books		**£12,204.85**

• Alternative Terminology
The terms *adjusted cash balance, true cash balance*, and *correct cash balance* are used interchangeably.

• HELPFUL HINT
The entries that follow are adjusting entries. In prior chapters, Cash was an account that did not require adjustment. That was a simplifying assumption for learning purposes because we had not yet explained a bank reconciliation.

ENTRIES FROM BANK RECONCILIATION

The company records each reconciling item used to determine the **adjusted cash balance per books. If the company does not journalize and post these items, the Cash account will not show the correct balance.** Laird Company plc would make the following entries on April 30.

COLLECTION OF NOTE RECEIVABLE This entry involves four accounts. Assuming that the interest of £50 has not been accrued and the collection fee is charged to Miscellaneous Expense, the entry is:

A	=	L	+	E
+1,035				
				−15 Exp
−1,000				
				+50 Rev

Cash Flows
+1,035

Apr. 30	Cash	1,035.00	
	Miscellaneous Expense	15.00	
	Notes Receivable		1,000.00
	Interest Revenue		50.00
	(To record collection of note receivable by bank)		

BOOK ERROR The cash disbursements journal shows that check no. 443 was a payment on account to Andrea Company, a supplier. The correcting entry is:

Apr. 30	Cash	36.00	
	Accounts Payable—Andrea Company		36.00
	(To correct error in recording check no. 443)		

A = L + E
+36
+36
Cash Flows
+36

NSF CHECK As indicated earlier, an NSF check becomes an account receivable to the depositor. The entry is:

Apr. 30	Accounts Receivable—J. R. Baron	425.60	
	Cash		425.60
	(To record NSF check)		

A = L + E
+425.60
−425.60
Cash Flows
−425.60

BANK SERVICE CHARGES Depositors debit check printing charges (DM) and other bank service charges (SC) to Miscellaneous Expense because they are usually nominal in amount. The entry is:

Apr. 30	Miscellaneous Expense	30.00	
	Cash		30.00
	(To record charge for printing company checks)		

A = L + E
−30 Exp
−30
Cash Flows
−30

Instead of making four separate entries, Laird could combine them into one compound entry.

After Laird has posted the entries, the Cash account will show the following.

Illustration 7-13
Adjusted balance in Cash account

Cash			
Apr. 30 Bal.	11,589.45	Apr. 30	425.60
30	1,035.00	30	30.00
30	36.00		
Apr. 30 Bal.	**12,204.85**		

The adjusted cash balance in the ledger should agree with the adjusted cash balance per books in the bank reconciliation in Illustration 7-12.

What entries does the bank make? If the company discovers any bank errors in preparing the reconciliation, it should notify the bank. The bank then can make the necessary corrections in its records. The bank does not make any entries for deposits in transit or outstanding checks. Only when these items reach the bank will the bank record these items.

Electronic Funds Transfer (EFT) System

It is not surprising that companies and banks have developed approaches to transfer funds among parties without the use of paper (deposit tickets, checks, etc.). Such procedures, called **electronic funds transfers (EFT)**, are disbursement systems that use wire, telephone, or computers to transfer cash balances from one location to another. Use of EFT is quite common. For example, many employees receive no formal payroll checks from their employers. Instead, employers send electronic payroll data to the appropriate banks. Also, individuals now frequently make regular payments such as those for house, car, and utilities by EFT.

EFT transfers normally result in better internal control since no cash or checks are handled by company employees. This does not mean that opportunities for fraud are eliminated. In fact, the same basic principles related to internal control apply to EFT transactions. For example, without proper segregation of duties and authorizations, an employee might be able to redirect electronic payments into a personal bank account and conceal the theft with fraudulent accounting entries.

Investor Insight Madoff's Ponzi Scheme

© AFP Photo/Timothy A. Clary/NewsCom

No recent fraud has generated more interest and rage than the one perpetrated by Bernard Madoff. Madoff was an elite New York investment fund manager who was highly regarded by securities regulators. Investors flocked to him because he delivered very steady returns of between 10% and 15%, no matter whether the market was going up or going down. However, for many years, Madoff did not actually invest the cash that people gave to him. Instead, he was running a Ponzi scheme: He paid returns to existing investors using cash received from new investors. As long as the size of his investment fund continued to grow from new investments at a rate that exceeded the amounts that he needed to pay out in returns, Madoff was able to operate his fraud smoothly.

To conceal his misdeeds, Madoff fabricated false investment statements that were provided to investors. In addition, Madoff hired an auditor that never verified the accuracy of the investment records but automatically issued unqualified opinions each year. Although a competing fund manager warned the U.S. SEC a number of times over a nearly 10-year period that he thought Madoff was engaged in fraud, the U.S. SEC never aggressively investigated the allegations. Investors, many of which were charitable organizations, lost more than $18 billion. Madoff was sentenced to a jail term of 150 years.

Q How was Madoff able to conceal such a giant fraud? (See page 379.)

DO IT!

Bank Reconciliation

Sally Kist owns Linen Kist Fabrics. Sally asks you to explain how she should treat the following reconciling items when reconciling the company's bank account: (1) a debit memorandum for an NSF check, (2) a credit memorandum for a note collected by the bank, (3) outstanding checks, and (4) a deposit in transit.

Action Plan

✔ Understand the purpose of a bank reconciliation.

✔ Identify time lags and explain how they cause reconciling items.

Solution

Sally should treat the reconciling items as follows.

(1) NSF check: Deduct from balance per books.
(2) Collection of note: Add to balance per books.
(3) Outstanding checks: Deduct from balance per bank.
(4) Deposit in transit: Add to balance per bank.

Related exercise material: **BE7-11, BE7-12, BE7-13, BE7-14, E7-9, E7-10, E7-11, E7-12, E7-13, and DO IT! 7-4.**

✔ The Navigator

Reporting Cash

Learning Objective 8
Explain the reporting of cash.

Cash consists of coins, currency (paper money), checks, money orders, and money on hand or on deposit in a bank or similar depository. Companies report cash in two different statements: the statement of financial position and the statement of cash flows. The statement of financial position reports the amount of cash available at a given point in time. The statement of cash flows shows the sources and uses of cash during a period of time. The statement of cash flows was introduced in Chapter 1 and will be discussed in much detail in Chapter 13. In this section, we discuss some important points regarding the presentation of cash in the statement of financial position.

When presented in a statement of financial position, cash on hand, cash in banks, and petty cash are often combined and reported simply as **Cash**. Because it is the most liquid asset owned by the company, cash is listed last in the current assets section of the statement of financial position.

Cash Equivalents

Many companies, such as Lenovo Group (CHN), use the designation "Cash and cash equivalents" in reporting cash. (See Illustration 7-14 for an example.) **Cash equivalents** are short-term, highly liquid investments that are both:

1. Readily convertible to known amounts of cash, and
2. So near their maturity that their market value is relatively insensitive to changes in interest rates.

Illustration 7-14
Statement of financial position presentation of cash

Real World

LENOVO GROUP
Statement of Financial Position (partial)

Current assets ($ in millions)	2014	2013
Cash and cash equivalents	**$3,858**	**$3,454**

Examples of cash equivalents are Treasury bills, commercial paper (short-term corporate notes), and money market funds. All typically are purchased with cash that is in excess of immediate needs.

While cash equivalents are now frequently reported with cash, it appears likely that the IASB will end this practice in the future. Instead, those items that are now referred to as cash equivalents will be reported as short-term investments.

Occasionally, a company will have a net negative balance in a bank account. If the negative balance is the result of the company's normal cash-management practices and can be paid on demand, the account balance is reported as part of cash. If these conditions are not met, the company should report the negative balance among current liabilities.

Ethics Note

Recently, some companies were forced to restate their financial statements because they had too broadly interpreted which types of investments could be treated as cash equivalents. By reporting these items as cash equivalents, the companies made themselves look more liquid.

Restricted Cash

A company may have **restricted cash**, cash that is not available for general use but rather is restricted for a special purpose. For example, landfill companies are often required to maintain a fund of restricted cash to ensure they will have adequate resources to cover closing and clean-up costs at the end of a landfill site's useful life. McKessor Corp. (USA) recently reported restricted cash of $962 million to be paid out as the result of investor lawsuits.

Cash restricted in use should be reported separately on the statement of financial position as restricted cash. If the company expects to use the restricted cash within the next year, it reports the amount as a current asset. When this is not the case, it reports the restricted funds as a non-current asset.

DO IT!

Reporting Cash

Indicate whether each of the following statements is true or false.

1. Cash and cash equivalents are comprised of coins, currency (paper money), money orders, and NSF checks.
2. Restricted cash is classified as either a current asset or non-current asset, depending on the circumstances.
3. A company may have a negative balance in its bank account. It should always offset this negative balance against cash and cash equivalents on the statement of financial position.
4. Because cash and cash equivalents often includes short-term investments, accounts receivable should be reported as the last item on the statement of financial position.

Action Plan

✔ Understand how companies present cash and restricted cash on the statement of financial position.

✔ Review the designations of cash equivalents and restricted cash, and how companies typically handle them.

Solution

1. False. NSF checks should be reported as receivables, not cash and cash equivalents. 2. True. 3. False. Companies that have a negative balance in their bank accounts should report the negative balance as a current liability unless the negative balance is the result of the company's normal cash-management practices and can be paid on demand. 4. False. Cash equivalents are readily convertible to known amounts of cash and so near maturity (less than 3 months) that they are considered more liquid than accounts receivable; therefore, they are reported after accounts receivable on the statement of financial position.

Related exercise material: BE7-15, E7-14, and DO IT! 7-5.

✔ The Navigator

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 Define fraud and internal control. A fraud is a dishonest act by an employee that results in personal benefit to the employee at a cost to the employer. The fraud triangle refers to the three factors that contribute to fraudulent activity by employees: opportunity, financial pressure, and rationalization. Internal control consists of all the related methods and measures adopted within an organization to safeguard its assets, enhance the reliability of its accounting records, increase efficiency of operations, and ensure compliance with laws and regulations.

2 Identify the principles of internal control activities. The principles of internal control are establishment of responsibility; segregation of duties; documentation procedures; physical controls; independent internal verification; and human resource controls such as bonding and requiring employees to take vacations.

3 Explain the applications of internal control principles to cash receipts. Internal controls over cash receipts include (a) designating specific personnel to handle cash; (b) assigning different individuals to receive cash, record cash, and maintain custody of cash; (c) using remittance advices for mail receipts, cash register tapes for over-the-counter receipts, and deposit slips for bank deposits; (d) using company safes and bank vaults to store cash with access limited to authorized personnel, and using cash registers in executing over-the-counter receipts; (e) making independent daily counts of register receipts and daily comparison of total receipts with total deposits; and (f) bonding personnel that handle cash and requiring them to take vacations.

4 Explain the applications of internal control principles to cash disbursements. Internal controls over cash disbursements include (a) having specific individuals such as the treasurer authorized to sign checks and approve vendors; (b) assigning different individuals to approve items for payment, make the payment, and record the payment; (c) using prenumbered checks and accounting for all checks, with each check supported by an approved invoice; (d) storing blank checks in a safe or vault with access restricted to authorized personnel, and using a check-writing machine to imprint amounts on checks; (e) comparing each check with the approved invoice before issuing the check, and making monthly reconciliations of bank and book balances; and (f) bonding personnel who handle cash, requiring employees to take vacations, and conducting background checks.

5 Describe the operation of a petty cash fund. Companies operate a petty cash fund to pay relatively small amounts of cash. They must establish the fund, make payments from the fund, and replenish the fund when the cash in the fund reaches a minimum level.

6 Indicate the control features of a bank account. A bank account contributes to good internal control by providing physical controls for the storage of cash. It minimizes the amount of currency that a company must keep on hand, and it creates a double record of a depositor's bank transactions.

7 Prepare a bank reconciliation. It is customary to reconcile the balance per books and balance per bank to their adjusted balances. The steps in the reconciling process are to determine deposits in transit, outstanding checks, errors by the depositor or the bank, and unrecorded bank memoranda.

8 Explain the reporting of cash. Companies list cash last in the current assets section of the statement of financial position. In some cases, they report cash together with cash equivalents. Cash restricted for a special purpose is reported separately as a current asset or as a noncurrent asset, depending on when the cash is expected to be used.

GLOSSARY REVIEW

Bank reconciliation The process of comparing the bank's balance of an account with the company's balance and explaining any differences to make them agree. (p. 347).

Bank service charge A fee charged by a bank for the use of its services. (p. 349).

Bank statement A monthly statement from the bank that shows the depositor's bank transactions and balances. (p. 348).

Bonding Obtaining insurance protection against theft by employees. (p. 337).

Cash Resources that consist of coins, currency, checks, money orders, and money on hand or on deposit in a bank or similar depository. (p. 354).

Cash equivalents Short-term, highly liquid investments that can be converted to a specific amount of cash. (p. 355).

Check A written order signed by a bank depositor, directing the bank to pay a specified sum of money to a designated recipient. (p. 347).

Deposits in transit Deposits recorded by the depositor but not yet been recorded by the bank. (p. 350).

Electronic funds transfer (EFT) A disbursement system that uses wire, telephone, or computers to transfer funds from one location to another. (p. 353).

Fraud A dishonest act by an employee that results in personal benefit to the employee at a cost to the employer. (p. 330).

Fraud triangle The three factors that contribute to fraudulent activity by employees: opportunity, financial pressure, and rationalization. (p. 330).

Internal auditors Company employees who continuously evaluate the effectiveness of the company's internal control system. (p. 336).

Internal control All of the related methods and activities adopted within an organization to safeguard its assets and enhance the accuracy and reliability of its accounting records. (p. 330).

NSF check A check that is not paid by a bank because of insufficient funds in a customer's bank account. (p. 349).

Outstanding checks Checks issued and recorded by a company but not yet paid by the bank. (p. 350).

Petty cash fund A cash fund used to pay relatively small amounts. (p. 343).

Restricted cash Cash that must be used for a special purpose. (p. 355).

Voucher An authorization form prepared for each payment in a voucher system. (p. 342).

Voucher system A network of approvals by authorized individuals acting independently to ensure that all disbursements by check are proper. (p. 342).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Which of the following is **not** an element of the fraud triangle?
(a) Rationalization. (c) Segregation of duties.
(b) Financial pressure. (d) Opportunity.

(LO 1) **2.** An organization uses internal control to enhance the accuracy and reliability of its accounting records and to:
(a) safeguard assets.
(b) prevent fraud.
(c) produce correct financial statements.
(d) deter employee dishonesty.

3. The principles of internal control do **not** include: (LO 2)
(a) establishment of responsibility.
(b) documentation procedures.
(c) management responsibility.
(d) independent internal verification.

4. Physical controls do **not** include: (LO 2)
(a) safes and vaults to store cash.
(b) independent bank reconciliations.
(c) locked warehouses for inventories.
(d) bank safety deposit boxes for important papers.

(LO 3) **5.** Permitting only designated personnel to handle cash receipts is an application of the principle of:
(a) segregation of duties.
(b) establishment of responsibility.
(c) independent internal verification.
(d) human resource controls.

(LO 3) **6.** Which of the following control activities is **not** relevant when a company uses a computerized (rather than manual) accounting system?
(a) Establishment of responsibility.
(b) Segregation of duties.
(c) Independent internal verification.
(d) All of these control activities are relevant to a computerized system.

(LO 4) **7.** The use of prenumbered checks in disbursing cash is an application of the principle of:
(a) establishment of responsibility.
(b) segregation of duties.
(c) physical controls.
(d) documentation procedures.

(LO 5) **8.** A company writes a check to replenish a €100 petty cash fund when the fund contains receipts of €94 and €4 in cash. In recording the check, the company should:
(a) debit Cash Over and Short for €2.
(b) debit Petty Cash for €94.
(c) credit Cash for €94.
(d) credit Petty Cash for €2.

(LO 6) **9.** The control features of a bank account do **not** include:
(a) having bank auditors verify the correctness of the bank balance per books.
(b) minimizing the amount of cash that must be kept on hand.
(c) providing a double record of all bank transactions.
(d) safeguarding cash by using a bank as a depository.

10. In a bank reconciliation, deposits in transit are: (LO 7)
(a) deducted from the book balance.
(b) added to the book balance.
(c) added to the bank balance.
(d) deducted from the bank balance.

11. The reconciling item in a bank reconciliation that will result in an adjusting entry by the depositor is: (LO 7)
(a) outstanding checks.
(b) deposit in transit.
(c) a bank error.
(d) bank service charges.

12. Which of the following items in a cash drawer at November 30 is **not** cash? (LO 8)
(a) Money orders.
(b) Coins and currency.
(c) An NSF check.
(d) A customer check dated November 28.

13. Which of the following statements correctly describes the reporting of cash? (LO 8)
(a) Cash cannot be combined with cash equivalents.
(b) Restricted cash funds may be combined with cash.
(c) Cash is listed last in the current assets section.
(d) Restricted cash funds cannot be reported as a current asset.

Solutions

1. (c) Segregation of duties is not an element of the fraud triangle. The other choices are fraud triangle elements.

2. (a) Safeguarding assets is one of the purposes of using internal control. The other choices are incorrect because while internal control can help to (b) prevent fraud, (c) produce correct financial statements, and (d) deter employee dishonesty, it is not one of the main purposes of using it.

3. (c) Management responsibility is not one of the principles of internal control. The other choices are true statements.

4. (b) Independent bank reconciliations are not a physical control. The other choices are true statements.

5. (b) Permitting only designated personnel to handle cash receipts is an application of the principle of establishment of responsibility, not (a) segregation of duties, (c) independent internal verification, or (d) human resource controls.

6. (d) Establishment of responsibility, segregation of duties, and independent internal verification are all relevant to a computerized system.

7. (d) The use of prenumbered checks in disbursing cash is an application of the principle of documentation procedures, not (a) establishment of responsibility, (b) segregation of duties, or (c) physical controls.

8. (a) When this check is recorded, the company should debit Cash Over and Short for the shortage of €2 (total of the receipts plus cash in the drawer (€98) versus €100), not (b) debit Petty Cash for €94, (c) credit Cash for €94, or (d) credit Petty Cash for €2.

9. (a) Having bank auditors verify the correctness of the bank balance per books is not one of the control features of a bank account. The other choices are true statements.

10. (c) Deposits in transit are added to the bank balance on a bank reconciliation, not (a) deducted from the book balance, (b) added to the book balance, or (d) deducted from the bank balance.

11. (d) Because the depositor does not know the amount of the bank service charges until the bank statement is received, an adjusting entry must be made when the statement is received. The other choices are incorrect because (a) outstanding checks do not require an adjusting entry by the depositor because the checks have already been recorded in the depositor's books, (b) deposits in transit do not require an adjusting entry by the depositor because the deposits have already been recorded in the depositor's books, and (c) bank errors do not require an adjusting entry by the depositor, but the depositor does need to inform the bank of the error so it can be corrected.

12. (c) An NSF check should not be considered cash. The other choices are true statements.

13. (c) Cash is listed last in the current assets section. The other choices are incorrect because (a) cash and cash equivalents can be appropriately combined when reporting cash on the statement of financial position, (b) restricted cash is not to be combined with cash when reporting cash on the statement of financial position, and (d) restricted funds can be reported as current assets if they will be used within one year.

PRACTICE EXERCISES

Indicate whether procedure is good or weak internal control.
(LO 2, 3)

1. Listed below are five procedures followed by Shepherd SA.

1. Total cash receipts are compared to bank deposits daily by someone who has no other cash responsibilities.
2. Time clocks are used for recording time worked by employees.
3. Employees are required to take vacations.
4. Any member of the sales department can approve credit sales.
5. Sam Hill ships goods to customers, bills customers, and receives payment from customers.

Instructions

Indicate whether each procedure is an example of good internal control or of weak internal control. If it is an example of good internal control, indicate which internal control principle is being followed. If it is an example of weak internal control, indicate which internal control principle is violated. Use the table below.

Procedure	IC Good or Weak?	Related Internal Control Principle
1.		
2.		
3.		
4.		
5.		

Solution

1.

Procedure	IC Good or Weak?	Related Internal Control Principle
1.	Good	Independent internal verification
2.	Good	Physical controls
3.	Good	Human resource controls
4.	Weak	Establishment of responsibility
5.	Weak	Segregation of duties

Prepare bank reconciliation and adjusting entries.
(LO 7)

2. The information below relates to the Cash account in the ledger of Ansel A/S.

Balance June 1—€17,150; Cash deposited—€64,000.
Balance June 30—€17,704; Checks written—€63,746.

The June bank statement shows a balance of €16,422 on June 30 and the following memoranda.

Credits		Debits	
Collection of €1,500 note plus interest €30	€1,530	NSF check: Anne Adams	€425
Interest earned on checking account	€35	Safety deposit box rent	€55

At June 30, deposits in transit were €4,750, and outstanding checks totaled €2,383.

Instructions

(a) Prepare the bank reconciliation at June 30.
(b) Prepare the adjusting entries at June 30, assuming (1) the NSF check was from a customer on account, and (2) no interest had been accrued on the note.

Solution

2. (a)

ANSEL A/S
Bank Reconciliation
June 30

Cash balance per bank statement		€16,422
Add: Deposits in transit		4,750
		21,172
Less: Outstanding checks		2,383
Adjusted cash balance per bank		€18,789
Cash balance per books		€17,704
Add: Collection of note receivable (€1,500 + €30)	€1,530	
Interest earned	35	1,565
		19,269
Less: NSF check	425	
Safety deposit box rent	55	480
Adjusted cash balance per books		€18,789

(b)

June 30	Cash	1,530	
	Notes Receivable		1,500
	Interest Revenue		30
30	Cash	35	
	Interest Revenue		35
30	Accounts Receivable (Anne Adams)	425	
	Cash		425
30	Miscellaneous Expense	55	
	Cash		55

PRACTICE PROBLEM

Prepare bank reconciliation and journalize entries.
(LO 7)

Victoria Peak Ltd.'s bank statement for May 2017 shows the following data.

Balance 5/1	HK$126,500	Balance 5/31	HK$142,800
Debit memorandum:		Credit memorandum:	
NSF check	HK$1,750	Collection of note receivable	HK$5,050

The cash balance per books at May 31 is HK$133,190. Your review of the data reveals the following.

1. The NSF check was from Copple Co., a customer.
2. The note collected by the bank was a HK$5,000, 3-month, 12% note. The bank charged a HK$100 collection fee. No interest has been accrued.
3. Outstanding checks at May 31 total HK$24,100.
4. Deposits in transit at May 31 total HK$17,520.
5. A Victoria Peak Ltd. check for HK$3,520, dated May 10, cleared the bank on May 25. The company recorded this check, which was a payment on account, for HK$3,250.

Instructions

(a) Prepare a bank reconciliation at May 31.
(b) Journalize the entries required by the reconciliation.

Solution

(a)

VICTORIA PEAK LTD.
Bank Reconciliation
May 31, 2017

Cash balance per bank statement		HK$142,800
Add: Deposits in transit		17,520
		160,320
Less: Outstanding checks		24,100
Adjusted cash balance per bank		HK$136,220
Cash balance per books		HK$133,190
Add: Collection of note receivable HK$5,000, plus HK$150 interest, less collection fee HK$100		5,050
		138,240
Less: NSF check	HK$1,750	
Error in recording check	270	2,020
Adjusted cash balance per books		HK$136,220

(b)

May 31	Cash	5,050	
	Miscellaneous Expense	100	
	Notes Receivable		5,000
	Interest Revenue		150
	(To record collection of note by bank)		
31	Accounts Receivable—Copple Co.	1,750	
	Cash		1,750
	(To record NSF check from Copple Co.)		
31	Accounts Payable	270	
	Cash		270
	(To correct error in recording check)		

WileyPLUS Brief Exercises, DO IT! Review, Exercises, and Problems, and many additional resources are available for practice in WileyPLUS.

QUESTIONS

1. A local bank reported that it lost €150,000 as the result of an employee fraud. Travis Witt is not clear on what is meant by an "employee fraud." Explain the meaning of fraud to Travis and give an example of frauds that might occur at a bank.
2. Fraud experts often say that there are three primary factors that contribute to employee fraud. Identify the three factors and explain what is meant by each.
3. Identify and describe the five components of a good internal control system.
4. "Internal control is concerned only with enhancing the accuracy of the accounting records." Do you agree? Explain.
5. What principles of internal control apply to most organizations?
6. At the corner grocery store, all sales clerks make change out of one cash register drawer. Is this a violation of internal control? Why?
7. Huan Lee is reviewing the principle of segregation of duties. What are the two common applications of this principle?
8. How do documentation procedures contribute to good internal control?
9. What internal control objectives are met by physical controls?

10. (a) Explain the control principle of independent internal verification. (b) What practices are important in applying this principle?

11. The management of Yaeger Company asks you, as the company accountant, to explain (a) the concept of reasonable assurance in internal control and (b) the importance of the human factor in internal control.

12. Yorkville Fertilizer plc owns the following assets at the statement of financial position date.

Cash in bank savings account	£ 6,000
Cash on hand	850
Cash refund due from tax authority	1,000
Checking account balance	12,000
Postdated checks	500

What amount should Yorkville report as cash in the statement of financial position?

13. What principle(s) of internal control is (are) involved in making daily cash counts of over-the-counter receipts?

14. Aurora Department Stores has just installed new electronic cash registers in its stores. How do cash registers improve internal control over cash receipts?

15. At Oswego Wholesale Company, two mail clerks open all mail receipts. How does this strengthen internal control?

16. "To have maximum effective internal control over cash disbursements, all payments should be made by check." Is this true? Explain.

17. Hecuba Company's internal controls over cash disbursements provide for the treasurer to sign checks imprinted by a check-writing machine in indelible ink after comparing the check with the approved invoice. Identify the internal control principles that are present in these controls.

18. How do the principles of (a) physical controls and (b) documentation controls apply to cash disbursements?

19. (a) What is a voucher system? (b) What principles of internal control apply to a voucher system?

20. What is the essential feature of an electronic funds transfer (EFT) procedure?

21. (a) Identify the three activities that pertain to a petty cash fund, and indicate an internal control principle that is applicable to each activity. (b) When are journal entries required in the operation of a petty cash fund?

22. "The use of a bank contributes significantly to good internal control over cash." Is this true? Why or why not?

23. Faye Uhlik is confused about the lack of agreement between the cash balance per books and the balance per bank. Explain the causes for the lack of agreement to Faye, and give an example of each cause.

24. What are the four steps involved in finding differences between the balance per books and balance per bank?

25. Paula Dominguez asks your help concerning an NSF check. Explain to Paula (a) what an NSF check is, (b) how it is treated in a bank reconciliation, and (c) whether it will require an adjusting entry.

26. (a) "Cash equivalents are the same as cash." Do you agree? Explain. (b) How should restricted cash funds be reported on the statement of financial position?

BRIEF EXERCISES

Identify fraud triangle concepts.
(LO 1)

BE7-1 Match each situation with the fraud triangle factor—opportunity, financial pressure, or rationalization—that best describes it.

1. An employee's monthly credit card payments are nearly 75% of his or her monthly earnings.
2. An employee earns minimum wage at a firm that has reported record earnings for each of the last five years.
3. An employee has an expensive gambling habit.
4. An employee has check-writing and -signing responsibilities for a small company, as well as reconciling the bank account.

Indicate internal control concepts.
(LO 1)

BE7-2 Yumi Nae has prepared the following statements about internal control.

1. One of the objectives of internal control is to safeguard assets from employee theft, robbery, and unauthorized use.
2. One of the objectives of internal control is to enhance the accuracy and reliability of the accounting records.
3. The three components of the fraud triangle are opportunity, financial pressure, and fear.

Identify each statement as true or false. If false, indicate how to correct the statement.

Explain the importance of internal control.
(LO 1)

BE7-3 Coco Leclerc is the new owner of Leclerc Parking. She has heard about internal control but is not clear about its importance for her business. Explain to Coco the four purposes of internal control and give her one application of each purpose for Leclerc Parking.

Identify internal control principles. (LO 2)

BE7-4 The internal control procedures in Varma Company provide that:

1. Employees who have physical custody of assets do not have access to the accounting records.
2. Each month, the assets on hand are compared to the accounting records by an internal auditor.
3. A prenumbered shipping document is prepared for each shipment of goods to customers.

Identify the principles of internal control that are being followed.

Identify the internal control principles applicable to cash receipts. (LO 3)

BE7-5 Rahman Ltd. has the following internal control procedures over cash receipts. Identify the internal control principle that is applicable to each procedure.

1. All over-the-counter receipts are entered on cash registers.
2. All cashiers are bonded.
3. Daily cash counts are made by cashier department supervisors.
4. The duties of receiving cash, recording cash, and custody of cash are assigned to different individuals.
5. Only cashiers may operate cash registers.

Make journal entries for cash overage and shortfall. (LO 3)

BE7-6 The cash register tape for Leprechaun Industries Ltd. reported sales of £6,891.50. Record the journal entry that would be necessary for each of the following situations. (a) Cash to be accounted for exceeds cash on hand by £46.25. (b) Cash on hand exceeds cash to be accounted for by £28.32.

Make journal entry using cash count sheet. (LO 3)

BE7-7 While examining cash receipts information, the accounting department determined the following information: opening cash balance €180, cash on hand €1,122.74, and cash sales per register tape €950.83. Prepare the required journal entry based upon the cash count sheet.

Identify the internal control principles applicable to cash disbursements. (LO 4)

BE7-8 Helena Company has the following internal control procedures over cash disbursements. Identify the internal control principle that is applicable to each procedure.

1. Company checks are prenumbered.
2. The bank statement is reconciled monthly by an internal auditor.
3. Blank checks are stored in a safe in the treasurer's office.
4. Only the treasurer or assistant treasurer may sign checks.
5. Check signers are not allowed to record cash disbursement transactions.

Prepare entry to replenish a petty cash fund. (LO 5)

BE7-9 On March 20, Yang Ltd.'s petty cash fund of ¥1,000 is replenished when the fund contains ¥90 in cash and receipts for postage ¥520, freight-out ¥260, and travel expense ¥100. Prepare the journal entry to record the replenishment of the petty cash fund.

Identify the control features of a bank account. (LO 6)

BE7-10 Anthony Ferrari is uncertain about the control features of a bank account. Explain the control benefits of (a) a check and (b) a bank statement.

Indicate location of reconciling items in a bank reconciliation. (LO 7)

BE7-11 The following reconciling items are applicable to the bank reconciliation for Kimura Company: (1) outstanding checks, (2) bank debit memorandum for service charge, (3) bank credit memorandum for collecting a note for the depositor, and (4) deposits in transit. Indicate how each item should be shown on a bank reconciliation.

Identify reconciling items that require adjusting entries. (LO 7)

BE7-12 Using the data in BE7-11, indicate (a) the items that will result in an adjustment to the depositor's records and (b) why the other items do not require adjustment.

Prepare partial bank reconciliation. (LO 7)

BE7-13 At July 31, Kowloon Ltd. has the following bank information: cash balance per bank HK$74,200, outstanding checks HK$7,640, deposits in transit HK$16,200, and a bank service charge HK$220. Determine the adjusted cash balance per bank at July 31.

Prepare partial bank reconciliation. (LO 7)

BE7-14 At August 31, Felipe SA has a cash balance per books of €8,900 and the following additional data from the bank statement: charge for printing Felipe SA checks €35, interest earned on checking account balance €40, and outstanding checks €800. Determine the adjusted cash balance per books at August 31.

Explain the statement presentation of cash balances. (LO 8)

BE7-15 Sokolov OAO has the following cash balances: Cash in Bank £15,742, Payroll Bank Account £5,000, and Plant Expansion Fund Cash £45,000 (to be used two years from now). Explain how each balance should be reported on the statement of financial position.

> DO IT! REVIEW

Identify violations of control activities.
(LO 2)

DO IT! 7-1 Identify which control activity is violated in each of the following situations, and explain how the situation creates an opportunity for fraud or inappropriate accounting practices.

1. Once a month, the sales department sends sales invoices to the accounting department to be recorded.
2. Angela Marino orders merchandise for Lake Como SpA; she also receives merchandise and authorizes payment for merchandise.
3. Several clerks at Esposito's Foods use the same cash register drawer.

Design system of internal control over cash receipts.
(LO 3)

DO IT! 7-2 Eric Nilsen is concerned with control over mail receipts at Midtown Sporting Goods. All mail receipts are opened by Arne Johansen. Arne sends the checks to the accounting department, where they are stamped "For Deposit Only." The accounting department records and deposits the mail receipts weekly. Eric asks for your help in installing a good system of internal control over mail receipts.

Make journal entries for petty cash fund.
(LO 5)

DO IT! 7-3 Arvel Ltd. established a £100 petty cash fund on August 1. On August 31, the fund had £6 cash remaining and petty cash receipts for postage £31, office supplies £44, and miscellaneous expense £16. Prepare journal entries to establish the fund on August 1 and replenish the fund on August 31.

Explain treatment of items in bank reconciliation.
(LO 7)

DO IT! 7-4 Ryou Kato owns Kato Blankets. Ryou asks you to explain how he should treat the following reconciling items when reconciling the company's bank account.

1. Outstanding checks.
2. A deposit in transit.
3. The bank charged to the company account a check written by another company.
4. A debit memorandum for a bank service charge.

Analyze statements about the reporting of cash.
(LO 8)

DO IT! 7-5 Indicate whether each of the following statements is true or false.

1. A company has the following assets at the end of the year: cash on hand $40,000, cash refund due from customer $30,000, and checking account balance $22,000. Cash and cash equivalents is therefore $62,000.
2. A company that has received NSF checks should report these checks as a current liability on the statement of financial position.
3. Restricted cash that is a current asset is reported as part of cash and cash equivalents.
4. A company has cash in the bank of $50,000, petty cash of $400, and share investments of $100,000. Total cash and cash equivalents is therefore $50,400.

EXERCISES

Identify the principles of internal control.
(LO 2)

E7-1 Luna Ernesto is the owner of Ernesto's Pizza. Ernesto's is operated strictly on a carryout basis. Customers pick up their orders at a counter where a clerk exchanges the pizza for cash. While at the counter, the customer can see other employees making the pizzas and the large ovens in which the pizzas are baked.

Instructions

Identify the six principles of internal control and give an example of each principle that you might observe when picking up your pizza. (*Note:* It may not be possible to observe all the principles.)

Identify internal control weaknesses over cash receipts and suggest improvements.
(LO 2, 3)

E7-2 The following control procedures are used at Aldean Ltd. for over-the-counter cash receipts.

1. To minimize the risk of robbery, cash in excess of £100 is stored in an unlocked attaché case in the stockroom until it is deposited in the bank.
2. All over-the-counter receipts are registered by three clerks who use a cash register with a single cash drawer.
3. The company accountant makes the bank deposit and then records the day's receipts.
4. At the end of each day, the total receipts are counted by the cashier on duty and reconciled to the cash register total.
5. Cashiers are experienced; they are not bonded.

Instructions

(a) For each procedure, explain the weakness in internal control, and identify the control principle that is violated.

(b) For each weakness, suggest a change in procedure that will result in good internal control.

Identify internal control weaknesses over cash disbursements and suggest improvements.

(LO 2, 4)

E7-3 The following control procedures are used in Monique's Boutique Shoppe for cash disbursements.

1. The company accountant prepares the bank reconciliation and reports any discrepancies to the owner.
2. The store manager personally approves all payments before signing and issuing checks.
3. Each week, 100 company checks are left in an unmarked envelope on a shelf behind the cash register.
4. After payment, bills are filed in a paid invoice folder.
5. The company checks are unnumbered.

Instructions

(a) For each procedure, explain the weakness in internal control, and identify the internal control principle that is violated.

(b) For each weakness, suggest a change in the procedure that will result in good internal control.

Identify internal control weaknesses over cash disbursements and suggest improvements.

(LO 4)

E7-4 At Teresa SpA, checks are not prenumbered because both the purchasing agent and the treasurer are authorized to issue checks. Each signer has access to unissued checks kept in an unlocked file cabinet. The purchasing agent pays all bills pertaining to goods purchased for resale. Prior to payment, the purchasing agent determines that the goods have been received and verifies the mathematical accuracy of the vendor's invoice. After payment, the invoice is filed by vendor name, and the purchasing agent records the payment in the cash disbursements journal. The treasurer pays all other bills following approval by authorized employees. After payment, the treasurer stamps all bills PAID, files them by payment date, and records the checks in the cash disbursements journal. Teresa Company maintains one checking account that is reconciled by the treasurer.

Instructions

(a) List the weaknesses in internal control over cash disbursements.

(b) Write a memo to the company treasurer indicating your recommendations for improvement.

Indicate whether procedure is good or weak internal control.

(LO 2, 3, 4)

E7-5 Listed below are five procedures followed by Zulma AG.

1. Several individuals operate the cash register using the same register drawer.
2. A monthly bank reconciliation is prepared by someone who has no other cash responsibilities.
3. Rosa Garcia writes checks and also records cash payment journal entries.
4. One individual orders inventory, while a different individual authorizes payments.
5. Unnumbered sales invoices from credit sales are forwarded to the accounting department every four weeks for recording.

Instructions

Indicate whether each procedure is an example of good internal control or of weak internal control. If it is an example of good internal control, indicate which internal control principle is being followed. If it is an example of weak internal control, indicate which internal control principle is violated. Use the table below.

Procedure	IC Good or Weak?	Related Internal Control Principle
1.		
2.		
3.		
4.		
5.		

Indicate whether procedure is good or weak internal control.
(LO 2, 3, 4)

E7-6 Listed below are five procedures followed by Bingham Enterprises Ltd.

1. Employees are required to take vacations.
2. Any member of the sales department can approve credit sales.
3. Blake Nayak ships goods to customers, bills customers, and receives payment from customers.
4. Total cash receipts are compared to bank deposits daily by someone who has no other cash responsibilities.
5. Time clocks are used for recording time worked by employees.

Instructions
Indicate whether each procedure is an example of good internal control or of weak internal control. If it is an example of good internal control, indicate which internal control principle is being followed. If it is an example of weak internal control, indicate which internal control principle is violated. Use the table below.

Procedure	IC Good or Weak?	Related Internal Control Principle
1.		
2.		
3.		
4.		
5.		

Prepare journal entries for a petty cash fund.
(LO 5)

E7-7 LaSalle SA established a petty cash fund on May 1, cashing a check for €100. The company reimbursed the fund on June 1 and July 1 with the following results.

June 1: Cash in fund €1.75. Receipts: delivery expense €31.25; postage expense €41.00; and miscellaneous expense €25.00.
July 1: Cash in fund €3.25. Receipts: delivery expense €21.00; entertainment expense €53.00; and miscellaneous expense €24.75.

On July 10, LaSalle increased the fund from €100 to €150.

Instructions
Prepare journal entries for LaSalle SA for May 1, June 1, July 1, and July 10.

Prepare journal entries for a petty cash fund.
(LO 5)

E7-8 Ankara A.Ş. uses an impress petty cash system. The fund was established on March 1 with a balance of ₺100. During March, the following petty cash receipts were found in the petty cash box.

Date	Receipt No.	For	Amount
3/5	1	Stamp Inventory	₺39
7	2	Freight-Out	17
9	3	Miscellaneous Expense	6
11	4	Travel Expense	24
14	5	Miscellaneous Expense	7

The fund was replenished on March 15 when the fund contained ₺4 in cash. On March 20, the amount in the fund was increased to ₺150.

Instructions
Journalize the entries in March that pertain to the operation of the petty cash fund.

E7-9 Basel AG is unable to reconcile the bank balance at January 31. Basel's reconciliation is as follows.

Prepare bank reconciliation and adjusting entries.

(LO 7)

Cash balance per bank	CHF3,660.20
Add: NSF check	590.00
Less: Bank service charge	30.00
Adjusted balance per bank	CHF4,220.20
Cash balance per books	CHF3,825.20
Less: Deposits in transit	480.00
Add: Outstanding checks	935.00
Adjusted balance per books	CHF4,280.20

Instructions

(a) Prepare a correct bank reconciliation.
(b) Journalize the entries required by the reconciliation.

E7-10 On April 30, the bank reconciliation of Yazici Company shows three outstanding checks: no. 254, €650; no. 255, €720; and no. 257, €410. The May bank statement and the May cash payments journal show the following.

Determine outstanding checks.

(LO 7)

Bank Statement			Cash Payments Journal		
Checks Paid			Checks Issued		
Date	**Check No.**	**Amount**	**Date**	**Check No.**	**Amount**
5/4	254	650	5/2	258	159
5/2	257	410	5/5	259	275
5/17	258	159	5/10	260	820
5/12	259	275	5/15	261	500
5/20	261	500	5/22	262	750
5/29	263	480	5/24	263	480
5/30	264	560	5/29	264	560

Instructions

Using Step 2 in the reconciliation procedure, list the outstanding checks at May 31.

E7-11 The following information pertains to Teresina Video SA.

Prepare bank reconciliation and adjusting entries.

(LO 7)

1. Cash balance per bank, July 31, R$7,293.
2. July bank service charge not recorded by the depositor R$28.
3. Cash balance per books, July 31, R$7,427.
4. Deposits in transit, July 31, R$1,500.
5. Bank collected R$700 note for Teresina in July, plus interest R$35, less fee R$25. The collection has not been recorded by Teresina, and no interest has been accrued.
6. Outstanding checks, July 31, R$684.

Instructions

(a) Prepare a bank reconciliation at July 31.
(b) Journalize the adjusting entries at July 31 on the books of Teresina Video SA.

E7-12 The information below relates to the Cash account in the ledger of Marin SA.

Prepare bank reconciliation and adjusting entries.

(LO 7)

Balance September 1—£17,150; Cash deposited—£64,000.
Balance September 30—£17,404; Checks written—£63,746.

The September bank statement shows a balance of £16,122 on September 30 and the following memoranda.

Credits		Debits	
Collection of £1,500 note plus interest £30	£1,530	NSF check: Violet Jones	£725
Interest earned on checking account	£45	Safety deposit box rent	£65

At September 30, deposits in transit were £4,450, and outstanding checks totaled £2,383.

Instructions

(a) Prepare the bank reconciliation at September 30.

(b) Prepare the adjusting entries at September 30, assuming (1) the NSF check was from a customer on account, and (2) no interest had been accrued on the note.

Compute deposits in transit and outstanding checks for two bank reconciliations.

(LO 7)

E7-13 The cash records of Petit SA show the following four situations.

1. The June 30 bank reconciliation indicated that deposits in transit total €920. During July, the general ledger account Cash shows deposits of €15,750, but the bank statement indicates that only €15,600 in deposits were received during the month.
2. The June 30 bank reconciliation also reported outstanding checks of €880. During the month of July, Petit's books show that €17,200 of checks were issued. The bank statement showed that €16,400 of checks cleared the bank in July.
3. In September, deposits per the bank statement totaled €26,700, deposits per books were €25,400, and deposits in transit at September 30 were €2,800.
4. In September, cash disbursements per books were €23,700, checks clearing the bank were €24,500, and outstanding checks at September 30 were €2,100.

There were no bank debit or credit memoranda. No errors were made by either the bank or Petit.

Instructions

Answer the following questions.

(a) In situation (1), what were the deposits in transit at July 31?

(b) In situation (2), what were the outstanding checks at July 31?

(c) In situation (3), what were the deposits in transit at August 31?

(d) In situation (4), what were the outstanding checks at August 31?

Show presentation of cash in financial statements.

(LO 8)

E7-14 Nayak plc has recorded the following items in its financial records.

Cash in bank	£ 41,000
Cash in plant expansion fund	100,000
Cash on hand	8,000
Highly liquid investments	34,000
Petty cash	500
Receivables from customers	89,000
Share investments	61,000

The highly liquid investments had maturities of 3 months or less when they were purchased. The share investments will be sold in the next 6 to 12 months. The plant expansion project will begin in 3 years.

Instructions

(a) What amount should Nayak report as "Cash and cash equivalents" on its statement of financial position?

(b) Where should the items not included in part (a) be reported on the statement of financial position?

(c) What disclosures should Nayak make in its financial statements concerning "cash and cash equivalents"?

PROBLEMS: SET A

Identify internal control principles over cash disbursements.

(LO 2, 4)

P7-1A Contreras Supply SLU recently changed its system of internal control over cash disbursements. The system includes the following features.

Instead of being unnumbered and manually prepared, all checks must now be prenumbered and written by using the new check-writing machine purchased by the company. Before a check can be issued, each invoice must have the approval of Berta Rojas, the purchasing agent, and Tiare Diaz, the receiving department supervisor. Checks must be signed by either Amaika Blake, the treasurer, or Juan Perez, the assistant treasurer. Before signing a check, the signer is expected to compare the amount of the check with the amount on the invoice.

After signing a check, the signer stamps the invoice PAID and inserts, within the stamp, the date, check number, and amount of the check. The "paid" invoice is then sent to the accounting department for recording.

Blank checks are stored in a safe in the treasurer's office. The combination to the safe is known only by the treasurer and assistant treasurer. Each month, the bank statement is reconciled with the bank balance per books by the assistant chief accountant. All employees who handle or account for cash are bonded.

Instructions

Identify the internal control principles and their application to cash disbursements of Contreras Supply SLU.

P7-2A Arial Ltd. maintains a petty cash fund for small expenditures. The following transactions occurred over a 2-month period.

Journalize and post petty cash fund transactions.

(LO 5)

July 1 Established petty cash fund by writing a check on Coulter Bank for €200.

15 Replenished the petty cash fund by writing a check for €198.00. On this date, the fund consisted of €2.00 in cash and the following petty cash receipts: freight-out €87.00, postage expense €51.40, entertainment expense €46.60, and miscellaneous expense €11.20.

31 Replenished the petty cash fund by writing a check for €192.00. At this date, the fund consisted of €8.00 in cash and the following petty cash receipts: freight-out €82.10, charitable contributions expense €45.00, postage expense €25.50, and miscellaneous expense €39.40.

Aug. 15 Replenished the petty cash fund by writing a check for €187.00. On this date, the fund consisted of €13.00 in cash and the following petty cash receipts: freight-out €75.60, entertainment expense €43.00, postage expense €33.00, and miscellaneous expense €37.00.

16 Increased the amount of the petty cash fund to €300 by writing a check for €100.

31 Replenished the petty cash fund by writing a check for €277.00. On this date, the fund consisted of €23 in cash and the following petty cash receipts: postage expense €133.00, travel expense €95.60, and freight-out €47.10.

Instructions

(a) Journalize the petty cash transactions.
(b) Post to the Petty Cash account.
(c) What internal control features exist in a petty cash fund?

(a) July 15, Cash short €1.80
(b) Aug. 31 balance €300

P7-3A On May 31, 2017, Terrell Ltd. had a cash balance per books of £6,781.50. The bank statement from Home Town Bank on that date showed a balance of £6,824.60. A comparison of the statement with the Cash account revealed the following facts.

Prepare a bank reconciliation and adjusting entries.

(LO 7)

1. The statement included a debit memo of £60 for the printing of additional company checks.
2. Cash sales of £836.15 on May 12 were deposited in the bank. The cash receipts journal entry and the deposit slip were incorrectly made for £886.15. The bank credited Terrell Company for the correct amount.
3. Outstanding checks at May 31 totaled £276.25. Deposits in transit were £1,916.15.
4. On May 18, the company issued check No. 1181 for £685 to Barry Dietz on account. The check, which cleared the bank in May, was incorrectly journalized and posted by Terrell for £658.
5. A £3,000 note receivable was collected by the bank for Terrell on May 31 plus £80 interest. The bank charged a collection fee of £20. No interest has been accrued on the note.
6. Included with the cancelled checks was a check issued by Bridges plc to Jon Newton for £600 that was incorrectly charged to Terrell by the bank.
7. On May 31, the bank statement showed an NSF charge of £640 for a check issued by Sandy Grifton, a customer, to Terrell on account.

Instructions

(a) Prepare the bank reconciliation at May 31, 2017.
(b) Prepare the necessary adjusting entries for Terrell at May 31, 2017.

(a) Adjusted cash balance per bank £9,064.50

Prepare a bank reconciliation and adjusting entries from detailed data.

(LO 7)

P7-4A The bank portion of the bank reconciliation for Rintala Ltd. at November 30, 2017, was as follows.

RINTALA LTD.
Bank Reconciliation
November 30, 2017

Cash balance per bank			£14,367.90
Add: Deposits in transit			2,530.20
			16,898.10
Less: Outstanding checks			
	Check Number	Check Amount	
	3451	£2,260.40	
	3470	720.10	
	3471	844.50	
	3472	1,426.80	
	3474	1,050.00	6,301.80
Adjusted cash balance per bank			£10,596.30

The adjusted cash balance per bank agreed with the cash balance per books at November 30.

The December bank statement showed the following checks and deposits.

Bank Statement

Checks			Deposits	
Date	**Number**	**Amount**	**Date**	**Amount**
12-1	3451	£ 2,260.40	12-1	£ 2,530.20
12-2	3471	844.50	12-4	1,211.60
12-7	3472	1,426.80	12-8	2,365.10
12-4	3475	1,640.70	12-16	2,672.70
12-8	3476	1,300.00	12-21	2,945.00
12-10	3477	2,130.00	12-26	2,567.30
12-15	3479	3,080.00	12-29	2,836.00
12-27	3480	600.00	12-30	1,025.00
12-30	3482	475.50	Total	£18,152.90
12-29	3483	1,140.00		
12-31	3485	540.80		
	Total	£15,438.70		

The cash records per books for December showed the following.

Cash Payments Journal

Date	**Number**	**Amount**	**Date**	**Number**	**Amount**
12-1	3475	£1,640.70	12-20	3482	£ 475.50
12-2	3476	1,300.00	12-22	3483	1,140.00
12-2	3477	2,130.00	12-23	3484	798.00
12-4	3478	621.30	12-24	3485	450.80
12-8	3479	3,080.00	12-30	3486	1,889.50
12-10	3480	600.00	Total		£14,933.20
12-17	3481	807.40			

Cash Receipts Journal

Date	**Amount**
12-3	£ 1,211.60
12-7	2,365.10
12-15	2,672.70
12-20	2,954.00
12-25	2,567.30
12-28	2,836.00
12-30	1,025.00
12-31	1,190.40
Total	£16,822.10

The bank statement contained two memoranda:

1. A credit of £3,645 for the collection of a £3,500 note for Rintala plus interest of £160 and less a collection fee of £15. Rintala has not accrued any interest on the note.

2. A debit of £572.80 for an NSF check written by D. Chagnon, a customer. At December 31, the check had not been redeposited in the bank.

At December 31, the cash balance per books was £12,485.20, and the cash balance per the bank statement was £20,154.30. The bank did not make any errors, but two errors were made by Rintala.

Instructions

(a) Using the four steps in the reconciliation procedure, prepare a bank reconciliation at December 31.

(a) Adjusted balance per books £15,458.40

(b) Prepare the adjusting entries based on the reconciliation. (*Hint:* The correction of any errors pertaining to recording checks should be made to Accounts Payable. The correction of any errors relating to recording cash receipts should be made to Accounts Receivable.)

P7-5A Cayemberg AG maintains a checking account at the Commerce Bank. At July 31, selected data from the ledger balance and the bank statement are shown below.

Prepare a bank reconciliation and adjusting entries.

(LO 7)

	Cash in Bank	
	Per Books	**Per Bank**
Balance, July 1	€17,600	€16,791
July receipts	81,100	
July credits		82,470
July disbursements	77,150	
July debits		74,756
Balance, July 31	€21,550	€24,505

Analysis of the bank data reveals that the credits consist of €81,000 of July deposits and a credit memorandum of €1,470 for the collection of a €1,400 note plus interest revenue of €70. The July debits per bank consist of checks cleared €74,700 and a debit memorandum of €65 for printing additional company checks.

You also discover the following errors involving July checks: (1) A check for €230 to a creditor on account that cleared the bank in July was journalized and posted as €320. (2) A salary check to an employee for €255 was recorded by the bank for €155.

The June 30 bank reconciliation contained only two reconciling items: deposits in transit €7,000 and outstanding checks of €6,200.

Instructions

(a) Prepare a bank reconciliation at July 31, 2017.

(a) Adjusted balance per books €23,045

(b) Journalize the adjusting entries to be made by Cayemberg. Assume that interest on the note has not been accrued.

P7-6A Nature Hill Middle School wants to raise money for a new sound system for its auditorium. The primary fund-raising event is a dance at which the famous disc jockey Obnoxious Al will play classic and not-so-classic dance tunes. Rob Drexler, the music and theater instructor, has been given the responsibility for coordinating the fund-raising efforts. This is Rob's first experience with fund-raising. He decides to put the eighth-grade choir in charge of the event; he will be a relatively passive observer.

Identify internal control weaknesses in cash receipts and cash disbursements.

(LO 2, 3, 4)

Rob had 500 unnumbered tickets printed for the dance. He left the tickets in a box on his desk and told the choir students to take as many tickets as they thought they could sell for £5 each. In order to ensure that no extra tickets would be floating around, he told them to dispose of any unsold tickets. When the students received payment for the tickets, they were to bring the cash back to Rob and he would put it in a locked box in his desk drawer.

Some of the students were responsible for decorating the gymnasium for the dance. Rob gave each of them a key to the money box and told them that if they took money out to purchase materials, they should put a note in the box saying how much they took and what it was used for. After 2 weeks the money box appeared to be getting full, so Rob asked Erik Radley to count the money, prepare a deposit slip, and deposit the money in a bank account Rob had opened.

The day of the dance, Rob wrote a check from the account to pay the DJ. Obnoxious Al, however, said that he accepted only cash and did not give receipts. So Rob took £200 out of the cash box and gave it to Al. At the dance, Rob had Sobia Hamm working at the entrance to the gymnasium, collecting tickets from students, and selling tickets to those who had not prepurchased them. Rob estimated that 400 students attended the dance.

The following day, Rob closed out the bank account, which had £250 in it, and gave that amount plus the £180 in the cash box to Principal Coleman. Principal Coleman seemed surprised that, after generating roughly £2,000 in sales, the dance netted only £430 in cash. Rob did not know how to respond.

Instructions
Identify as many internal control weaknesses as you can in this scenario, and suggest how each could be addressed.

PROBLEMS: SET B

Identify internal control weaknesses over cash receipts.
(LO 2, 3)

P7-1B Orpheum Theater is located in the Vancouver Mall. A cashier's booth is located near the entrance to the theater. Three cashiers are employed. One works from 1–5 P.M., another from 5–9 P.M. The shifts are rotated among the three cashiers. The cashiers receive cash from customers and operate a machine that ejects serially numbered tickets. The rolls of tickets are inserted and locked into the machine by the theater manager at the beginning of each cashier's shift.

After purchasing a ticket, the customer takes the ticket to an usher stationed at the entrance of the theater lobby some 60 feet from the cashier's booth. The usher tears the ticket in half, admits the customer, and returns the ticket stub to the customer. The other half of the ticket is dropped into a locked box by the usher.

At the end of each cashier's shift, the theater manager removes the ticket rolls from the machine and makes a cash count. The cash count sheet is initialed by the cashier. At the end of the day, the manager deposits the receipts in total in a bank night deposit vault located in the mall. The manager also sends copies of the deposit slip and the initialed cash count sheets to the theater company treasurer for verification and to the company's accounting department. Receipts from the first shift are stored in a safe located in the manager's office.

Instructions
(a) Identify the internal control principles and their application to the cash receipts transactions of the Orpheum Theater.
(b) If the usher and cashier decide to collaborate to misappropriate cash, what actions might they take?

Journalize and post petty cash fund transactions.
(LO 5)

P7-2B De Smet SA maintains a petty cash fund for small expenditures. The following transactions occurred over a 2-month period.

July	1	Established petty cash fund by writing a check on Star Bank for €100.
	15	Replenished the petty cash fund by writing a check for €94.90. On this date, the fund consisted of €5.10 in cash and the following petty cash receipts: freight-out €51.00, postage expense €20.50, entertainment expense €23.10, and miscellaneous expense €4.10.
	31	Replenished the petty cash fund by writing a check for €92.90. At this date, the fund consisted of €7.10 in cash and the following petty cash receipts: freight-out €43.50, charitable contributions expense €20.00, postage expense €20.10, and miscellaneous expense €9.30.
Aug.	15	Replenished the petty cash fund by writing a check for €98.00. On this date, the fund consisted of €2.00 in cash and the following petty cash receipts: freight-out €40.20, entertainment expense €21.00, postage expense €14.00, and miscellaneous expense €19.80.
	16	Increased the amount of the petty cash fund to €150 by writing a check for €50.
	31	Replenished the petty cash fund by writing a check for €137.00. On this date, the fund consisted of €13 in cash and the following petty cash receipts: freight-out €74.00, entertainment expense €43.20, and postage expense €17.70.

Instructions
(a) July 15 Cash over €3.80
(b) Aug. 31 balance €150

(a) Journalize the petty cash transactions.
(b) Post to the Petty Cash account.
(c) What internal control features exist in a petty cash fund?

P7-3B Aglife Genetics Ltd. of Lancashire spreads herbicides and applies liquid fertilizer for local farmers. On May 31, 2017, the company's Cash account per its general ledger showed the following balance.

Prepare a bank reconciliation and adjusting entries.

(LO 7)

CASH					NO. 101
Date	**Explanation**	**Ref.**	**Debit**	**Credit**	**Balance**
May 31	Balance				13,287

The bank statement from Lancashire Bank on that date showed the following balance.

Lancaster Bank

Checks and Debits	Deposits and Credits	Daily Balance
XXX	XXX	5/31 12,648

A comparison of the details on the bank statement with the details in the Cash account revealed the following facts.

1. The statement included a debit memo of £35 for the printing of additional company checks.
2. Cash sales of £1,720 on May 12 were deposited in the bank. The cash receipts journal entry and the deposit slip were incorrectly made for £1,820. The bank credited Aglife Genetics for the correct amount.
3. Outstanding checks at May 31 totaled £1,425, and deposits in transit were £2,100.
4. On May 18, the company issued check no. 1181 for £1,102 to M. Datz on account. The check, which cleared the bank in May, was incorrectly journalized and posted by Aglife Genetics for £110.
5. A £4,000 note receivable was collected by the bank for Aglife Genetics on May 31 plus £100 interest. The bank charged a collection fee of £25. No interest has been accrued on the note.
6. Included with the cancelled checks was a check issued by River Lune Company to Carol Mertz for £900 that was incorrectly charged to Aglife Genetics by the bank.
7. On May 31, the bank statement showed an NSF charge of £2,012 for a check issued by Tyler Gricius, a customer, to Aglife Genetics on account.

Instructions

(a) Prepare the bank reconciliation at May 31, 2017.

(b) Prepare the necessary adjusting entries for Aglife Genetics Ltd. at May 31, 2017.

(a) Adj. cash bal. £14,223

P7-4B The bank portion of the bank reconciliation for Brasilia SA at October 31, 2017, was as follows.

Prepare a bank reconciliation and adjusting entries from detailed data.

(LO 7)

BRASILIA SA
Bank Reconciliation
October 31, 2017

Cash balance per bank			R$6,000
Add: Deposits in transit			842
			6,842
Less: Outstanding checks			
	Check Number	Check Amount	
	2451	R$700	
	2470	396	
	2471	464	
	2472	170	
	2474	578	2,308
Adjusted cash balance per bank			R$4,534

The adjusted cash balance per bank agreed with the cash balance per books at October 31.

The November bank statement showed the following checks and deposits:

Bank Statement

Checks Date	Checks Number	Checks Amount	Deposits Date	Deposits Amount
11-1	2470	R$ 396	11-1	R$ 842
11-2	2471	464	11-4	666
11-5	2474	578	11-8	545
11-4	2475	903	11-13	1,416
11-8	2476	1,556	11-18	810
11-10	2477	330	11-21	1,624
11-15	2479	980	11-25	1,412
11-18	2480	714	11-28	908
11-27	2481	382	11-30	652
11-30	2483	317	Total	R$8,875
11-29	2486	495		
	Total	R$7,115		

The cash records per books for November showed the following.

Cash Payments Journal

Date	Number	Amount	Date	Number	Amount
11-1	2475	R$ 903	11-20	2483	R$ 317
11-2	2476	1,556	11-22	2484	460
11-2	2477	330	11-23	2485	525
11-4	2478	300	11-24	2486	495
11-8	2479	890	11-29	2487	340
11-10	2480	714	11-30	2488	635
11-15	2481	382	Total		R$8,197
11-18	2482	350			

Cash Receipts Journal

Date	Amount
11-3	R$ 666
11-7	545
11-12	1,416
11-17	810
11-20	1,642
11-24	1,412
11-27	908
11-29	652
11-30	1,581
Total	R$9,632

The bank statement contained two bank memoranda:

1. A credit of R$1,375 for the collection of a R$1,300 note for Brasilia plus interest of R$91 and less a collection fee of R$16. Brasilia has not accrued any interest on the note.
2. A debit for the printing of additional company checks R$35.

At November 30, the cash balance per books was R$5,969, and the cash balance per the bank statement was R$9,100. The bank did not make any errors, but two errors were made by Brasilia.

Instructions

(a) Adjusted cash balance per bank R$7,201

(a) Using the four steps in the reconciliation procedure described on pages 350–351, prepare a bank reconciliation at November 30.

(b) Prepare the adjusting entries based on the reconciliation. (*Hint:* The correction of any errors pertaining to recording checks should be made to Accounts Payable. The correction of any errors relating to recording cash receipts should be made to Accounts Receivable.)

P7-5B Tizani SpA's bank statement from Eastern National Bank at August 31, 2017, shows the information below.

Prepare a bank reconciliation and adjusting entries.
(LO 7)

Balance, August 1	€11,284	Bank credit memoranda:	
August deposits	47,521	Collection of note receivable plus €105 interest	€4,505
Checks cleared in August	46,175	Interest earned	41
Balance, August 31	17,146	Bank debit memorandum:	
		Safety deposit box rent	30

A summary of the Cash account in the ledger for August shows: balance, August 1, €10,559; receipts €50,050; disbursements €47,794; and balance, August 31, €12,815. Analysis reveals that the only reconciling items on the July 31 bank reconciliation were a deposit in transit for €2,200 and outstanding checks of €2,925. The deposit in transit was the first deposit recorded by the bank in August. In addition, you determine that there were two errors involving company checks drawn in August: (1) A check for €340 to a creditor on account that cleared the bank in August was journalized and posted for €480. (2) A salary check to an employee for €275 was recorded by the bank for €295.

Instructions

(a) Prepare a bank reconciliation at August 31.
(b) Journalize the adjusting entries to be made by Tizani at August 31. Assume that interest on the note has not been accrued by the company.

(a) Adjusted balance per books €17,471

P7-6B Stupendous Ltd. is a very profitable small business. It has not, however, given much consideration to internal control. For example, in an attempt to keep clerical and office expenses to a minimum, the company has combined the jobs of cashier and bookkeeper. As a result, Jake Burnett handles all cash receipts, keeps the accounting records, and prepares the monthly bank reconciliations.

Prepare a comprehensive bank reconciliation with theft and internal control deficiencies.
(LO 2, 3, 4, 7)

The balance per the bank statement on October 31, 2017, was £15,313. Outstanding checks were no. 62 for £107.74, no. 183 for £127.50, no. 284 for £215.26, no. 862 for £132.10, no. 863 for £192.78, and no. 864 for £140.49. Included with the statement was a credit memorandum of £460 indicating the collection of a note receivable for Stupendous by the bank on October 25. This memorandum has not been recorded by Stupendous.

The company's ledger showed one cash account with a balance of £18,608.81. The balance included undeposited cash on hand. Because of the lack of internal controls, Burnett took for personal use all of the undeposited receipts in excess of £3,226.18. He then prepared the following bank reconciliation in an effort to conceal his theft of cash.

Bank Reconciliation

Cash balance per books, October 31		£18,608.81
Add: Outstanding checks		
No. 862	£132.10	
No. 863	192.78	
No. 864	140.49	390.37
		18,999.18
Less: Undeposited receipts		3,226.18
Unadjusted balance per bank, October 31		15,773.00
Less: Bank credit memorandum		460.00
Cash balance per bank statement, October 31		£15,313.00

Instructions

(a) Prepare a correct bank reconciliation. (*Hint:* Deduct the amount of the theft from the adjusted balance per books.)
(b) Indicate the three ways that Burnett attempted to conceal the theft and the pound amount pertaining to each method.
(c) What principles of internal control were violated in this case?

(a) Adjusted balance per books £17,623.31

COMPREHENSIVE PROBLEM

CP7 On December 1, 2017, Papadopoulos SA had the following account balances.

	Debit		Credit
Cash	€18,200	Accumulated Depreciation—Equipment	€ 3,000
Notes Receivable	2,000	Accounts Payable	6,100
Accounts Receivable	7,500	Share Capital—Ordinary	50,000
Inventory	16,000	Retained Earnings	14,200
Prepaid Insurance	1,600		€73,300
Equipment	28,000		
	€73,300		

During December, the company completed the following transactions.

Dec. 7 Received €3,600 cash from customers in payment of account (no discount allowed).
12 Purchased merchandise on account from Spiro Co. €12,000, terms 1/10, n/30.
17 Sold merchandise on account €16,000, terms 2/10, n/30. The cost of the merchandise sold was €10,000.
19 Paid salaries €2,200.
22 Paid Spiro Co. in full, less discount.
26 Received collections in full, less discounts, from customers billed on December 17.
31 Received €2,700 cash from customers in payment of account (no discount allowed).

Adjustment data:

1. Depreciation €200 per month.
2. Insurance expired €400.

Instructions

(a) Journalize the December transactions. (Assume a perpetual inventory system.)
(b) Enter the December 1 balances in the ledger T-accounts and post the December transactions. Use Cost of Goods Sold, Depreciation Expense, Insurance Expense, Salaries and Wages Expense, Sales Revenue, and Sales Discounts.
(c) The statement from Athens Bank on December 31 showed a balance of €25,930. A comparison of the bank statement with the Cash account revealed the following facts.
  1. The bank collected a note receivable of €2,000 for Papadopoulos on December 15.
  2. The December 31 receipts were deposited in a night deposit vault on December 31. These deposits were recorded by the bank in January.
  3. Checks outstanding on December 31 totaled €1,210.
  4. On December 31, the bank statement showed an NSF charge of €680 for a check received by the company from A. Quinn, a customer, on account.

  Prepare a bank reconciliation as of December 31 based on the available information. (*Hint:* The cash balance per books is €26,100. This can be proven by finding the balance in the Cash account from parts (a) and (b).)
(d) Journalize the adjusting entries resulting from the bank reconciliation and adjustment data.
(e) Post the adjusting entries to the ledger T-accounts.
(f) Prepare an adjusted trial balance.
(g) Prepare an income statement for December and a classified statement of financial position at December 31.

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–6.)

MC7 Part 1 Mei-ling is struggling to keep up with the recording of her accounting transactions. She is spending a lot of time marketing and selling mixers and giving her cookie classes. Her friend Mike is an accounting student who runs his own accounting service. He

has asked Mei-ling if she would like to have him do her accounting. Mike and Mei-ling meet and discuss her business.

Part 2 Mei-ling decides that she cannot afford to hire Mike to do her accounting. One way that she can ensure that her cash account does not have any errors and is accurate and up-to-date is to prepare a bank reconciliation at the end of each month. Mei-ling would like you to help her.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP7-1 The financial statements of TSMC are presented in Appendix A. The complete annual report, including notes to the consolidated financial statements, is available in the Investors section of the company's website, *www.tsmc.com*.

Instructions

(a) What data about cash and cash equivalents are shown in the consolidated statement of financial position?
(b) In its notes to consolidated financial statements, how does TSMC define cash equivalents?

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP7-2 Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C.

Instructions

(a) Based on the information contained in these financial statements, determine each of the following for each company (ignore overdrafts):
    (1) Cash and cash equivalents balance at December 31, 2013.
    (2) Cash provided by operating activities during the most recent fiscal year shown (from the statement of cash flows).
(b) What conclusions concerning the management of cash can be drawn from these data?

Real-World Focus

BYP7-3 All organizations should have systems of internal control. Universities are no exception. This site discusses the basics of internal control in a university setting.

Address: **www.bc.edu/offices/audit/controls**

Steps: Go to the site shown above.

Instructions

The home page of this site provides links to answer the following questions.

(a) In a university setting, who has responsibility for evaluating the adequacy of the system of internal control?
(b) What are some red flags indicating white-collar crime?
(c) What role does an internal audit play at Boston College?
(d) What are two IT controls over computer operations?

Critical Thinking

Decision-Making Across the Organization

BYP7-4 The board of trustees of a local church is concerned about the internal accounting controls for the offering collections made at weekly services. The trustees ask you to serve on a three-person audit team with the internal auditor of a local college and a public accountant who has just joined the church.

At a meeting of the audit team and the board of trustees, you learn the following.

1. The church's board of trustees has delegated responsibility for the financial management and audit of the financial records to the finance committee. This group prepares the annual budget and approves major disbursements. It is not involved in collections or recordkeeping. No audit has been made in recent years because the same trusted employee has kept church records and served as financial secretary for 15 years. The church does not carry any fidelity insurance.
2. The collection at the weekly service is taken by a team of ushers who volunteer to serve one month. The ushers take the collection plates to a basement office at the rear of the church. They hand their plates to the head usher and return to the church service. After all plates have been turned in, the head usher counts the cash received. The head usher then places the cash in the church safe along with a notation of the amount counted. The head usher volunteers to serve for 3 months.
3. The next morning, the financial secretary opens the safe and recounts the collection. The secretary withholds £150–£200 in cash, depending on the cash expenditures expected for the week, and deposits the remainder of the collections in the bank. To facilitate the deposit, church members who contribute by check are asked to make their checks payable to "Cash."
4. Each month, the financial secretary reconciles the bank statement and submits a copy of the reconciliation to the board of trustees. The reconciliations have rarely contained any bank errors and have never shown any errors per books.

Instructions

With the class divided into groups, answer the following.

(a) Indicate the weaknesses in internal accounting control over the handling of collections.
(b) List the improvements in internal control procedures that you plan to make at the next meeting of the audit team for (1) the ushers, (2) the head usher, (3) the financial secretary, and (4) the finance committee.
(c) What church policies should be changed to improve internal control?

Communication Activity

BYP7-5 As a new auditor for the public accounting firm of Murphy, Mooney, and Feeney, you have been assigned to review the internal controls over mail cash receipts of Sullivan Company. Your review reveals the following: Checks are promptly endorsed "For Deposit Only," but no list of the checks is prepared by the person opening the mail. The mail is opened either by the cashier or by the employee who maintains the accounts receivable records. Mail receipts are deposited in the bank weekly by the cashier.

Instructions

Write a letter to Michael Kelly, owner of Sullivan Company, explaining the weaknesses in internal control and your recommendations for improving the system.

Ethics Case

BYP7-6 You are the assistant controller in charge of general ledger accounting at Prince Edward Bottling. Your company has a large loan from an insurance company. The loan agreement requires that the company's cash account balance be maintained at €200,000 or more, as reported monthly.

At June 30, the cash balance is €80,000, which you report to Anne Shirley, the financial vice president. Anne excitedly instructs you to keep the cash receipts book open for one additional day for purposes of the June 30 report to the insurance company. Anne says, "If we don't get that cash balance over €200,000, we'll default on our loan agreement. They could close us down, put us all out of our jobs!" Anne continues, "I talked to Gilbert Distributors (one of Prince Edward's largest customers) this morning. They said they sent us a check for €150,000 yesterday. We should receive it tomorrow. If we include just that one check in our cash balance, we'll be in the clear. It's in the mail!"

Instructions

(a) Who will suffer negative effects if you do not comply with Anne Shirley's instructions? Who will suffer if you do comply?

(b) What are the ethical considerations in this case?

(c) What alternatives do you have?

Answers to Insight and Accounting Across the Organization Questions

p. 331 And the Controls Are... Q: Why is sustainability information important to investors? **A:** Investors, customers, suppliers, and employees want more information about companies' long-term impact on society. There is a growing awareness that sustainability issues can affect a company's financial performance. Proper reporting on sustainability issues develops a solid reputation for transparency and provides confidence to shareholders.

p. 338 Internal Control and the Role of Human Resources Q: Why would unsupervised employees or employees who report to each other represent potential internal control threats? **A:** An unsupervised employee may have a fraudulent job (or may even be a fictitious person), e.g., a person drawing a paycheck without working. Or, if two employees supervise each other, there is no real separation of duties, and they can conspire to defraud the company.

p. 346 How Employees Steal Q: How can companies reduce the likelihood of occupational fraud? **A:** To reduce the occurrence of occupational fraud, a company should follow the procedures discussed in this chapter. These include having only designated personnel sign checks, having different personnel approve payments and make payments, ensuring that check-signers do not record disbursements, using prenumbered checks and matching each check to an approved invoice, storing blank checks securely, reconciling the bank statement, and stamping invoices PAID.

p. 354 Madoff's Ponzi Scheme Q: How was Madoff able to conceal such a giant fraud? **A:** Madoff fabricated false investment statements that were provided to investors. In addition, his auditor never verified these investment statements even though the auditor gave him an unqualified opinion each year.

A Look at U.S. GAAP

Learning Objective 9

Compare the accounting for fraud, internal control, and cash under IFRS and U.S. GAAP.

Fraud can occur anywhere. And because the three main factors that contribute to fraud are universal in nature, the principles of internal control activities are used globally by companies. While the U.S. Sarbanes-Oxley Act (SOX) does not apply to international companies, most large international companies have internal controls similar to those indicated in the chapter. GAAP and IFRS are also very similar in accounting for cash. *IAS No. 1 (revised)*, "Presentation of Financial Statements," is the only standard that discusses issues specifically related to cash.

Key Points

- The fraud triangle discussed in this chapter is applicable to all international companies. Some of the major frauds on a U.S. basis are Enron, WorldCom, and more recently the Bernie Madoff Ponzi scheme.
- Rising economic crime poses a growing threat to companies, with 34% of all organizations worldwide being victims of fraud in a recent 12-month period. The survey data shows that the incidence of economic crime varies by industry sector, some (notably insurance, governmental, hospitality and leisure, and financial services) reporting higher levels of fraud than others, and by size and type of organization. However, no organization is immune (*PricewaterhouseCoopers' Global Economic Crime Survey*, 2011).
- Internal controls are a system of checks and balances designed to prevent and detect fraud and errors. While most companies have these systems in place, many have never completely documented them, nor had an independent auditor attest to their effectiveness. Both of these actions are required under SOX.
- Companies find that internal control review is a costly process but badly needed. One study estimates the cost of SOX compliance for U.S. companies at over $35 billion, with audit fees doubling in the first year of compliance. At the same time, examination of internal controls indicates

lingering problems in the way companies operate. One study of first compliance with the internal-control testing provisions documented material weaknesses for about 13% of companies reporting in a two-year period (*PricewaterhouseCoopers' Global Economic Crime Survey*, 2005).

- As indicated earlier, SOX internal control standards apply only to companies listed on U.S. exchanges. There is continuing debate over whether foreign issuers should have to comply with this extra layer of regulation.

Similarities

- Accounting scandals both in the United States and internationally have re-ignited the debate over the relative merits of GAAP, which takes a "rules-based" approach to accounting, versus IFRS, which takes a "principles-based" approach. The FASB announced that it intends to introduce more principles-based standards.
- The accounting and internal control procedures related to cash are essentially the same under both GAAP and this textbook. In addition, the definition used for cash equivalents is the same.
- Most companies report cash and cash equivalents together under GAAP, as shown in this textbook. In addition, GAAP follows the same accounting policies related to the reporting of restricted cash.
- GAAP and IFRS define cash and cash equivalents similarly as follows.
  - **Cash** is comprised of cash on hand and demand deposits.
  - **Cash equivalents** are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Differences

- After numerous corporate scandals, the U.S. Congress passed the Sarbanes-Oxley Act (SOX). Under SOX, all publicly traded U.S. corporations are required to maintain an adequate system of internal control.
- As a result of SOX, corporate executives and boards of directors must ensure that internal controls are reliable and effective. In addition, independent outside auditors must attest to the adequacy of the internal control system.
- SOX created the Public Company Accounting Oversight Board (PCAOB) to establish auditing standards and regulate auditor activity.

Looking to the Future

Ethics has become a very important aspect of reporting. Different cultures have different perspectives on bribery and other questionable activities, and consequently penalties for engaging in such activities vary considerably across countries.

High-quality international accounting requires both high-quality accounting standards and high-quality auditing. Similar to the convergence of GAAP and IFRS, there is movement to improve international auditing standards. The International Auditing and Assurance Standards Board (IAASB) functions as an independent standard-setting body. It works to establish high-quality auditing and assurance and quality-control standards throughout the world. Whether the IAASB adopts internal control provisions similar to those in SOX remains to be seen.

Under proposed new standards for financial statements, companies would not be allowed to combine cash equivalents with cash.

GAAP Practice

GAAP Self-Test Questions

1. Non-U.S. companies that follow IFRS:
   (a) do not normally use the principles of internal control activities described in this textbook.
   (b) often offset cash with accounts payable on the statement of financial position.
   (c) are not required to follow SOX.
   (d) None of the above.

2. Which of the following is the correct accounting under GAAP for cash?
   (a) Cash cannot be combined with cash equivalents.
   (b) Restricted cash funds may be reported as a current or non-current asset depending on the circumstances.
   (c) Restricted cash funds cannot be reported as a current asset.
   (d) Cash on hand is not reported on the statement of financial position as Cash.
3. The Sarbanes-Oxley Act applies to:
   (a) all U.S. companies listed on U.S. exchanges.
   (b) all companies that list shares on any securities exchange in any country.
   (c) all European companies listed on European exchanges.
   (d) Both (a) and (c).
4. High-quality accounting requires both high-quality accounting standards and:
   (a) a reconsideration of SOX to make it less onerous.
   (b) high-quality auditing standards.
   (c) government intervention to ensure that the public interest is protected.
   (d) the development of new principles of internal control activities.
5. Cash equivalents under GAAP:
   (a) are significantly different than the cash equivalents discussed in the textbook.
   (b) are generally disclosed separately from cash.
   (c) may be required to be reported separately from cash in the future.
   (d) None of the above.

GAAP Exercises

GAAP7-1 Some people argue that the internal control requirements of the Sarbanes-Oxley Act (SOX) put U.S. companies at a competitive disadvantage to companies outside the United States. Discuss the competitive implications (both pros and cons) of SOX.

GAAP7-2 State whether each of the following is true or false. For those that are false, explain why.

(a) A proposed new financial accounting standard would not allow cash equivalents to be reported in combination with cash.
(b) Perspectives on bribery and penalties for engaging in bribery are the same across all countries.
(c) Cash equivalents are comprised of cash on hand and demand deposits.
(d) SOX was created by the International Accounting Standards Board.

GAAP Financial Reporting Problem: Apple Inc.

GAAP7-3 The financial statements of Apple are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions
Using the financial statements and notes to the financial statements, answer these questions about Apple's internal controls and cash.

(a) What comments, if any, are made about cash in the "Report of Independent Registered Public Accounting Firm"?
(b) What data about cash and cash equivalents are shown in the consolidated balance sheet (statement of financial position)?
(c) What activities are identified in the consolidated statement of cash flows as being responsible for the changes in cash during 2013?
(d) How are cash equivalents defined in the Notes to Consolidated Financial Statements?
(e) Read the section of the report titled "Management's Report on Internal Control Over Financial Reporting." Summarize the statements made in that section of the report.

Answers to GAAP Self-Test Questions
1. c **2.** b **3.** a **4.** b **5.** c

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✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER

8 Accounting for Receivables

FEATURE STORY Are You Going to Pay Me—or Not?

What is the only thing harder than making a sale? Answer: Collecting the cash. Just ask a banker, virtually any banker. Bankers around the world have been awash in "doubtful" loans for years. And, it may be many years before the mess is finally cleaned up.

If your business sells most of its goods on credit or is in the business of making loans, then accurately recording your receivables is one of your most important accounting tasks. At the end of every accounting period, companies are required to estimate how many of their receivables are "uncollectible." A significant decline in the amount of estimated doubtful loans can send a company's share price soaring. For example, BNP Paribas (FRA) reported a decline in the estimated provision for doubtful loans of more than 50%. The market reacted very favorably, with the company's share price rising by 5.3% in one day.

On the other hand, when a company announces an unexpected increase in its estimated doubtful loans, the securities market often reacts severely. For example, BBVA (ESP) announced that it was increasing its estimated provision for doubtful loans by €164 million. Its share price fell by 6% in a single day.

No bank is spared scrutiny of its estimated doubtful loans. In fact, it is likely that no number in a bank's financial statements receives more careful investigation by financial analysts and investors. Nearly three years after the beginning of the financial crisis, Bank of America's (USA) share price was still in single digits (after hitting a high of $54 per share) primarily because of investor concern regarding its provision for doubtful loans. And, on the other side of the globe, in Iran, one banker suggested that as many as 20% of the loans held by that country's banks are doubtful.

Sources: Ben Hall, "Fall in Bad Loans Boosts BNP Paribas," *Financial Times Online* (*FT.com*) (August 2, 2010); Tracy Alloway, "BBVA, an Exercise in Spanish Banking Losses," *Financial Times Online* (*FT.com*) (February 3, 2011); and Najmeh Bozorgmehr, "Private Banks Open to Assist Tehran Insiders," *Financial Times Online (FT.com)* (May 9, 2011).

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- [ ] Scan Learning Objectives
- [ ] Read Feature Story
- [ ] Review and Practice pp. 402–408
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- [ ] Complete Assignments
- [ ] Watch WileyPLUS Chapter Reviews
- [ ] Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1 Identify the different types of receivables.

2 Explain how companies recognize accounts receivable.

3 Distinguish between the methods and bases companies use to value accounts receivable.

4 Describe the entries to record the disposition of accounts receivable.

5 Compute the maturity date of and interest on notes receivable.

6 Explain how companies recognize notes receivable.

7 Describe how companies value notes receivable.

8 Describe the entries to record the disposition of notes receivable.

9 Explain the statement presentation and analysis of receivables.

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PREVIEW OF CHAPTER 8

As indicated in the Feature Story, receivables are a significant asset for banks. Because a large portion of sales are credit sales, receivables are important to companies in other industries as well. As a consequence, companies must pay close attention to their receivables and manage them carefully. In this chapter, you will learn what journal entries companies make when they sell products, when they collect cash from those sales, and when they write off accounts they cannot collect.

The content and organization of the chapter are as follows.

ACCOUNTING FOR RECEIVABLES

Types of Receivables	Accounts Receivable	Notes Receivable	Statement Presentation and Analysis
• Accounts receivable • Notes receivable • Other receivables	• Recognizing accounts receivable • Valuing accounts receivable • Disposing of accounts receivable	• Determining the maturity date • Computing interest • Recognizing notes receivable • Valuing notes receivable • Disposing of notes receivable	• Presentation • Analysis

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Types of Receivables

Learning Objective 1
Identify the different types of receivables.

The term **receivables** refers to amounts due from individuals and companies. Receivables are claims that are expected to be collected in cash. The management of receivables is a very important activity for any company that sells goods or services on credit.

Receivables are important because they represent one of a company's most liquid assets. For many companies, receivables are also one of the largest assets. Illustration 8-1 lists receivables as a percentage of total assets for five well-known companies in a recent year.

Illustration 8-1
Receivables as a percentage of assets

Company	Receivables as a Percentage of Total Assets
adidas (DEU)	16%
Hyundai (KOR)	5
Samsung (KOR)	13
Nestlé (CHE)	41
China Mobile Limited (HKG)	2

The relative significance of a company's receivables as a percentage of its assets depends on various factors: its industry, the time of year, whether it extends long-term financing, and its credit policies. To reflect important differences among receivables, they are frequently classified as (1) accounts receivable, (2) notes receivable, and (3) other receivables.

Accounts receivable are amounts customers owe on account. They result from the sale of goods and services. Companies generally expect to collect accounts receivable within 30 to 60 days. They are usually the most significant type of claim held by a company.

Notes receivable are a written promise (as evidenced by a formal instrument) for amounts to be received. The note normally requires the collection of interest and extends for time periods of 60–90 days or longer. Notes and accounts receivable that result from sales transactions are often called **trade receivables**.

Other receivables include non-trade receivables such as interest receivable, loans to company officers, advances to employees, and income taxes refundable. These do not generally result from the operations of the business. Therefore, they are generally classified and reported as separate items in the statement of financial position.

Ethics Note

Companies report receivables from employees separately in the financial statements. The reason: Sometimes those assets are not the result of an "arm's-length" transaction.

Accounts Receivable

Recognizing Accounts Receivable

Learning Objective 2
Explain how companies recognize accounts receivable.

Recognizing accounts receivable is relatively straightforward. A service organization records a receivable when it performs a service on account. A merchandiser records accounts receivable at the point of sale of merchandise on account. When a merchandiser sells goods, it increases (debits) Accounts Receivable and increases (credits) Sales Revenue.

The seller may offer terms that encourage early payment by providing a discount. Sales returns also reduce receivables. The buyer might find some of the goods unacceptable and choose to return the unwanted goods.

To review, assume that Hennes & Mauritz (SWE) on July 1, 2017, sells merchandise on account to Polo Company for $1,000, terms 2/10, n/30. On July 5, Polo returns merchandise with a sales price of $100 to Hennes & Mauritz. On July 11, Hennes & Mauritz receives payment from Polo Company for the balance due. The journal entries to record these transactions on the books of Hennes & Mauritz are as follows. **(Cost of goods sold entries are omitted.)**

Ethics Note

In exchange for lower interest rates, some companies have eliminated the 25-day grace period before finance charges kick in. Be sure you read the fine print in any credit agreement you sign.

July 1	Accounts Receivable—Polo Company	1,000	
	Sales Revenue		1,000
	(To record sales on account)		
July 5	Sales Returns and Allowances	100	
	Accounts Receivable—Polo Company		100
	(To record merchandise returned)		
July 11	Cash ($900 − $18)	882	
	Sales Discounts ($900 × .02)	18	
	Accounts Receivable—Polo Company		900
	(To record collection of accounts receivable)		

• HELPFUL HINT
These entries are the same as those described in Chapter 5. For simplicity, we have omitted inventory and cost of goods sold from this set of journal entries and from end-of-chapter material.

Some retailers issue their own credit cards. When you use a retailer's credit card (JCPenney (USA), for example), the retailer charges interest on the balance due if not paid within a specified period (usually 25–30 days).

To illustrate, assume that you use your JCPenney credit card to purchase clothing with a sales price of $300 on June 1, 2017. JCPenney will increase (debit) Accounts Receivable for $300 and increase (credit) Sales Revenue for $300 (cost of goods sold entry omitted) as follows.

June 1	Accounts Receivable	300	
	Sales Revenue		300
	(To record sales on account)		

A	=	L	+	E
+300				
				+300 Rev

Cash Flows
no effect

Assuming that you owe $300 at the end of the month, and JCPenney charges 1.5% per month on the balance due, the adjusting entry that JCPenney makes to record interest revenue of $4.50 ($300 × 1.5%) on June 30 is as follows.

June 30	Accounts Receivable	4.50	
	Interest Revenue		4.50
	(To record interest on amount due)		

A	=	L	+	E
+4.50				
				+4.50 Rev

Cash Flows
no effect

Interest revenue is often substantial for many retailers.

ANATOMY OF A FRAUD

Tasanee was the accounts receivable clerk for a large non-profit foundation that provided performance and exhibition space for the performing and visual arts. Her responsibilities included activities normally assigned to an accounts receivable clerk, such as recording revenues from various sources (e.g., donations, facility rental fees, ticket revenue, and bar receipts). However, she was also responsible for handling all cash and checks from the time they were received until the time she deposited them, as well as preparing the bank reconciliation. Tasanee took advantage of her situation by falsifying bank deposits and bank reconciliations so that she could steal cash from the bar receipts. Since nobody else logged the donations or matched the donation receipts to pledges prior to Tasanee receiving them, she was able to offset the cash that was stolen against donations that she received but didn't record. Her crime was made easier by the fact that her boss, the company's controller, only did a very superficial review of the bank reconciliation and thus didn't notice that some numbers had been cut out from other documents and taped onto the bank reconciliation.

Total take: $1.5 million

THE MISSING CONTROLS

Segregation of duties. The foundation should not have allowed an accounts receivable clerk, whose job was to record receivables, to also handle cash, record cash, make deposits, and especially prepare the bank reconciliation.

Independent internal verification. The controller was supposed to perform a thorough review of the bank reconciliation. Because he did not, he was terminated from his position.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 183–194.

DO IT!

Recognizing Accounts Receivable

On May 1, Wilton sold merchandise on account to Bates for €50,000 terms 3/15, net 45. On May 4, Bates returns merchandise with a sales price of €2,000. On May 16, Wilton receives payment from Bates for the balance due. Prepare journal entries to record the May transactions on Wilton's books. (You may ignore cost of goods sold entries and explanations.)

Action Plan

✔ Prepare entry to record the receivable and related return.

✔ Compute the sales discount and related entry.

Solution

May 1	Accounts Receivable—Bates	50,000	
	Sales Revenue		50,000
4	Sales Returns and Allowances	2,000	
	Accounts Receivable—Bates		2,000
16	Cash (€48,000 – €1,440)	46,560	
	Sales Discounts (€48,000 × .03)	1,440	
	Accounts Receivable—Bates		48,000

Related exercise material: **BE8-2, E8-1, E8-2, and DO IT! 8-1.**

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Valuing Accounts Receivable

Learning Objective 3

Distinguish between the methods and bases companies use to value accounts receivable.

Once companies record receivables in the accounts, the next question is: How should they report receivables in the financial statements? Companies report accounts receivable on the statement of financial position as an asset. But determining the **amount** to report is sometimes difficult because some receivables will become uncollectible.

Each customer must satisfy the credit requirements of the seller before the credit sale is approved. Inevitably, though, some accounts receivable become uncollectible. For example, a customer may not be able to pay because of a decline in its sales revenue due to a downturn in the economy. Similarly, individuals may be laid off from their jobs or faced with unexpected hospital bills. Companies record credit losses as debits to **Bad Debt Expense** (or Uncollectible Accounts Expense). Such losses are a normal and necessary risk of doing business on a credit basis. Recently, when home prices in many parts of the world fell, home foreclosures rose and lenders experienced huge increases in their bad debt expense.

• Alternative Terminology
You will sometimes see *Bad Debt Expense* called *Uncollectible Accounts Expense.*

Two methods are used in accounting for uncollectible accounts: (1) the direct write-off method and (2) the allowance method. The following sections explain these methods.

DIRECT WRITE-OFF METHOD FOR UNCOLLECTIBLE ACCOUNTS

Under the **direct write-off method**, when a company determines a particular account to be uncollectible, it charges the loss to Bad Debt Expense. Assume, for example, that Warden Ltd. writes off as uncollectible M. E. Doran's HK$1,600 balance on December 12. Warden's entry is as follows.

Dec. 12	Bad Debt Expense	1,600	
	Accounts Receivable—M. E. Doran		1,600
	(To record write-off of M. E. Doran account)		

A = L + E
−1,600 Exp
−1,600
Cash Flows
no effect

Under this method, Bad Debt Expense will show only **actual losses** from uncollectibles. The company will report accounts receivable at its gross amount.

Although this method is simple, its use can reduce the usefulness of both the income statement and statement of financial position. Consider the following example. Assume that in 2017, Quick Buck Computer Ltd. decided it could increase its revenues by offering computers to college students without requiring any money down and with no credit-approval process. On campuses across the country, it distributed one million computers with a selling price of HK$6,400 each. This increased Quick Buck's revenues and receivables by HK$6,400 million. The promotion was a huge success! The 2017 statement of financial position and income statement looked great. Unfortunately, during 2018, nearly 40% of the customers defaulted on their loans. This made the 2018 income statement and statement of financial position look terrible. Illustration 8-2 shows the effects of these events on the financial statements if the direct write-off method is used.

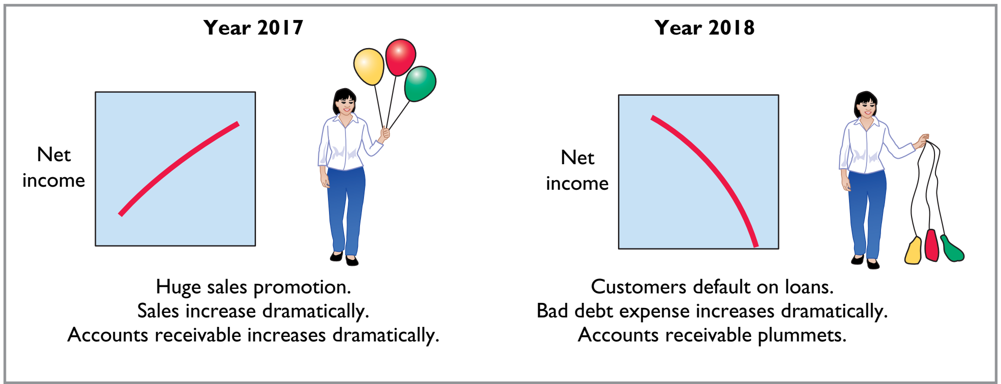


Illustration 8-2
Effects of direct write-off method

Under the direct write-off method, companies often record bad debt expense in a period different from the period in which they record the revenue. The method does not attempt to match bad debt expense to sales revenue in the income statement. Nor does the direct write-off method show accounts receivable in the statement of financial position at the amount the company actually expects to receive. **Consequently, unless bad debt losses are insignificant, the direct write-off method is not acceptable for financial reporting purposes.**

ALLOWANCE METHOD FOR UNCOLLECTIBLE ACCOUNTS

The **allowance method** of accounting for bad debts involves estimating uncollectible accounts at the end of each period. This provides better matching on the income statement. It also ensures that companies state receivables on the statement of financial position at their cash (net) realizable value. **Cash (net) realizable value** is the net amount the company expects to receive in cash.[1] It excludes amounts that the company estimates it will not collect. Thus, this method reduces receivables in the statement of financial position by the amount of estimated uncollectible receivables.

• HELPFUL HINT
In this context, *material* means significant or important to financial statement users.

IFRS requires the allowance method for financial reporting purposes when bad debts are material in amount. This method has three essential features:

1. Companies **estimate** uncollectible accounts receivable. They match this estimated expense **against revenues** in the same accounting period in which they record the revenues.
2. Companies debit estimated uncollectibles to Bad Debt Expense and credit them to Allowance for Doubtful Accounts through an adjusting entry at the end of each period. Allowance for Doubtful Accounts is a contra account to Accounts Receivable.
3. When companies write off a specific account, they debit actual uncollectibles to Allowance for Doubtful Accounts and credit that amount to Accounts Receivable.

RECORDING ESTIMATED UNCOLLECTIBLES To illustrate the allowance method, assume that Hampson Furniture has credit sales of €1,200,000 in 2017. Of this amount, €200,000 remains uncollected at December 31. The credit manager estimates that €12,000 of these sales will be uncollectible. The adjusting entry to record the estimated uncollectibles increases (debits) Bad Debt Expense and increases (credits) Allowance for Doubtful Accounts, as follows.

A	=	L	+	E
				−12,000 Exp
−12,000				

Cash Flows
no effect

Dec. 31	Bad Debt Expense	12,000	
	Allowance for Doubtful Accounts		12,000
	(To record estimate of uncollectible accounts)		

Hampson reports Bad Debt Expense in the income statement as an operating expense (usually as a selling expense). Thus, the estimated uncollectibles are matched with sales in 2017. Hampson records the expense in the same year it made the sales.

Allowance for Doubtful Accounts shows the estimated amount of claims on customers that the company expects will become uncollectible in the future. Companies use a contra account instead of a direct credit to Accounts Receivable because they do not know which customers will not pay. The credit balance in the allowance account will absorb the specific write-offs when they occur. As Illustration 8-3 shows, the company deducts the allowance account from accounts receivable in the current assets section of the statement of financial position.

Illustration 8-3
Presentation of allowance for doubtful accounts

HAMPSON FURNITURE
Statement of Financial Position (partial)

Current assets		
Supplies		€ 25,000
Inventory		310,000
Accounts receivable	**€200,000**	
Less: Allowance for doubtful accounts	**12,000**	**188,000**
Cash		14,800
Total current assets		€537,800

[1]The IASB uses the term *amortized cost* instead of cash (net) realizable value. For short-term receivables, which are the focus of this chapter, amortized cost and cash (net) realizable value are essentially the same. For non-current receivables, amortized cost has more relevance.

The amount of €188,000 in Illustration 8-3 represents the expected **cash realizable value** of the accounts receivable at the statement date. **Companies do not close Allowance for Doubtful Accounts at the end of the fiscal year.**

• HELPFUL HINT
Cash realizable value is sometimes referred to as *accounts receivable* (*net*).

RECORDING THE WRITE-OFF OF AN UNCOLLECTIBLE ACCOUNT Companies use various methods of collecting past-due accounts, such as letters, calls, and legal action. When they have exhausted all means of collecting a past-due account and collection appears impossible, the company should write off the account. In the credit card industry, for example, it is standard practice to write off accounts that are 210 days past due. To prevent premature or unauthorized write-offs, authorized management personnel should formally approve each write-off. To maintain segregation of duties, the employee authorized to write off accounts should not have daily responsibilities related to cash or receivables.

To illustrate a receivables write-off, assume that the financial vice president of Hampson Furniture authorizes a write-off of the €500 balance owed by R. A. Ware on March 1, 2018. The entry to record the write-off is as follows.

Mar. 1	Allowance for Doubtful Accounts	500	
	Accounts Receivable—R. A. Ware		500
	(Write-off of R. A. Ware account)		

A	=	L	+	E
+500				
−500				

Cash Flows
no effect

Bad Debt Expense does not increase when the write-off occurs. **Under the allowance method, companies debit every bad debt write-off to the allowance account rather than to Bad Debt Expense.** A debit to Bad Debt Expense would be incorrect because the company has already recognized the expense when it made the adjusting entry for estimated bad debts. Instead, the entry to record the write-off of an uncollectible account reduces both Accounts Receivable and Allowance for Doubtful Accounts. After posting, the general ledger accounts appear as shown in Illustration 8-4.

Illustration 8-4
General ledger balances after write-off

Accounts Receivable		Allowance for Doubtful Accounts	
Jan. 1 Bal. 200,000	Mar. 1 500	Mar. 1 500	Jan. 1 Bal. 12,000
Mar. 1 Bal. 199,500			Mar. 1 Bal. 11,500

A write-off affects **only statement of financial position accounts**—not income statement accounts. The write-off of the account reduces both Accounts Receivable and Allowance for Doubtful Accounts. Cash realizable value in the statement of financial position, therefore, remains the same, as Illustration 8-5 shows.

Illustration 8-5
Cash realizable value comparison

	Before Write-Off	After Write-Off
Accounts receivable	€ 200,000	€ 199,500
Less: Allowance for doubtful accounts	12,000	11,500
Cash realizable value	**€188,000**	**€188,000**

RECOVERY OF AN UNCOLLECTIBLE ACCOUNT Occasionally, a company collects from a customer after it has written off the account as uncollectible. The company makes two entries to record the recovery of a bad debt. (1) It reverses the entry made in writing off the account. This reinstates the customer's account. (2) It journalizes the collection in the usual manner.

To illustrate, assume that on July 1, R. A. Ware pays the €500 amount that Hampson had written off on March 1. Hampson makes the following entries.

A = L + E
+500
−500
Cash Flows
no effect

(1)

July 1	Accounts Receivable—R. A. Ware	500	
	Allowance for Doubtful Accounts		500
	(To reverse write-off of R. A. Ware account)		

A = L + E
+500
−500
Cash Flows
+500

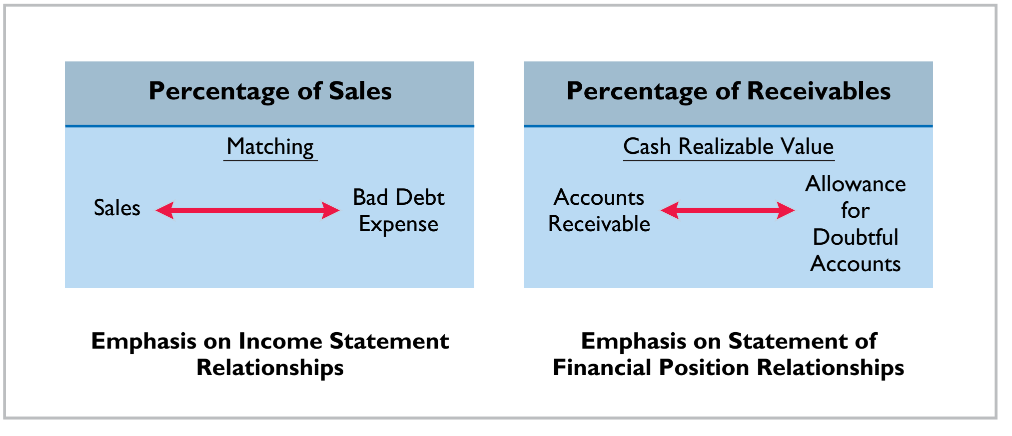
(2)

July 1	Cash	500	
	Accounts Receivable—R. A. Ware		500
	(To record collection from R. A. Ware)		

Note that the recovery of a bad debt, like the write-off of a bad debt, affects **only statement of financial position accounts**. The net effect of the two entries above is a debit to Cash and a credit to Allowance for Doubtful Accounts for €500. Accounts Receivable and the Allowance for Doubtful Accounts both increase in entry (1) for two reasons. First, the company made an error in judgment when it wrote off the account receivable. Second, after R. A. Ware did pay, Accounts Receivable in the general ledger and Ware's account in the subsidiary ledger should show the collection for possible future credit purposes.

ESTIMATING THE ALLOWANCE For Hampson Furniture in Illustration 8-3, the amount of the expected uncollectibles was given. However, in "real life," companies must estimate that amount when they use the allowance method. One of two bases is used to determine this amount: **(1) percentage of sales** or **(2) percentage of receivables**. Both bases are generally accepted. The choice is a management decision. It depends on the relative emphasis that management wishes to give to expenses and revenues on the one hand or to cash realizable value of the accounts receivable on the other. The choice is whether to emphasize income statement or statement of financial position relationships. Illustration 8-6 compares the two bases.

Illustration 8-6
Comparison of bases for estimating uncollectibles



The percentage-of-sales basis results in a better matching of expenses with revenues—an income statement viewpoint. The percentage-of-receivables basis produces the better estimate of cash realizable value—a statement of financial position viewpoint. Under both bases, the company must determine its past experience with bad debt losses.

Percentage-of-Sales. In the **percentage-of-sales basis**, management estimates what percentage of credit sales will be uncollectible. This percentage is based on past experience and anticipated credit policy.

The company applies this percentage to either total credit sales or net credit sales of the current year. To illustrate, assume that Gonzalez SA elects to use the percentage-of-sales basis. It concludes that 1% of net credit sales will become uncollectible. If net credit sales for 2017 are €800,000, the estimated bad debt expense is €8,000 (1% × €800,000). The adjusting entry is as follows.

Dec. 31	Bad Debt Expense	8,000	
	Allowance for Doubtful Accounts		8,000
	(To record estimated bad debts for year)		

A	=	L	+	E
				−8,000 Exp
−8,000				

Cash Flows
no effect

After the adjusting entry is posted, assuming the allowance account already has a credit balance of €1,723, the accounts of Gonzalez SA will show the following.

Illustration 8-7
Bad debt accounts after posting

Bad Debt Expense		Allowance for Doubtful Accounts	
Dec. 31 Adj. **8,000**			Jan. 1 Bal. 1,723
			Dec. 31 Adj. **8,000**
			Dec. 31 Bal. 9,723

This basis of estimating uncollectibles emphasizes the matching of expenses with revenues. As a result, Bad Debt Expense will show a direct percentage relationship to the sales base on which it is computed. **When the company makes the adjusting entry, it disregards the existing balance in Allowance for Doubtful Accounts.** The adjusted balance in this account when netted against accounts receivable should be a reasonable approximation of the realizable value of the receivables. If actual write-offs differ significantly from the amount estimated, the company should modify the percentage for future years.

Percentage-of-Receivables. Under the **percentage-of-receivables basis**, management estimates what percentage of receivables will result in losses from uncollectible accounts. The company prepares an **aging schedule**, in which it classifies customer balances by the length of time they have been unpaid. Because of its emphasis on time, the analysis is often called **aging the accounts receivable**.

• HELPFUL HINT
Where appropriate, the percentage-of-receivables basis may use only a single percentage rate.

After the company arranges the accounts by age, it determines the expected bad debt losses. It applies percentages based on past experience to the totals in each category. The longer a receivable is past due, the less likely it is to be collected. Thus, the estimated percentage of uncollectible debts increases as the number of days past due increases. Illustration 8-8 (page 392) shows an aging schedule for Dart Company Ltd. Note that the estimated percentage uncollectible increases from 2% to 40% as the number of days past due increases.

Total estimated bad debts for Dart (₩2,228,000) represent the amount of existing customer claims the company expects will become uncollectible in the future. This amount represents the **required balance** in Allowance for Doubtful Accounts at the statement of financial position date. **The amount of the bad debt adjusting entry is the difference between the required balance and the existing balance in the allowance account.** If the trial balance shows Allowance for Doubtful Accounts with a credit balance of ₩528,000, the company will make an adjusting entry for ₩1,700,000 (₩2,228,000 − ₩528,000), as shown here (₩ in thousands).

Dec. 31	Bad Debt Expense	1,700	
	Allowance for Doubtful Accounts		1,700
	(To adjust allowance account to total estimated uncollectibles)		

A	=	L	+	E
				−1,700 Exp
−1,700				

Cash Flows
no effect

Illustration 8-8
Aging schedule

Worksheet.xls

	A	B	C	D	E	F	G
1	(₩ in thousands)			Number of Days Past Due			
2			Not				
3	**Customer**	**Total**	**Yet Due**	**1–30**	**31–60**	**61–90**	**Over 90**
4	T. E. Song	₩ 600		₩ 300		₩ 200	₩ 100
5	R. C. Han	300	₩ 300				
6	B. A. Yoon	450		200	₩ 250		
7	O. L. Choi	700	500			200	
8	T. O. Bae	600			300		300
9	Others	36,950	26,200	5,200	2,450	1,600	1,500
10		₩39,600	₩27,000	₩5,700	₩3,000	₩2,000	₩1,900
11	Estimated Percentage Uncollectible		2%	4%	10%	20%	40%
12	Total Estimated Bad Debts	₩ 2,228	₩ 540	₩ 228	₩ 300	₩ 400	₩ 760
13							

• HELPFUL HINT
The older categories have higher percentages because the longer an account is past due, the less likely it is to be collected.

After Dart posts its adjusting entry, its accounts will appear as follows (₩ in thousands).

Illustration 8-9
Bad debt accounts after posting

Bad Debt Expense	
Dec. 31 Adj. **1,700**	

Allowance for Doubtful Accounts	
	Bal. 528
	Dec. 31 Adj. **1,700**
	Bal. 2,228

Allowance for Doubtful Accounts	
Dec. 31 **Unadj.** Bal. 500	Dec. 31 **Adj.** 2,728
	Dec. 31 Bal. 2,228

Occasionally, the allowance account will have a **debit balance** prior to adjustment. This occurs when write-offs during the year have exceeded previous provisions for bad debts. In such a case, the company **adds the debit balance to the required balance** when it makes the adjusting entry. Thus, if there had been a ₩500,000 debit balance in the allowance account before adjustment, the adjusting entry would have been for ₩2,728,000 (₩2,228,000 + ₩500,000) to arrive at a credit balance of ₩2,228,000. The percentage-of-receivables basis will normally result in the better approximation of cash realizable value.

DO IT!

Uncollectible Accounts Receivable

Brule Co. has been in business for five years. The unadjusted trial balance at the end of the current year shows:

Accounts Receivable	\$30,000 Dr.
Sales Revenue	\$180,000 Cr.
Allowance for Doubtful Accounts	\$2,000 Dr.

Bad debts are estimated to be 10% of receivables. Prepare the entry to adjust Allowance for Doubtful Accounts.

Action Plan

✔ Estimate the amount the company does not expect to collect.

✔ Consider the existing balance in the allowance account when using the percentage-of-receivables basis.

✔ Report receivables at their cash (net) realizable value.

Solution

The following entry should be made to bring the balance in Allowance for Doubtful Accounts up to a normal credit balance of \$3,000 (10% × \$30,000):

Bad Debt Expense [(10% × \$30,000) + \$2,000]	5,000	
Allowance for Doubtful Accounts		5,000
(To record estimate of uncollectible accounts)		

Related exercise material: **BE8-3, BE8-4, BE8-5, BE8-6, BE8-7, E8-3, E8-4, E8-5, and DO IT! 8-2.**

✔ The Navigator

Disposing of Accounts Receivable

Learning Objective 4

Describe the entries to record the disposition of accounts receivable.

In the normal course of events, companies collect accounts receivable in cash and remove the receivables from the books. However, as credit sales and receivables have grown in significance, the "normal course of events" has changed. Companies now frequently sell their receivables to another company for cash, thereby shortening the cash-to-cash operating cycle.

Companies sell receivables for two major reasons. First, **they may be the only reasonable source of cash**. When money is tight, companies may not be able to borrow money in the usual credit markets. Or, if money is available, the cost of borrowing may be prohibitive.

A second reason for selling receivables is that **billing and collection are often time-consuming and costly**. It is often easier for a retailer to sell the receivables to another party with expertise in billing and collection matters. Credit card companies such as MasterCard (USA) and Visa (USA) specialize in billing and collecting accounts receivable. MasterCard and Visa credit cards are issued by banks around the world, including ICBC (CHN), BNP Paribas (FRA), and Barclays (GBR).

SALE OF RECEIVABLES

A common sale of receivables is a sale to a factor. A **factor** is a finance company or bank that buys receivables from businesses and then collects the payments directly from the customers. Factoring is a multibillion dollar business.

Factoring arrangements vary widely. Typically, the factor charges a commission to the company that is selling the receivables. This fee ranges from 1–3% of the amount of receivables purchased. To illustrate, assume that Tsai Furniture factors NT$600,000 of receivables to Federal Factors. Federal Factors assesses a service charge of 2% of the amount of receivables sold. The journal entry to record the sale by Tsai Furniture on April 2, 2017, is as follows.

Apr. 2	Cash	588,000	
	Service Charge Expense (2% × NT$600,000)	12,000	
	Accounts Receivable		600,000
	(To record the sale of accounts receivable)		

A	=	L	+	E
+588,000				
				−12,000 Exp
−600,000				

Cash Flows
+588,000

If the company often sells its receivables, it records the service charge expense (such as that incurred by Tsai) as a selling expense. If the company infrequently sells receivables, it may report this amount in the "Other income and expense" section of the income statement.

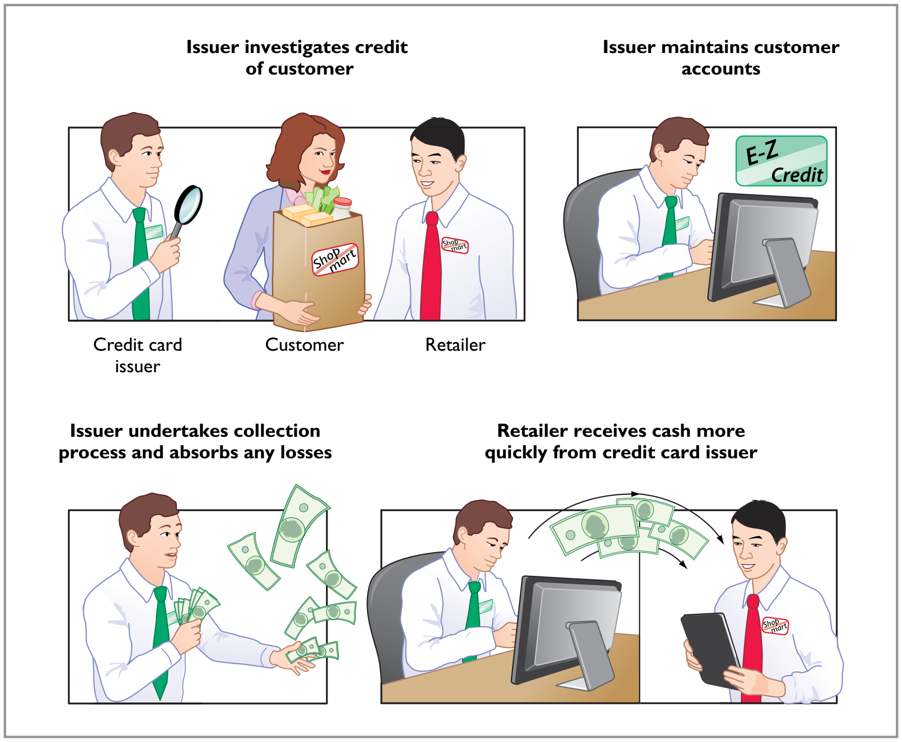
CREDIT CARD SALES

Credit card use is becoming widespread around the world. ICBC is among the largest credit card issuers in the world. Visa and MasterCard are the credit cards that most individuals use. Three parties are involved when credit cards are used in retail sales: (1) the credit card issuer, who is independent of the retailer; (2) the retailer; and (3) the customer. A retailer's acceptance of a national credit card is another form of selling (factoring) the receivable.

Illustration 8-10 (page 394) shows the major advantages of credit cards to the retailer. In exchange for these advantages, the retailer pays the credit card issuer a fee of 2–6% of the invoice price for its services.

ACCOUNTING FOR CREDIT CARD SALES The retailer generally considers sales from the use of credit card sales as **cash sales**. The retailer must pay to the bank that issues the card a fee for processing the transactions. The retailer records the credit card slips in a similar manner as checks deposited from a cash sale.

Illustration 8-10
Advantages of credit cards to the retailer



To illustrate, Lee Co. Ltd. purchases NT$6,000 of music downloads for its restaurant from Yang Music, using a Visa First Bank Card. First Bank charges a service fee of 3%. The entry to record this transaction by Yang Music on March 22, 2018, is as follows.

A	=	L	+	E
+5,820				
				−180 Exp
				+6,000 Rev

Cash Flows
+5,820

Mar. 22	Cash	5,820	
	Service Charge Expense	180	
	Sales Revenue		6,000
	(To record Visa credit card sales)		

Accounting Across the Organization **How Does a Credit Card Work?** PPR (FRA)


Michael Braun/iStockphoto

Most of you know how to use a credit card, but do you know what happens in the transaction and how the transaction is processed? Suppose that you use a Visa card to purchase some new ties at PPR (FRA). The salesperson swipes your card, which allows the information on the magnetic strip on the back of the card to be read. The salesperson then enters the amount of the purchase. The machine contacts the Visa computer, which routes the call back to the bank that issued your Visa card. The issuing bank verifies that the account exists, that the card is not stolen, and that you have not exceeded your credit limit. At this point, the slip is printed, which you sign.

Visa acts as the clearing agent for the transaction. It transfers funds from the issuing bank to PPR's bank account. Generally this transfer of funds, from sale to the receipt of funds in the merchant's account, takes two to three days.

In the meantime, Visa puts a pending charge on your account for the amount of the tie purchase; that amount counts immediately against your available credit limit. At the end of the billing period, Visa sends you an invoice (your credit card bill) which shows the various charges you made, and the amounts that Visa expended on your behalf, for the month. You then must "pay the piper" for your stylish new ties.

Q Assume that PPR prepares a bank reconciliation at the end of each month. If some credit card sales have not been processed by the bank, how should PPR treat these transactions on its bank reconciliation? (See page 422.)

DO IT!

Disposition of Accounts Receivable

Mehl Wholesalers NV has been expanding faster than it can raise capital. According to its local banker, the company has reached its debt ceiling. Mehl's suppliers (creditors) are demanding payment within 30 days of the invoice date for goods acquired, but Mehl's customers are slow in paying (60–90 days). As a result, Mehl has a cash flow problem.

Mehl needs €120,000 in cash to safely cover next Friday's payroll. Its balance of outstanding accounts receivables totals €750,000. To alleviate this cash crunch, the company sells €125,000 of its receivables on September 7, 2017. Mehl is charged a 1% service charge on this sale. Record the entry that Mehl would make when it raises the needed cash.

Action Plan

✔ To speed up the collection of cash, sell receivables to a factor.

✔ Calculate service charge expense as a percentage of the factored receivables.

Solution

If Mehl Wholesalers factors €125,000 of its accounts receivable at a 1% service charge, it would make the following entry.

Sept. 7	Cash	123,750	
	Service Charge Expense (1% × €125,000)	1,250	
	Accounts Receivable		125,000
	(To record sale of receivables to factor)		

Related exercise material: BE8-8, E8-7, E8-8, E8-9, and DO IT! 8-3.

✔ The Navigator

Notes Receivable

Learning Objective 5
Compute the maturity date of and interest on notes receivable.

Companies may also grant credit in exchange for a formal credit instrument known as a promissory note. A **promissory note** is a written promise to pay a specified amount of money on demand or at a definite time. Promissory notes may be used (1) when individuals and companies lend or borrow money, (2) when the amount of the transaction and the credit period exceed normal limits, or (3) in settlement of accounts receivable.

In a promissory note, the party making the promise to pay is called the **maker**. The party to whom payment is to be made is called the **payee**. The note may specifically identify the payee by name or may designate the payee simply as the bearer of the note.

In the note shown in Illustration 8-11, Calhoun plc is the maker, and Wilma Ltd. is the payee. To Wilma Ltd., the promissory note is a note receivable. To Calhoun plc, it is a note payable.

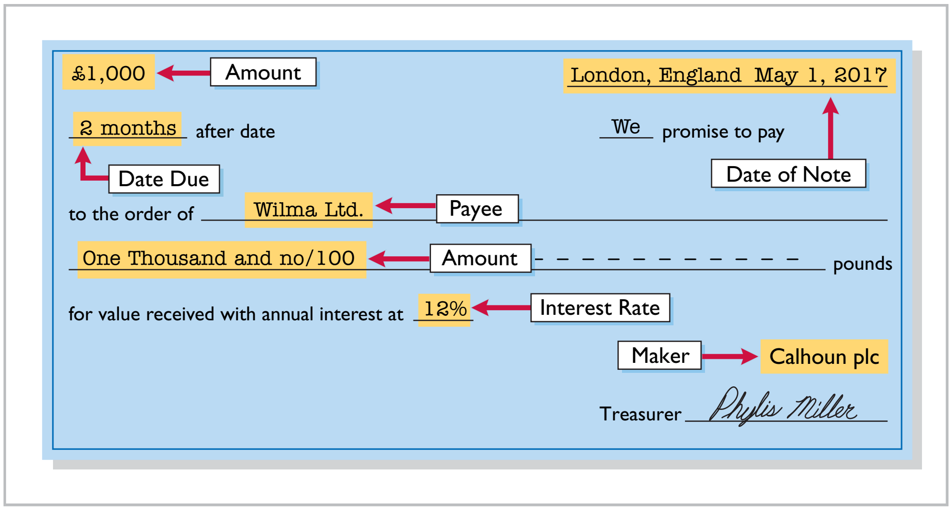


Illustration 8-11
Promissory note

• HELPFUL HINT
For this note, the maker, Calhoun plc, debits Cash and credits Notes Payable. The payee, Wilma Ltd., debits Notes Receivable and credits Cash.

Notes receivable give the holder a stronger legal claim to assets than do accounts receivable. Like accounts receivable, notes receivable can be readily sold to another party. Promissory notes are negotiable instruments (as are checks), which means that they can be transferred to another party by endorsement.

Companies frequently accept notes receivable from customers who need to extend the payment of an outstanding account receivable. They often require such notes from high-risk customers. In some industries (such as the pleasure and sport boat industry), all credit sales are supported by notes. The majority of notes, however, originate from loans.

The basic issues in accounting for notes receivable are the same as those for accounts receivable:

1. **Recognizing** notes receivable.
2. **Valuing** notes receivable.
3. **Disposing of** notes receivable.

On the following pages, we look at these issues. Before we do, however, we need to consider two issues that do not apply to accounts receivable: determining the maturity date and computing interest.

Determining the Maturity Date

When the life of a note is expressed in terms of months, you find the date when it matures by counting the months from the date of issue. For example, the maturity date of a three-month note dated May 1 is August 1. A note drawn on the last day of a month matures on the last day of a subsequent month. That is, a July 31 note due in two months matures on September 30.

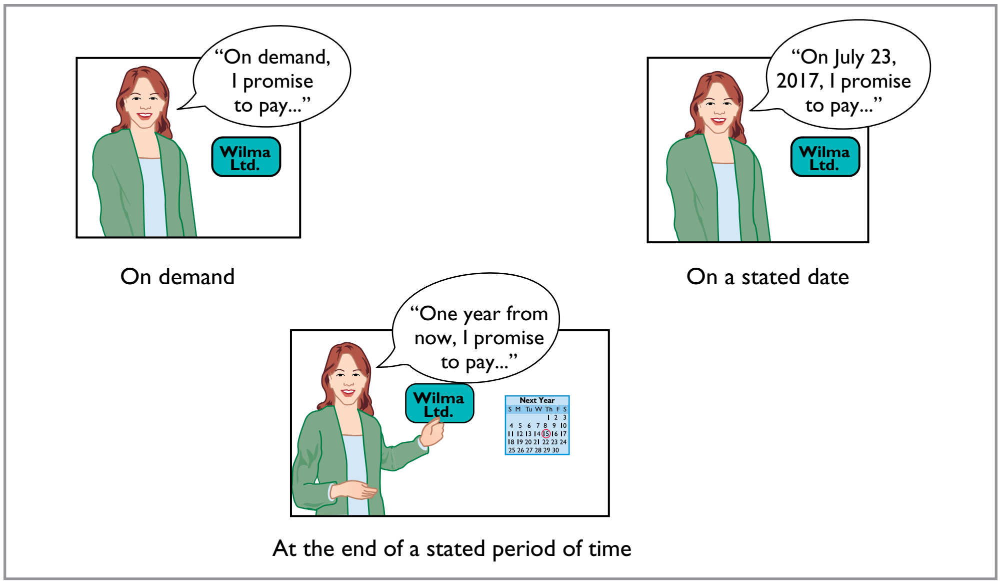
When the due date is stated in terms of days, you need to count the exact number of days to determine the maturity date. In counting, **omit the date the note is issued but include the due date**. For example, the maturity date of a 60-day note dated July 17 is September 15, computed as follows.

Illustration 8-12
Computation of maturity date

Term of note		60 days
July (31–17)	14	
August	31	45
Maturity date: September		**15**

Illustration 8-13 shows three ways of stating the maturity date of a promissory note.

Illustration 8-13
Maturity date of different notes



Computing Interest

Illustration 8-14 gives the basic formula for computing interest on an interest-bearing note.

Face Value of Note	×	Annual Interest Rate	×	Time in Terms of One Year	=	Interest

Illustration 8-14
Formula for computing interest

The interest rate specified in a note is an **annual** rate of interest. The time factor in the formula in Illustration 8-14 expresses the fraction of a year that the note is outstanding. When the maturity date is stated in days, the time factor is often the number of days divided by 360. When counting days, omit the date that the note is issued but include the due date. When the due date is stated in months, the time factor is the number of months divided by 12. Illustration 8-15 shows computation of interest for various time periods.

• HELPFUL HINT
The interest rate specified is the *annual* rate.

Terms of Note	Interest Computation
	Face × Rate × Time = Interest
$ 730, 9%, 120 days	$ 730 × 9% × **120/360** = $ 21.90
$1,000, 8%, 6 months	$1,000 × 8% × **6/12** = $ 40.00
$2,000, 6%, 1 year	$2,000 × 6% × **1/1** = $120.00

Illustration 8-15
Computation of interest

There are different ways to calculate interest. For example, the computation in Illustration 8-15 assumes 360 days for the length of the year. Most financial instruments use 365 days to compute interest. *For homework problems, assume 360 days to simplify computations*.

Recognizing Notes Receivable

Learning Objective 6
Explain how companies recognize notes receivable.

To illustrate the basic entry for notes receivable, we will use Calhoun plc's £1,000, two-month, 12% promissory note dated May 1. Assuming that Calhoun plc wrote the note to settle an open account, Wilma Ltd. makes the following entry for the receipt of the note.

May 1	Notes Receivable	1,000	
	Accounts Receivable—Calhoun plc		1,000
	(To record acceptance of Calhoun plc note)		

A	=	L	+	E
+1,000				
−1,000				

Cash Flows
no effect

The company records the note receivable at its **face value**, the amount shown on the face of the note. No interest revenue is reported when the note is accepted because the revenue recognition principle does not recognize revenue until the performance obligation is satisfied. Interest is earned (accrued) as time passes.

If a company lends money using a note, the entry is a debit to Notes Receivable and a credit to Cash in the amount of the loan.

Valuing Notes Receivable

Learning Objective 7
Describe how companies value notes receivable.

Valuing short-term notes receivable is the same as valuing accounts receivable. Like accounts receivable, companies report short-term notes receivable at their **cash (net) realizable value**. The notes receivable allowance account is Allowance for Doubtful Accounts. The estimations involved in determining cash realizable value and in recording bad debt expense and the related allowance are done similarly to accounts receivable.

Global Insight **Can Fair Value Be Unfair?**

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The IASB and the Financial Accounting Standards Board (FASB) are considering proposals for how to account for financial instruments. The FASB has proposed that loans and receivables be accounted for at their fair value (the amount they could currently be sold for), as are most investments. The FASB believes that this would provide a more accurate view of a company's financial position. It might be especially useful as an early warning when a bank is in trouble because of poor-quality loans. But, banks argue that fair values are difficult to estimate accurately. They are also concerned that volatile fair values could cause large swings in a bank's reported net income. As a result, the IASB issued a standard that instead accounts for loans at amortized cost.

Source: David Reilly, "Banks Face a Mark-to-Market Challenge," *Wall Street Journal Online* (March 15, 2010).

Q What are the arguments in favor of and against fair value accounting for loans and receivables? (See page 422.)

Disposing of Notes Receivable

Learning Objective 8

Describe the entries to record the disposition of accounts receivable.

Notes may be held to their maturity date, at which time the face value plus accrued interest is due. In some situations, the maker of the note defaults, and the payee must make an appropriate adjustment. In other situations, similar to accounts receivable, the holder of the note speeds up the conversion to cash by selling the receivables. The accounting entries for the sale of notes receivable are left for a more advanced class.

HONOR OF NOTES RECEIVABLE

A note is **honored** when its maker pays in full at its maturity date. For each interest-bearing note, the **amount due at maturity** is the face value of the note plus interest for the length of time specified on the note.

To illustrate, assume that Wolder Co. lends Higley Co. €10,000 on June 1, accepting a five-month, 9% interest note. In this situation, interest is €375 (€10,000 × 9% × $\frac{5}{12}$). The amount due, **the maturity value**, is €10,375 (€10,000 + €375). To obtain payment, Wolder (the payee) must present the note either to Higley Co. (the maker) or to the maker's agent, such as a bank. If Wolder presents the note to Higley Co. on November 1, the maturity date, Wolder's entry to record the collection is as follows.

A	=	L	+	E
+10,375				
−10,000				
				+375 Rev

Cash Flows
+10,375

Nov. 1	Cash	10,375	
	Notes Receivable		10,000
	Interest Revenue (€10,000 × 9% × $\frac{5}{12}$)		375
	(To record collection of Higley note and interest)		

ACCRUAL OF INTEREST RECEIVABLE

Suppose instead that Wolder Co. prepares financial statements as of September 30. The timeline in Illustration 8-16 presents this situation.

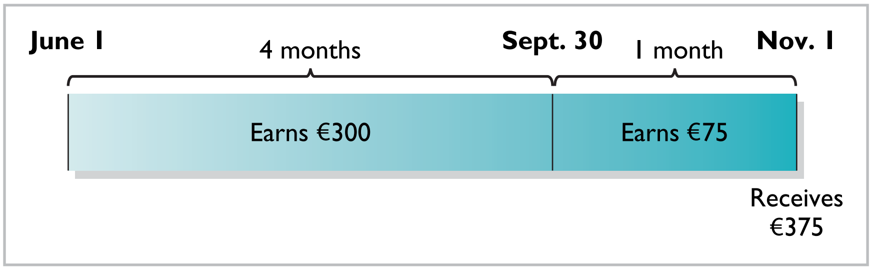

Illustration 8-16
Timeline of interest earned

To reflect interest earned but not yet received, Wolder must accrue interest on September 30. In this case, the adjusting entry by Wolder is for four months of interest, or €300, as shown below.

Sept. 30	Interest Receivable (€10,000 × 9% × $\frac{4}{12}$)	300	
	Interest Revenue		300
	(To accrue 4 months' interest on Higley note)		

A = L + E
+300
+300 Rev
Cash Flows
no effect

At the note's maturity on November 1, Wolder receives €10,375. This amount represents repayment of the €10,000 note as well as five months of interest, or $375, as shown below. The €375 is comprised of the €300 Interest Receivable accrued on September 30 plus €75 earned during October. Wolder's entry to record the honoring of the Higley note on November 1 is as follows.

Nov. 1	Cash [€10,000 + (€10,000 × 9% × $\frac{5}{12}$)]	10,375	
	Notes Receivable		10,000
	Interest Receivable		300
	Interest Revenue (€10,000 × 9% × $\frac{1}{12}$)		75
	(To record collection of Higley note and interest)		

A = L + E
+10,375
−10,000
−300
+75 Rev
Cash Flows
+10,375

In this case, Wolder credits Interest Receivable because the receivable was established in the adjusting entry on September 30.

DISHONOR OF NOTES RECEIVABLE

A **dishonored (defaulted) note** is a note that is not paid in full at maturity. A dishonored note receivable is no longer negotiable. However, the payee still has a claim against the maker of the note for both the note and the interest. Therefore, the note holder usually transfers the Notes Receivable account to an Accounts Receivable account.

To illustrate, assume that Higley Co. on November 1 indicates that it cannot pay at the present time. The entry to record the dishonor of the note depends on whether Wolder Co. expects eventual collection. If it does expect eventual collection, Wolder Co. debits the amount due (face value and interest) on the note to Accounts Receivable. It would make the following entry at the time the note is dishonored (assuming no previous accrual of interest).

Nov. 1	Accounts Receivable—Higley	10,375	
	Notes Receivable		10,000
	Interest Revenue		375
	(To record the dishonor of Higley note)		

A = L + E
+10,375
−10,000
+375 Rev
Cash Flows
no effect

If instead on November 1 there is no hope of collection, the note holder would write off the face value of the note by debiting Allowance for Doubtful Accounts. No interest revenue would be recorded because collection will not occur.

Accounting Across the Organization **Filling a Lending Void**

Trafalgar Capital Advisors (GBR)

© Pesky Monkey/iStockphoto

After the global financial crisis, many banks were slow to extend business loans. Companies that needed financing were forced to look to alternative sources. For example, those with significant receivables were sometimes able to use those as a mechanism to get funding. One company, Trafalgar Capital Advisors (GBR), has an investment fund that extends financing supported by receivables, especially on long-term contracts. Examples have included, "suppliers with a large order from a large supermarket chain such as Walmart or Carrefour, which may account for 30 percent of their annual revenue, companies supplying systems to Thomson Reuters on 'non-cancellable' contracts, contractors selling to the UK's Ministry of Defence ('they never get paid on time'), and an organiser of international golf tournaments with long-term contracts but lumpy revenue streams." The company does not like to lend on "intangible" collateral, such as that of biotech or software companies.

Source: Steve Johnson, "Few Fund Managers Filling Bank Lending Void," *Financial Times Online (FT.com)* (January 9, 2011).

Q Why do you suppose the company prefers to extend credit supported by receivables rather than intangible assets? (See page 422.)

DO IT!

Notes Receivable

Gambit Stores accepts from Leonard SpA a €3,400, 90-day, 6% note dated May 10 in settlement of Leonard's overdue account. (a) What is the maturity date of the note? (b) What entry does Gambit make at the maturity date, assuming Leonard pays the note and interest in full at that time?

Action Plan

✔ Count the exact number of days to determine the maturity date. Omit the date the note is issued, but include the due date.

✔ Determine whether interest was accrued.

✔ Compute the accrued interest.

✔ Prepare the entry for collection of the note and interest.

✔ The entry to record interest at maturity in this solution assumes no interest has been previously accrued on this note.

Solution

(a) The maturity date is August 8, computed as follows.

Term of note:		90 days
May (31 − 10)	21	
June	30	
July	31	82
Maturity date: August		8

(b) The interest payable at the maturity date is €51, computed as follows.

$$\text{Face} \times \text{Rate} \times \text{Time} = \text{Interest}$$
$$€3{,}400 \times 6\% \times 90/360 = €51$$

The entry recorded by Gambit Stores at the maturity date is:

Aug. 8	Cash	3,451	
	Notes Receivable		3,400
	Interest Revenue		51
	(To record collection of Leonard note)		

Related exercise material: **BE8-9, BE8-10, E8-10, E8-11, E8-12, E8-13, and DO IT! 8-4.**

✔ The Navigator

Statement Presentation and Analysis

Learning Objective 9
Explain the statement presentation and analysis of receivables.

Presentation

Companies should identify in the statement of financial position or in the notes to the financial statements each of the major types of receivables. Short-term receivables appear in the current assets section of the statement of financial position. Short-term investments appear after short-term receivables because these investments are more liquid (nearer to cash). Companies report both the gross amount of receivables and the allowance for doubtful accounts.

In an income statement, companies report bad debt expense and service charge expense as selling expenses in the operating expenses section. Interest revenue appears under "Other income and expense" in the non-operating activities section of the income statement.

Analysis

Investors and corporate managers compute financial ratios to evaluate the liquidity of a company's accounts receivable. They use the **accounts receivable turnover** to assess the liquidity of the receivables. This ratio measures the number of times, on average, the company collects accounts receivable during the period. It is computed by dividing net credit sales (net sales less cash sales) by the average net accounts receivable during the year. Unless seasonal factors are significant, average net accounts receivable outstanding can be computed from the beginning and ending balances of net accounts receivable.

For example, in a recent year Lenovo Group (CHN) (which reported in U.S. dollars) had net sales of $38,707 million for the year. It had a beginning accounts receivable (net) balance of $2,885 million and an ending accounts receivable (net) balance of $3,171 million. Assuming that Lenovo's sales were all on credit, its accounts receivable turnover is computed as follows.

Net Credit Sales	÷	Average Net Accounts Receivable	=	Accounts Receivable Turnover
$38,707	÷	$\frac{\$2,885 + \$3,171}{2}$	=	12.8 times

Illustration 8-17
Accounts receivable turnover and computation

The result indicates an accounts receivable turnover of 12.8 times per year. The higher the turnover, the more liquid the company's receivables.

A variant of the accounts receivable turnover that makes the liquidity even more evident is its conversion into an **average collection period** in terms of days. This is done by dividing the turnover into 365 days. For example, Lenovo's turnover of 12.8 times is divided into 365 days, as shown in Illustration 8-18, to obtain approximately 28.5 days. This means that it takes Lenovo on average 28.5 days to collect its accounts receivable.

Days in Year	÷	Accounts Receivable Turnover	=	Average Collection Period in Days
365 days	÷	12.8 times	=	28.5 days

Illustration 8-18
Average collection period for receivables formula and computation

Companies frequently use the average collection period to assess the effectiveness of a company's credit and collection policies. The general rule is that the collection period should not greatly exceed the credit term period (that is, the time allowed for payment).

DO IT!

Analysis of Receivables

In 2017, Rafael Nadal SA has net credit sales of €923,795 for the year. It had a beginning accounts receivable (net) balance of €38,275 and an ending accounts receivable (net) balance of €35,988. Compute Rafael Nadal SA's (a) accounts receivable turnover and (b) average collection period in days.

Action Plan

✔ Review the formula to compute the accounts receivable turnover.

✔ Make sure that both the beginning and ending accounts receivable balances are considered in the computation.

✔ Review the formula to compute the average collection period in days.

Solution

(a)	Net credit sales	÷	Average net accounts receivable	=	Accounts receivable turnover
	€923,795	÷	$\frac{€38,275 + €35,988}{2}$	=	24.9 times
(b)	Days in year	÷	Accounts receivable turnover	=	Average collection period in days
	365	÷	24.9 times	=	14.7 days

Related exercise material: **BE8-12, E8-14, and DO IT! 8-5.**

✔ The Navigator

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 Identify the different types of receivables. Receivables are frequently classified as (1) accounts, (2) notes, and (3) other. Accounts receivable are amounts customers owe on account. Notes receivable are claims for which lenders issue formal instruments of credit as proof of the debt. Other receivables include non-trade receivables such as interest receivable, loans to company officers, advances to employees, and income taxes refundable.

2 Explain how companies recognize accounts receivable. Companies record accounts receivable when they perform a service on account or at the point of sale of merchandise on account. Accounts receivable are reduced by sales returns and allowances. Cash discounts reduce the amount received on accounts receivable. When interest is charged on a past due receivable, the company adds this interest to the accounts receivable balance and recognizes it as interest revenue.

3 Distinguish between the methods and bases companies use to value accounts receivable. There are two methods of accounting for uncollectible accounts: the allowance method and the direct write-off method. Companies may use either the percentage-of-sales or the percentage-of-receivables basis to estimate uncollectible accounts using the allowance method. The percentage-of-sales basis emphasizes the expense recognition (matching) principle. The percentage-of-receivables basis emphasizes the cash realizable value of the accounts receivable. An aging schedule is often used with this basis.

4 Describe the entries to record the disposition of accounts receivable. When a company collects an account receivable, it credits Accounts Receivable. When a company sells (factors) an account receivable, a service charge expense reduces the amount received.

5 Compute the maturity date of and interest on notes receivable. For a note stated in months, the maturity date is found by counting the months from the date of issue. For a note stated in days, the number of days is counted, omitting the issue date and counting the due date. The formula for computing interest is Face value × Interest rate × Time.

6 Explain how companies recognize notes receivable. Companies record notes receivable at face value. In some cases, it is necessary to accrue interest prior to maturity. In this case, companies debit Interest Receivable and credit Interest Revenue.

7 Describe how companies value notes receivable. As with accounts receivable, companies report notes receivable at their cash (net) realizable value. The notes receivable allowance account is Allowance for Doubtful Accounts. The computation and estimations involved in valuing notes receivable at cash realizable value, and in recording the proper amount of bad debt expense and related allowance, are similar to those for accounts receivable.

8 Describe the entries to record the disposition of notes receivable. Notes can be held to maturity. At that time the face value plus accrued interest is due, and the note is removed from the accounts. In many cases, the holder of the note speeds up the conversion by selling the receivable to another party (a factor). In some situations, the maker of the note dishonors the note (defaults), in which case the company transfers the note and accrued interest to an account receivable or writes off the note.

9 Explain the statement presentation and analysis of receivables. Companies should identify in the statement of financial position or in the notes to the financial statements each major type of receivable. Short-term receivables are considered current assets. Companies report the gross amount of receivables and the allowance for doubtful accounts. They report bad debt and service charge expenses in the income statement as operating (selling) expenses. Interest revenue appears under "Other income and expense" in the non-operating activities section of the statement. Managers and investors evaluate accounts receivable for liquidity by computing a turnover ratio and an average collection period.

GLOSSARY REVIEW

Accounts receivable Amounts owed by customers on account. (p. 384).

Accounts receivable turnover A measure of the liquidity of accounts receivable; computed by dividing net credit sales by average net accounts receivable. (p. 401).

Aging the accounts receivable The analysis of customer balances by the length of time they have been unpaid. (p. 391).

Allowance method A method of accounting for bad debts that involves estimating uncollectible accounts at the end of each period. (p. 387).

Average collection period The average amount of time that a receivable is outstanding; calculated by dividing 365 days by the accounts receivable turnover. (p. 401).

Bad Debt Expense An expense account to record uncollectible receivables. (p. 386).

Cash (net) realizable value The net amount a company expects to receive in cash. (p. 388).

Direct write-off method A method of accounting for bad debts that involves expensing accounts at the time they are determined to be uncollectible. (p. 387).

Dishonored (defaulted) note A note that is not paid in full at maturity. (p. 399).

Factor A finance company or bank that buys receivables from businesses and then collects the payments directly from the customers. (p. 393).

Maker The party in a promissory note who is making the promise to pay. (p. 395).

Notes receivable Written promise (as evidenced by a formal instrument) for amounts to be received. (p. 384).

Other receivables Various forms of non-trade receivables, such as interest receivable and income taxes refundable. (p. 384).

Payee The party to whom payment of a promissory note is to be made. (p. 395).

Percentage-of-receivables basis Management estimates what percentage of receivables will result in losses from uncollectible accounts. (p. 391).

Percentage-of-sales basis Management estimates what percentage of credit sales will be uncollectible. (p. 390).

Promissory note A written promise to pay a specified amount of money on demand or at a definite time. (p. 395).

Receivables Amounts due from individuals and other companies. (p. 384).

Trade receivables Notes and accounts receivable that result from sales transactions. (p. 384).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Receivables are frequently classified as:
(a) accounts receivable, company receivables, and other receivables.
(b) accounts receivable, notes receivable, and employee receivables.
(c) accounts receivable and general receivables.
(d) accounts receivable, notes receivable, and other receivables.

(LO 2) **2.** Buehler Company Ltd. on June 15 sells merchandise on account to Chaz Co. for HK$10,000, terms 2/10, n/30. On June 20, Chaz returns merchandise worth HK$3,000 to Buehler. On June 24, payment is received from Chaz for the balance due. What is the amount of cash received?
(a) HK$7,000. (c) HK$6,860.
(b) HK$6,800. (d) None of the above.

3. Which of the following approaches for bad debts is best described as a statement of financial position method? (LO 3)
(a) Percentage-of-receivables basis.
(b) Direct write-off method.
(c) Percentage-of-sales basis.
(d) Both percentage-of-receivables basis and direct write-off method.

(LO 3) **4.** Hughes plc has a credit balance of £5,000 in its Allowance for Doubtful Accounts before any adjustments are made at the end of the year. Based on review and aging of its accounts receivable at the end of the year, Hughes estimates that £60,000 of its receivables are uncollectible. The amount of bad debt expense which should be reported for the year is:

(a) £5,000. (c) £60,000.
(b) £55,000. (d) £65,000.

(LO 3) **5.** Use the same information as in Question 4, except that Hughes has a debit balance of £5,000 in its Allowance for Doubtful Accounts before any adjustments are made at the end of the year. In this situation, the amount of bad debt expense that should be reported for the year is:

(a) £5,000. (c) £60,000.
(b) £55,000. (d) £65,000.

(LO 3) **6.** Net sales for the month are ₩800,000,000 and bad debts are expected to be 1.5% of net sales. The company uses the percentage-of-sales basis. If Allowance for Doubtful Accounts has a credit balance of ₩15,000,000 before adjustment, what is the balance after adjustment?

(a) ₩15,000,000. (c) ₩23,000,000.
(b) ₩27,000,000. (d) ₩31,000,000.

(LO 3) **7.** In 2017, Roso Carlson Ltd. had net credit sales of NT$7,500,000. On January 1, 2017, Allowance for Doubtful Accounts had a credit balance of NT$180,000. During 2017, NT$300,000 of uncollectible accounts receivable were written off. Past experience indicates that 3% of net credit sales become uncollectible. What should be the adjusted balance of Allowance for Doubtful Accounts at December 31, 2017?

(a) NT$100,500. (c) NT$225,000.
(b) NT$105,000. (d) NT$405,000.

(LO 3) **8.** An analysis and aging of the accounts receivable of Prince Ltd. at December 31 reveals the following data.

Accounts receivable	£800,000
Allowance for doubtful accounts per books before adjustment	50,000
Amounts expected to become uncollectible	65,000

The cash realizable value of the accounts receivable at December 31, after adjustment, is:

(a) £685,000. (c) £800,000.
(b) £750,000. (d) £735,000.

(LO 4) **9.** Which of the following statements about Visa credit card sales is **incorrect**?

(a) The credit card issuer makes the credit investigation of the customer.
(b) The retailer is not involved in the collection process.
(c) Two parties are involved.
(d) The retailer receives cash more quickly than it would from individual customers on account.

(LO 4) **10.** Blinka Retailers accepted €50,000 of Citibank Visa credit card charges for merchandise sold on July 1. Citibank charges 4% for its credit card use. The entry to record this transaction by Blinka Retailers will include a credit to Sales Revenue of €50,000 and a debit(s) to:

(a) Cash €48,000
and Service Charge Expense € 2,000
(b) Accounts Receivable €48,000
and Service Charge Expense € 2,000
(c) Cash €50,000
(d) Accounts Receivable €50,000

11. One of the following statements about promissory notes is incorrect. The **incorrect** statement is: (LO 5)

(a) The party making the promise to pay is called the maker.
(b) The party to whom payment is to be made is called the payee.
(c) A promissory note is not a negotiable instrument.
(d) A promissory note is often required from high-risk customers.

12. Foti Co. accepts a $1,000, 3-month, 6% promissory note in settlement of an account with Bartelt Co. The entry to record this transaction is as follows. (LO 6)

(a)	Notes Receivable	1,015	
	Accounts Receivable		1,015
(b)	Notes Receivable	1,000	
	Accounts Receivable		1,000
(c)	Notes Receivable	1,000	
	Sales Revenue		1,000
(d)	Notes Receivable	1,030	
	Accounts Receivable		1,030

13. Ginter Co. Ltd. holds Kolar plc's €10,000, 120-day, 9% note. The entry made by Ginter when the note is collected, assuming no interest has been previously accrued, is: (LO 8)

(a)	Cash	10,300	
	Notes Receivable		10,300
(b)	Cash	10,000	
	Notes Receivable		10,000
(c)	Accounts Receivable	10,300	
	Notes Receivable		10,000
	Interest Revenue		300
(d)	Cash	10,300	
	Notes Receivable		10,000
	Interest Revenue		300

14. Accounts and notes receivable are reported in the current assets section of the statement of financial position at: (LO 9)

(a) cash (net) realizable value.
(b) net book value.
(c) lower-of-cost-or-net realizable value.
(d) invoice cost.

15. Oliveras Company Ltd. had net credit sales during the year of HK$8,000,000 and cost of goods sold of HK$5,000,000. The balance in accounts receivable at the beginning of the year was HK$1,000,000, and the end of the year it was HK$1,500,000. What were the accounts receivable turnover and the average collection period in days? (LO 9)

(a) 4.0 and 91.3 days.
(b) 5.3 and 68.9 days.
(c) 6.4 and 57 days.
(d) 8.0 and 45.6 days.

Solutions

1. (d) Receivables are frequently classified as accounts receivable, notes receivable, and other receivables. The other choices are incorrect because receivables are not frequently classified as (a) company receivables, (b) employee receivables, or (c) general receivables.

2. (c) Because payment is received within 10 days of the purchase, the cash received is HK$6,860 [[HK$10,000 − HK$3,000] − [(HK$10,000 − HK$3,000) × 2%)]]. The other choices are incorrect because (a) HK$7,000 does not consider the 2% discount; (b) the amount of the discount is based upon the amount after the return is granted (HK$7,000 × 2%), not the amount before the return of merchandise (HK$10,000 × 2%); and (d) there is a correct answer.

3. (a) The percentage-of-receivables basis is a statement of financial position method because it emphasizes the cash (net) realizable value of accounts receivable. The other choices are incorrect because (b) the direct write-off method is neither a statement of financial position nor an income statement method for accounting for bad debts, (c) the percentage-of-sales basis is an income statement method because it results in a better matching of expenses with revenues, and (d) only the percentage-of-receivables basis is a statement of financial position method, not the direct write-off method.

4. (b) By crediting Allowance for Doubtful Accounts for £55,000, the new balance will be the required balance of £60,000. This adjusting entry debits Bad Debt Expense for £55,000 and credits Allowance for Doubtful Accounts for £55,000, not (a) £5,000, (c) £60,000, or (d) £65,000.

5. (d) By crediting Allowance for Doubtful Accounts for £65,000, the new balance will be the required balance of £60,000. This adjusting entry debits Bad Debt Expense for £65,000 and credits Allowance for Doubtful Accounts for £65,000, not (a) £5,000, (b) £55,000, or (c) £60,000.

6. (b) Net sales times the percentage expected to default equals the amount of bad debt expense for the year (₩800,000,000 × 1.5% = ₩12,000,000). Because this adjusting entry credits Allowance for Doubtful Accounts, the balance after adjustment is ₩27,000,000 (₩15,000,000 + ₩12,000,000), not (a) ₩15,000,000 (c) ₩23,000,000 or (d) ₩31,000,000.

7. (b) The accounts written off during the year will result in a NT$300,000 debit to Allowance for Doubtful Accounts. The adjusting entry for bad debts will include a NT$225,000 credit (NT$7,500,000 × 3%) to Allowance for Doubtful Accounts. Combining the beginning balance of NT$18,000 credit, the NT$30,000 debit, and the NT$225,000 credit leaves a credit balance of NT$105,000 in the allowance account, not (a) NT$100,500, (c) NT$225,000, or (d) NT$405,000.

8. (d) Accounts Receivable less the expected uncollectible amount equals the cash realizable value of £735,000 (£800,000 − £65,000), not (a) £685,000, (b) £750,000, or (c) £800,000.

9. (c) There are three parties, not two, involved in Visa credit card sales: the credit card company, the retailer, and the customer. The other choices are true statements.

10. (a) Credit card sales are considered cash sales. Cash is debited €48,000 for the net amount received (€50,000 − €2,000 for credit card use fee), and Service Charge Expense is debited €2,000 for the 4% credit card use fee (€50,000 × 4%). The other choices are therefore incorrect.

11. (c) A promissory note is a negotiable instrument. The other choices are true statements.

12. (b) Notes Receivable is recorded at face value ($1,000). No interest on the note is recorded until it is earned. Accounts Receivable is credited because no new sales have been made. The other choices are therefore incorrect.

13. (d) Cash is debited for its maturity value [€10,000 + interest earned (€10,000 × 120/360 × 9%)], Notes Receivable credited for its face value, and Interest Revenue credited for the amount of interest earned. The other choices are therefore incorrect.

14. (a) Accounts Receivable is reported in the current assets section of the statement of financial position at the gross amount less the allowance for doubtful accounts, not at (b) net book value, (c) lower-of-cost-or-net realizable value, or (d) invoice cost.

15. (c) The accounts receivable turnover is 6.4 [HK$8,000/(HK$1,000 + HK$1,500)/2] (amounts in thousands). The average collection period in days is 57 days (365/6.4). The other choices are therefore incorrect.

PRACTICE EXERCISES

1. The ledger of J.C. Cobb Company at the end of the current year shows Accounts Receivable $150,000, Sales Revenue $850,000, and Sales Returns and Allowances $30,000.

Journalize entries to record allowance for doubtful accounts using two different bases.

(LO 3)

Instructions

(a) If J.C. Cobb uses the direct write-off method to account for uncollectible accounts, journalize the adjusting entry at December 31, assuming J.C. Cobb determines that M. Jack's $1,500 balance is uncollectible.

(b) If Allowance for Doubtful Accounts has a credit balance of $2,400 in the trial balance, journalize the adjusting entry at December 31, assuming bad debts are expected to be (1) 1.5% of net sales, and (2) 10% of accounts receivable.

(c) If Allowance for Doubtful Accounts has a debit balance of $200 in the trial balance, journalize the adjusting entry at December 31, assuming bad debts are expected to be (1) 0.75% of net sales and (2) 6% of accounts receivable.

Solution

1. (a)	Dec. 31	Bad Debt Expense	1,500	
		Accounts Receivable—M. Jack		1,500
(b) (1)	Dec. 31	Bad Debt Expense [($850,000 − $30,000) × 1.5%]	12,300	
		Allowance for Doubtful Accounts		12,300
(2)	Dec. 31	Bad Debt Expense	12,600	
		Allowance for Doubtful Accounts [($150,000 × 10%) − $2,400]		12,600
(c) (1)	Dec. 31	Bad Debt Expense [($850,000 − $30,000) × 0.75%]	6,150	
		Allowance for Doubtful Accounts		6,150
(2)	Dec. 31	Bad Debt Expense	9,200	
		Allowance for Doubtful Accounts [($150,000 × 6%) + $200]		9,200

Journalize entries for notes receivable transactions.

(LO 5, 6, 8)

2. Troope Supply SA has the following transactions related to notes receivable during the last 3 months of 2017.

Oct.	1	Loaned €16,000 cash to Juan Vasquez on a 1-year, 10% note.
Dec.	11	Sold goods to A. Palmer, A/S, receiving a €6,750, 90-day, 8% note.
	16	Received a €6,400, 30-day, 9% note in exchange for J. Nicholas's outstanding accounts receivable.
	31	Accrued interest revenue on all notes receivable.

Instructions

(a) Journalize the transactions for Troup Supply.
(b) Record the collection of the Vasquez note at its maturity in 2018.

Solution

2. (a)

	2017		
Oct. 1	Notes Receivable	16,000	
	Cash		16,000
Dec. 11	Notes Receivable	6,750	
	Sales Revenue		6,750
16	Notes Receivable	6,400	
	Accounts Receivable—Nicholas		6,400
31	Interest Receivable	454	
	Interest Revenue*		454

*Calculation of interest revenue:

Vasquez's note:	€16,000 ×	10% ×	3/12 =	€400
Palmer's note:	6,750 ×	8% ×	20/360 =	30
Nicholas's note:	6,400 ×	9% ×	15/360 =	24
Total accrued interest				€454

(b)

	2018		
Oct. 1	Cash	17,600	
	Interest Receivable		400
	Interest Revenue**		1,200
	Notes Receivable		16,000

**(€16,000 × 10% × 9/12)

PRACTICE PROBLEM

Prepare entries for various receivables transactions.
(LO 2, 3, 4)

The following selected transactions relate to Dylan plc.

Mar. 1	Sold £20,000 of merchandise to Potter plc, terms 2/10, n/30.
11	Received payment in full from Potter plc for balance due.
12	Accepted Juno Ltd.'s £20,000, 6-month, 12% note for balance due on existing accounts receivable.
13	Made Dylan plc credit card sales for £13,200.
15	Made Visa credit card sales totaling £6,700. A 3% service fee is charged by Visa.
Apr. 11	Sold accounts receivable of £8,000 to Harcot Factor. Harcot Factor assesses a service charge of 2% of the amount of receivables sold.
13	Received collections of £8,200 on Dylan plc credit card sales and added finance charges of 1.5% to the remaining balances.
May 10	Wrote off as uncollectible £16,000 of accounts receivable. Dylan uses the percentage-of-sales basis to estimate bad debts.
June 30	Credit sales recorded during the first 6 months total £2,000,000. The bad debt percentage is 1% of credit sales. At June 30, the balance in the allowance account is £3,500 before adjustment. The company prepares financial statements on a semiannual basis.
July 16	One of the accounts receivable written off in May was from J. Simon, who pays the amount due, £4,000, in full.

Instructions

Prepare the journal entries for the transactions.

Solution

Mar. 1	Accounts Receivable—Potter	20,000	
	Sales Revenue		20,000
	(To record sales on account)		
11	Cash	19,600	
	Sales Discounts (2% × £20,000)	400	
	Accounts Receivable—Potter		20,000
	(To record collection of accounts receivable)		
12	Notes Receivable	20,000	
	Accounts Receivable—Juno		20,000
	(To record acceptance of Juno Ltd. note)		
13	Accounts Receivable	13,200	
	Sales Revenue		13,200
	(To record company credit card sales)		
15	Cash	6,499	
	Service Charge Expense (3% × £6,700)	201	
	Sales Revenue		6,700
	(To record credit card sales)		
Apr. 11	Cash	7,840	
	Service Charge Expense (2% × £8,000)	160	
	Accounts Receivable		8,000
	(To record sale of receivables to factor)		
13	Cash	8,200	
	Accounts Receivable		8,200
	(To record collection of accounts receivable)		
	Accounts Receivable [(£13,200 − £8,200) × 1.5%]	75	
	Interest Revenue		75
	(To record interest on amount due)		
May 10	Allowance for Doubtful Accounts	16,000	
	Accounts Receivable		16,000
	(To record write-off of accounts receivable)		
June 30	Bad Debt Expense (£2,000,000 × 1%)	20,000	
	Allowance for Doubtful Accounts		20,000
	(To record estimate of uncollectible accounts)		

July 16	Accounts Receivable—J. Simon	4,000	
	Allowance for Doubtful Accounts		4,000
	(To reverse write-off of accounts receivable)		
	Cash	4,000	
	Accounts Receivable—J. Simon		4,000
	(To record collection of accounts receivable)		

QUESTIONS

1. What is the difference between an account receivable and a note receivable?
2. What are some common types of receivables other than accounts receivable and notes receivable?
3. Texaco Oil Company (USA) issues its own credit cards. Assume that Texaco charges you $40 interest on an unpaid balance. Prepare the journal entry that Texaco makes to record this revenue.
4. What are the essential features of the allowance method of accounting for bad debts?
5. Roger Holloway cannot understand why cash realizable value does not decrease when an uncollectible account is written off under the allowance method. Clarify this point for Roger Holloway.
6. Distinguish between the two bases that may be used in estimating uncollectible accounts.
7. Borke Ltd. has a credit balance of NT$320,000 in Allowance for Doubtful Accounts. The estimated bad debt expense under the percentage-of-sales basis is NT$370,000. The total estimated uncollectibles under the percentage-of-receivables basis is NT$580,000. Prepare the adjusting entry under each basis.
8. How are bad debts accounted for under the direct write-off method? What are the disadvantages of this method?
9. Freida ASA accepts both its own credit cards and national credit cards. What are the advantages of accepting both types of cards?
10. An article recently appeared in the *Wall Street Journal* indicating that companies are selling their receivables at a record rate. Why are companies selling their receivables?
11. WestSide Textiles decides to sell HK$8,000,000 of its accounts receivable to First Factors Ltd. First Factors assesses a service charge of 3% of the amount of receivables sold. Prepare the journal entry that WestSide Textiles makes to record this sale.
12. Your roommate is uncertain about the advantages of a promissory note. Compare the advantages of a note receivable with those of an account receivable.
13. How may the maturity date of a promissory note be stated?
14. Indicate the maturity date of each of the following promissory notes:

	Date of Note	Terms
(a)	March 13	one year after date of note
(b)	May 4	3 months after date
(c)	June 20	30 days after date
(d)	July 1	60 days after date

15. Compute the missing amounts for each of the following notes.

	Principal	Annual Interest Rate	Time	Total Interest
(a)	?	9%	120 days	€ 450
(b)	€30,000	10%	3 years	?
(c)	€60,000	?	5 months	€3,000
(d)	€45,000	8%	?	€1,200

16. In determining interest revenue, some financial institutions use 365 days per year and others use 360 days. Why might a financial institution use 360 days?
17. Jana Company dishonors a note at maturity. What are the options available to the lender?
18. General Motors Corporation (USA) has accounts receivable and notes receivable. How should the receivables be reported on the statement of financial position?
19. The accounts receivable turnover is 8.14, and average net accounts receivable during the period is £400,000. What is the amount of net credit sales for the period?

BRIEF EXERCISES

Identify different types of receivables.
(LO 1)

BE8-1 Presented below are three receivables transactions. Indicate whether these receivables are reported as accounts receivable, notes receivable, or other receivables on a statement of financial position.
(a) Sold merchandise on account for ₩64,000,000 to a customer.
(b) Received a promissory note of ₩57,000,000 for services performed.
(c) Advanced ₩8,000,000 to an employee.

BE8-2 Record the following transcriptions on the books of Galaxy Co.

Record basic accounts receivable transactions. (LO 2)

(a) On July 1, Galaxy Co. sold merchandise on account to Kingston Inc. for $17,200, terms 2/10, n/30.
(b) On July 8, Kingston Inc. returned merchandise worth $3,800 to Galaxy Co.
(c) On July 11, Kingston Inc. paid for the merchandise.

BE8-3 During its first year of operations, Energy Company SE had credit sales of €3,000,000; €600,000 remained uncollected at year-end. The credit manager estimates that €28,000 of these receivables will become uncollectible.

Prepare entry for allowance method and partial statement of financial position. (LO 3, 9)

(a) Prepare the journal entry to record the estimated uncollectibles.
(b) Prepare the current assets section of the statement of financial position for Energy Company. Assume that in addition to the receivables it has cash of €90,000, inventory of €118,000, and prepaid insurance of €7,500.

BE8-4 At the end of 2017, Endrun Ltd. has accounts receivable of £700,000 and an allowance for doubtful accounts of £54,000. On January 24, 2018, the company learns that its receivable from Marcello is not collectible, and management authorizes a write-off of £6,200.

Prepare entry for write-off; determine cash realizable value. (LO 3)

(a) Prepare the journal entry to record the write-off.
(b) What is the cash realizable value of the accounts receivable (1) before the write-off and (2) after the write-off?

BE8-5 Assume the same information as BE8-4. On March 4, 2018, Endrun Ltd. receives payment of £6,200 in full from Marcello. Prepare the journal entries to record this transaction.

Prepare entries for collection of bad debt write-off. (LO 3)

BE8-6 Hamblin Co. elects to use the percentage-of-sales basis in 2017 to record bad debt expense. It estimates that 2% of net credit sales will become uncollectible. Sales revenues are $800,000 for 2017, sales returns and allowances are $38,000, and the allowance for doubtful accounts has a credit balance of $9,000. Prepare the adjusting entry to record bad debt expense in 2017.

Prepare entry using percentage- of-sales method. (LO 3)

BE8-7 Shenzhen Ltd. uses the percentage-of-receivables basis to record bad debt expense. It estimates that 1% of accounts receivable will become uncollectible. Accounts receivable are £420,000 at the end of the year, and the allowance for doubtful accounts has a credit balance of £1,280.

Prepare entry using percentage-of-receivables method. (LO 3)

(a) Prepare the adjusting journal entry to record bad debt expense for the year.
(b) If the allowance for doubtful accounts had a debit balance of £740 instead of a credit balance of £1,280, determine the amount to be reported for bad debt expense.

BE8-8 Presented below are two independent transactions.

Prepare entries to dispose of accounts receivable. (LO 4)

(a) Fiesta Restaurant accepted a Visa card in payment of a €175 lunch bill. The bank charges a 4% fee. What entry should Fiesta make?
(b) St. Pierre AG sold its accounts receivable of €70,000. What entry should St. Pierre make, given a service charge of 3% on the amount of receivables sold?

BE8-9 Compute interest and find the maturity date for the following notes.

Compute interest and determine maturity dates on notes. (LO 5)

	Date of Note	Principal	Interest Rate (%)	Terms
(a)	June 10	£80,000	6%	60 days
(b)	July 14	£64,000	7%	90 days
(c)	April 27	£12,000	4%	75 days

BE8-10 Presented below are data on three promissory notes. Determine the missing amounts.

Determine maturity dates and compute interest and rates on notes. (LO 5)

	Date of Note	Terms	Maturity Date	Principal	Annual Interest Rate	Total Interest
(a)	April 1	60 days	?	€600,000	5%	?
(b)	July 2	30 days	?	90,000	?	€600
(c)	March 7	6 months	?	120,000	10%	?

BE8-11 On January 10, 2017, Wilfer Ltd. sold merchandise on account to Elgin Co. for HK$80,400, n/30. On February 9, Elgin Co. gave Wilfer Ltd. a 7% promissory note in settlement of this account. Prepare the journal entry to record the sale and the settlement of the account receivable.

Prepare entry for notes receivable exchanged for account receivable. (LO 6)

Compute ratios to analyze receivables.
(LO 9)

BE8-12 The financial statements of Minnesota Mining and Manufacturing Company (3M) (USA) report net sales of $20.0 billion. Accounts receivable (net) are $2.7 billion at the beginning of the year and $2.8 billion at the end of the year. Compute 3M's accounts receivable turnover. Compute 3M's average collection period for accounts receivable in days.

> DO IT! REVIEW

Prepare entries to recognize accounts receivable.
(LO 2)

DO IT! 8-1 On March 1, Lincoln sold merchandise on account to Amelia SA for €28,000, terms 1/10, net 45. On March 6, Amelia returns merchandise with a sales price of €1,000. On March 11, Lincoln receives payment from Amelia for the balance due. Prepare journal entries to record the March transactions on Lincoln's books. (You may ignore cost of goods sold entries and explanations.)

Prepare entry for uncollectible accounts.
(LO 3)

DO IT! 8-2 Amazon SA has been in business for several years. At the end of the current year, the ledger shows:

Accounts Receivable	R$ 310,000 Dr.
Sales Revenue	2,200,000 Cr.
Allowance for Doubtful Accounts	4,100 Cr.

Bad debts are estimated to be 4% of receivables. Prepare the entry to adjust Allowance for Doubtful Accounts.

Prepare entry for factored accounts.
(LO 4)

DO IT! 8-3 Paltrow Distributors is a growing company whose ability to raise capital has not been growing as quickly as its expanding assets and sales. Paltrow's local banker has indicated that the company cannot increase its borrowing for the foreseeable future. Paltrow's suppliers are demanding payment for goods acquired within 30 days of the invoice date, but Paltrow's customers are slow in paying for their purchases (60–90 days). As a result, Paltrow has a cash flow problem.

Paltrow needs £860,000 to cover next Friday's payroll. Its balance of outstanding accounts receivable totals £1,000,000. To alleviate this cash crunch, the company sells all of its accounts receivable (£1,000,000). Record the entry that Paltrow would make when it raises the needed cash. (Assume a 3% service charge.)

Prepare entries for notes receivable.
(LO 5, 8)

DO IT! 8-4 Karbon Wholesalers accepts from Bazaar Stores a €6,000, 4-month, 7% note dated May 10 in settlement of Bazaar's overdue account. (a) What is the maturity date of the note? (b) What is the entry made by Karbon at the maturity date, assuming Bazaar pays the note and interest in full at that time?

Compute ratios for receivables.
(LO 9)

DO IT! 8-5 In 2017, Lauren plc has net credit sales of £1,480,000 for the year. It had a beginning accounts receivable (net) balance of £112,000 and an ending accounts receivable (net) balance of £108,000. Compute Lauren plc's (a) accounts receivable turnover and (b) average collection period in days.

EXERCISES

Journalize entries related to accounts receivable.
(LO 2)

E8-1 Presented below are selected transactions of Federer AG. Federer sells in large quantities to other companies and also sells its product in a small retail outlet.

March	1	Sold merchandise on account to Lynda Co. for CHF3,800, terms 2/10, n/30.
	3	Lynda Co. returned merchandise worth CHF600 to Federer.
	9	Federer collected the amount due from Lynda Co. from the March 1 sale.
	15	Federer sold merchandise for CHF200 in its retail outlet. The customer used his Federer credit card.
	31	Federer added 1.5% monthly interest to the customer's credit card balance.

Instructions
Prepare journal entries for the transactions on page 410.

E8-2 Presented below are two independent situations.

Journalize entries for recognizing accounts receivable.
(LO 2)

(a) On January 6, Bennett Co. sells merchandise on account to Jackie Ltd. for £7,000, terms 2/10, n/30. On January 16, Jackie Ltd. pays the amount due. Prepare the entries on Bennett's books to record the sale and related collection.
(b) On January 10, Connor Bybee uses his Sheridan Co. credit card to purchase merchandise from Sheridan Co. for £9,000. On February 10, Bybee is billed for the amount due of £9,000. On February 12, Bybee pays £6,000 on the balance due. On March 10, Bybee is billed for the amount due, including interest at 2% per month on the unpaid balance as of February 12. Prepare the entries on Sheridan Co.'s books related to the transactions that occurred on January 10, February 12, and March 10.

E8-3 The ledger of Elburn ASA at the end of the current year shows Accounts Receivable €110,000, Sales Revenue €840,000, and Sales Returns and Allowances €28,000.

Journalize entries to record allowance for doubtful accounts using two different bases.
(LO 3)

Instructions
(a) If Elburn uses the direct write-off method to account for uncollectible accounts, journalize the adjusting entry at December 31, assuming Elburn determines that T. Thum's €1,500 balance is uncollectible.
(b) If Allowance for Doubtful Accounts has a credit balance of €2,500 in the trial balance, journalize the adjusting entry at December 31, assuming bad debts are expected to be (1) 1% of net sales, and (2) 10% of accounts receivable.
(c) If Allowance for Doubtful Accounts has a debit balance of €200 in the trial balance, journalize the adjusting entry at December 31, assuming bad debts are expected to be (1) 0.75% of net sales and (2) 6% of accounts receivable.

E8-4 Leland Ltd. has accounts receivable of £98,100 at March 31. Credit terms are 2/10, n/30. At March 31, Allowance for Doubtful Accounts has a credit balance of £900 prior to adjustment. The company uses the percentage-of-receivables basis for estimating uncollectible accounts. The company's estimate of bad debts is shown below.

Determine bad debt expense; prepare the adjusting entry for bad debt expense.
(LO 3)

Age of Accounts	Balance, March 31	Estimated Percentage Uncollectible
1–30 days	£65,000	2.0%
31–60 days	17,600	5.0%
61–90 days	8,500	30.0%
Over 90 days	7,000	50.0%
	£98,100	

Instructions
(a) Determine the total estimated uncollectibles.
(b) Prepare the adjusting entry at March 31 to record bad debt expense.

E8-5 At December 31, 2016, Crawford Ltd. had a credit balance of £15,000 in Allowance for Doubtful Accounts. During 2017, Crawford wrote off accounts totaling £14,100. One of those accounts (£1,800) was later collected. At December 31, 2017, an aging schedule indicated that the balance in Allowance for Doubtful Accounts should be £17,800.

Journalize write-off and recovery.
(LO 3)

Instructions
Prepare journal entries to record the 2017 transactions of Crawford Ltd.

E8-6 On December 31, 2016, Russell NV estimated that 2% of its net sales of €360,000 will become uncollectible. The company recorded this amount as an addition to Allowance for Doubtful Accounts. On May 11, 2017, Russell NV determined that the B. Vetter account was uncollectible and wrote off €1,100. On June 12, 2017, Vetter paid the amount previously written off.

Journalize percentage-of-sales basis, write-off, recovery.
(LO 3)

Instructions
Prepare the journal entries on December 31, 2016, May 11, 2017, and June 12, 2017.

E8-7 Presented below and on page 412 are two independent situations.

Journalize entries for the sale of accounts receivable.
(LO 4)

(a) On March 3, Pusan Appliances sells ₩620,000,000 of its receivables to Universal Factors Ltd. Universal Factors assesses a finance charge of 4% of the amount of receivables sold. Prepare the entry on Pusan Appliances' books to record the sale of the receivables.

(b) On May 10, Taejeon Ltd. sold merchandise for ₩3,200,000 and accepted the customer's America Bank MasterCard. America Bank charges a 5% service charge for credit card sales. Prepare the entry on Taejeon's books to record the sale of merchandise.

Journalize entries for credit card sales.
(LO 4)

E8-8 Presented below are two independent situations.

(a) On April 2, Julie Keiser uses her JCPenney Company credit card to purchase merchandise from a JCPenney store for $1,500. On May 1, Keiser is billed for the $1,500 amount due. Keiser pays $900 on the balance due on May 3. On June 1, Keiser receives a bill for the amount due, including interest at 1.0% per month on the unpaid balance as of May 3. Prepare the entries on JCPenney Co.'s books related to the transactions that occurred on April 2, May 3, and June 1.
(b) On July 4, Avalon Restaurant accepts a Visa card for a $200 dinner bill. Visa charges a 3% service fee. Prepare the entry on Avalon's books related to this transaction.

Journalize credit card sales.
(LO 4)

E8-9 Hong Kong Stores accepts both its own and national credit cards. During the year, the following selected summary transactions occurred.

Jan. 15	Made Hong Kong credit card sales totaling HK$17,000. (There were no balances prior to January 15.)
20	Made Visa credit card sales (service charge fee 2%) totaling HK$4,800.
Feb. 10	Collected HK$11,000 on Hong Kong credit card sales.
15	Added finance charges of 1.5% to Hong Kong credit card account balances.

Instructions
Journalize the transactions for Hong Kong Stores.

Journalize entries for notes receivable transactions.
(LO 5, 6)

E8-10 Reeves Supply plc has the following transactions related to notes receivable during the last 2 months of 2017. The company does not make entries to accrue interest except at December 31.

Nov. 1	Loaned £15,000 cash to Norma Jeanne on a 12-month, 9% note.
Dec. 11	Sold goods to Bob Sharbo, receiving a £6,750, 90-day, 8% note.
16	Received a £4,400, 180-day, 12% note in exchange for Richard Russo's outstanding accounts receivable.
31	Accrued interest revenue on all notes receivable.

Instructions
(a) Journalize the transactions for Reeves Supply.
(b) Record the collection of the Jeanne note at its maturity in 2018.

Journalize entries for notes receivable.
(LO 5, 6)

E8-11 Record the following transactions for Taylor Co. in the general journal.

2017

May 1	Received a €7,500, 12-month, 8% note in exchange for Len Monroe's outstanding accounts receivable.
Dec. 31	Accrued interest on the Monroe note.
Dec. 31	Closed the interest revenue account.

2018

May 1	Received principal plus interest on the Monroe note. (No interest has been accrued in 2018.)

Prepare entries for note receivable transactions.
(LO 5, 6, 8)

E8-12 Bieber Ltd. had the following select transactions.

May 1, 2017	Accepted Crane plc's 12-month, 12% note in settlement of a £16,000 account receivable.
July 1, 2017	Loaned £25,000 cash to Sam Howard on a 9-month, 10% note.
Dec. 31, 2017	Accrued interest on all notes receivable.
Apr. 1, 2018	Sam Howard dishonored its note; Bieber expects it will eventually collect.
May 1, 2018	Received principal plus interest on the Crane note.

Instructions
Prepare journal entries to record the transactions. Bieber prepares adjusting entries once a year on December 31.

E8-13 On May 2, Nanjing Ltd. lends ¥7,600,000 to Cortland Ltd., issuing a 3-month, 7% note. At the maturity date, August 2, Cortland indicates that it cannot pay.

Journalize entries for dishonor of notes receivable.

(LO 5, 8)

Instructions

(a) Prepare the entry to record the issuance of the note.
(b) Prepare the entry to record the dishonor of the note, assuming that Nanjing expects collection will occur.
(c) Prepare the entry to record the dishonor of the note, assuming that Nanjing does not expect collection in the future.

E8-14 Lashkova A/S had accounts receivable of €100,000 on January 1, 2017. The only transactions that affected accounts receivable during 2017 were net credit sales of €1,000,000, cash collections of €920,000, and accounts written off of €30,000.

Compute accounts receivable turnover and average collection period.

(LO 9)

Instructions

(a) Compute the ending balance of accounts receivable.
(b) Compute the accounts receivable turnover for 2017.
(c) Compute the average collection period in days.

PROBLEMS: SET A

P8-1A At December 31, 2016, Cafu SA reported the following information on its statement of financial position.

Prepare journal entries related to bad debt expense.

(LO 2, 3, 9)

Accounts receivable	R$960,000
Less: Allowance for doubtful accounts	66,000

During 2017, the company had the following transactions related to receivables.

1. Sales on account	R$3,315,000
2. Sales returns and allowances	50,000
3. Collections of accounts receivable	2,810,000
4. Write-offs of accounts receivable deemed uncollectible	88,000
5. Recovery of bad debts previously written off as uncollectible	29,000

Instructions

(a) Prepare the journal entries to record each of these five transactions. Assume that no cash discounts were taken on the collections of accounts receivable.
(b) Enter the January 1, 2017, balances in Accounts Receivable and Allowance for Doubtful Accounts, post the entries to the two accounts (use T-accounts), and determine the balances.
(c) Prepare the journal entry to record bad debt expense for 2017, assuming that an aging of accounts receivable indicates that expected bad debts are R$125,000.
(d) Compute the accounts receivable turnover for 2017, assuming the expected bad debt information presented in (c).

(b) Accounts receivable R$1,327,000
ADA R$7,000
(c) Bad debt expense R$118,000

P8-2A Information related to Hamilton plc for 2017 is summarized below.

Compute bad debt amounts.

(LO 3)

Total credit sales	£2,500,000
Accounts receivable at December 31	970,000
Bad debts written off	66,000

Instructions

(a) What amount of bad debt expense will Hamilton report if it uses the direct write-off method of accounting for bad debts?
(b) Assume that Hamilton estimates its bad debt expense to be 3% of credit sales. What amount of bad debt expense will Hamilton record if it has an Allowance for Doubtful Accounts credit balance of £4,000?
(c) Assume that Hamilton estimates its bad debt expense based on 7% of accounts receivable. What amount of bad debt expense will Hamilton record if it has an Allowance for Doubtful Accounts credit balance of £3,000?

(d) Assume the same facts as in (c), except that there is a £3,000 debit balance in Allowance for Doubtful Accounts. What amount of bad debt expense will Hamilton record?

(e) What is the weakness of the direct write-off method of reporting bad debt expense?

Journalize entries to record transactions related to bad debts.

(LO 3)

P8-3A Presented below is an aging schedule for Sycamore AG.

Worksheet.xls

	A	B	C	D	E	F	G
1				Number of Days Past Due			
2			Not				
3	**Customer**	**Total**	**Yet Due**	**1–30**	**31–60**	**61–90**	**Over 90**
4	Anders	€ 28,000		€12,000	€16,000		
5	Blake	40,000	€ 40,000				
6	Cyrs	57,000	16,000	6,000		€35,000	
7	De Jong	34,000					€34,000
8	Others	132,000	96,000	16,000	14,000		6,000
9		€291,000	€152,000	€34,000	€30,000	€35,000	€40,000
10	Estimated percentage uncollectible		2%	6%	10%	25%	60%
11	Total estimated bad debts	€ 40,830	€ 3,040	€ 2,040	€ 3,000	€ 8,750	€24,000
12							

At December 31, 2017, the unadjusted balance in Allowance for Doubtful Accounts is a credit of €9,200.

Instructions

(a) Bad debt expense €31,630

(a) Journalize and post the adjusting entry for bad debts at December 31, 2017.

(b) Journalize and post to the allowance account the following events and transactions in the year 2018.

(1) On March 31, a €1,000 customer balance originating in 2017 is judged uncollectible.

(2) On May 31, a check for €1,000 is received from the customer whose account was written off as uncollectible on March 31.

(c) Bad debt expense €32,700

(c) Journalize the adjusting entry for bad debts on December 31, 2018, assuming that the unadjusted balance in Allowance for Doubtful Accounts is a debit of €1,100 and the aging schedule indicates that total estimated bad debts will be €31,600.

Journalize transactions related to bad debts.

(LO 3)

P8-4A Hú Ltd. uses the allowance method to estimate uncollectible accounts receivable. The company produced the following aging of the accounts receivable at year-end.

Worksheet.xls

	A	B	C	D	E	F	G
1			Number of Days Outstanding				
2							
3		**Total**	**0–30**	**31–60**	**61–90**	**91–120**	**Over 120**
4	Accounts receivable	HK$193,000	HK$70,000	HK$46,000	HK$39,000	HK$23,000	HK$15,000
5	% uncollectible		1%	3%	5%	8%	10%
6	Estimated bad debts						
7							

Instructions

(a) Calculate the total estimated bad debts based on the information on page 414.

(b) Prepare the year-end adjusting journal entry to record the bad debts using the aged uncollectible accounts receivable determined in (a). Assume the current balance in Allowance for Doubtful Accounts is a HK$3,000 debit.

(c) Of the above accounts, HK$5,000 is determined to be specifically uncollectible. Prepare the journal entry to write off the uncollectible account.

(d) The company collects HK$5,000 subsequently on a specific account that had previously been determined to be uncollectible in (c). Prepare the journal entry(ies) necessary to restore the account and record the cash collection.

(e) Comment on how your answers to (a)–(d) would change if Hú Ltd. used 3% of **total** accounts receivable, rather than aging the accounts receivable. What are the advantages to the company of aging the accounts receivable rather than applying a percentage to total accounts receivable?

(a) Tot. est. bad debts HK$7,370

P8-5A At December 31, 2017, the trial balance of Roberto SpA contained the following amounts before adjustment.

Journalize entries to record transactions related to bad debts.

(LO 3)

	Debit	Credit
Accounts Receivable	€385,000	
Allowance for Doubtful Accounts		€ 800
Sales Revenue		918,000

Instructions

(a) Based on the information given, which method of accounting for bad debts is Roberto using—the direct write-off method or the allowance method? How can you tell?

(b) Prepare the adjusting entry at December 31, 2017, for bad debt expense under each of the following independent assumptions.
   (1) An aging schedule indicates that €12,400 of accounts receivable will be uncollectible.
   (2) The company estimates that 1% of sales will be uncollectible.

(b) (2) €9,180

(c) Repeat part (b) assuming that instead of a credit balance there is an €960 debit balance in Allowance for Doubtful Accounts.

(d) During the next month, January 2018, a €3,000 account receivable is written off as uncollectible. Prepare the journal entry to record the write-off.

(e) Repeat part (d) assuming that Roberto uses the direct write-off method instead of the allowance method in accounting for uncollectible accounts receivable.

(f) What type of account is Allowance for Doubtful Accounts? How does it affect how accounts receivable is reported on the statement of financial position at the end of the accounting period?

P8-6A Hilo Ltd. closes its books monthly. On September 30, selected ledger account balances are:

Prepare entries for various notes receivable transactions.

(LO 2, 4, 5, 8, 9)

Notes Receivable	£31,000
Interest Receivable	170

Notes Receivable include the following.

Date	Maker	Face	Term	Interest
Aug. 16	Demaster Ltd.	£ 8,000	60 days	8%
Aug. 25	Skinner Co.	9,000	60 days	10%
Sept. 30	Almer Ltd.	14,000	6 months	9%

Interest is computed using a 360-day year. During October, the following transactions were completed.

Oct. 7 Made sales of £6,300 on Hilo credit cards.
12 Made sales of £1,200 on MasterCard credit cards. The credit card service charge is 3%.
15 Added £460 to Hilo customer balance for finance charges on unpaid balances.
15 Received payment in full from Demaster Ltd. on the amount due.
24 Received notice that the Skinner note has been dishonored. (Assume that Skinner is expected to pay in the future.)

Instructions

(a) Journalize the October transactions and the October 31 adjusting entry for accrued interest receivable.

(b) Accounts receivable £15,910

(c) Total receivables £30,015

(b) Enter the balances at October 1 in the receivable accounts. Post the entries to all of the receivable accounts.

(c) Show the statement of financial position presentation of the receivable accounts at October 31.

Prepare entries for various receivable transactions.

(LO 2, 4, 5, 6, 7, 8)

P8-7A On January 1, 2017, Derek Co. had Accounts Receivable €139,000, Notes Receivable €30,000, and Allowance for Doubtful Accounts €13,200. The note receivable is from Kaye Noonan Ltd. It is a 4-month, 9% note dated December 31, 2016. Derek prepares financial statements annually at December 31. During the year, the following selected transactions occurred.

Jan.	5	Sold €24,000 of merchandise to Zwingle SE, terms n/15.
	20	Accepted Zwingle's €24,000, 3-month, 6% note for balance due.
Feb.	18	Sold €8,000 of merchandise to Gerard AG and accepted Gerard's €8,000, 6-month, 7% note for the amount due.
Apr.	20	Collected Zwingle note in full.
	30	Received payment in full from Kaye Noonan on the amount due.
May	25	Accepted Isabella Ltd.'s €4,000, 3-month, 7% note in settlement of a past-due balance on account.
Aug.	18	Received payment in full from Gerard on note due.
	25	The Isabella note was dishonored. Isabella is not bankrupt; future payment is anticipated.
Sept.	1	Sold €10,000 of merchandise to Fernando Co. and accepted a €10,000, 6-month, 8% note for the amount due.

Instructions

Journalize the transactions.

PROBLEMS: SET B

Prepare journal entries related to bad debt expense.

(LO 2, 3, 9)

P8-1B At December 31, 2016, Globe Trotter Imports reported the following information on its statement of financial position.

Accounts receivable	€220,000
Less: Allowance for doubtful accounts	15,000

During 2017, the company had the following transactions related to receivables.

1. Sales on account	€2,400,000
2. Sales returns and allowances	45,000
3. Collections of accounts receivable	2,250,000
4. Write-offs of accounts receivable deemed uncollectible	10,600
5. Recovery of bad debts previously written off as uncollectible	2,000

Instructions

(a) Prepare the journal entries to record each of these five transactions. Assume that no cash discounts were taken on the collections of accounts receivable.

(b) Accounts receivable €314,400
ADA €6,400

(c) Bad debt expense €15,000

(b) Enter the January 1, 2017, balances in Accounts Receivable and Allowance for Doubtful Accounts. Post the entries to the two accounts (use T-accounts), and determine the balances.

(c) Prepare the journal entry to record bad debt expense for 2017, assuming that an aging of accounts receivable indicates that estimated bad debts are €21,400.

(d) Compute the accounts receivable turnover for the year 2017, assuming the expected bad debt information presented in (c).

Compute bad debt amounts.

(LO 3)

P8-2B Information related to Izmir A.Ş. for 2017 is summarized below.

Total credit sales	₺920,000
Accounts receivable at December 31	369,000
Bad debts written off	23,400

Instructions

(a) What amount of bad debt expense will Izmir report if it uses the direct write-off method of accounting for bad debts?

(b) Assume that Izmir decides to estimate its bad debt expense to be 3% of credit sales. What amount of bad debt expense will Izmir record if Allowance for Doubtful Accounts has a credit balance of ₺3,000?

(c) Assume that Izmir decides to estimate its bad debt expense based on 7% of accounts receivable. What amount of bad debt expense will Izmir record if Allowance for Doubtful Accounts has a credit balance of ₺4,000?

(d) Assume the same facts as in (c), except that there is a ₺2,000 debit balance in Allowance for Doubtful Accounts. What amount of bad debt expense will Izmir record?

(e) What is the weakness of the direct write-off method of reporting bad debt expense?

Journalize entries to record transactions related to bad debts.

(LO 3)

P8-3B Presented below is an aging schedule for Garry Owen plc.

Worksheet.xls

	A	B	C	D	E	F	G
1				Number of Days Past Due			
2			Not				
3	**Customer**	**Total**	**Yet Due**	**1–30**	**31–60**	**61–90**	**Over 90**
4	Alma	£ 26,000		£11,500	£14,500		
5	Browne	45,000	£ 45,000				
6	Conlon	75,000	22,500	7,500		£45,000	
7	Dalton	57,000					£57,000
8	Others	189,000	138,000	22,500	19,500		9,000
9		£392,000	£205,500	£41,500	£34,000	£45,000	£66,000
10	Estimated percentage uncollectible		2%	6%	10%	25%	60%
11	Total estimated bad debts	£ 60,850	£ 4,110	£ 2,490	£ 3,400	£11,250	£39,600
12							

At December 31, 2017, the unadjusted balance in Allowance for Doubtful Accounts is a credit of £14,000.

Instructions

(a) Journalize and post the adjusting entry for bad debts at December 31, 2017.

(a) Bad debt expense £46,850

(b) Journalize and post to the allowance account the following events and transactions in the year 2018.

(1) March 1, a £1,900 customer balance originating in 2017 is judged uncollectible.

(2) May 1, a check for £1,900 is received from the customer whose account was written off as uncollectible on March 1.

(c) Journalize the adjusting entry for bad debts on December 31, 2018. Assume that the unadjusted balance in Allowance for Doubtful Accounts is a debit of £3,400, and the aging schedule indicates that total estimated bad debts will be £48,300.

(c) Bad debt expense £51,700

Journalize transactions related to bad debts.

(LO 3)

P8-4B The following represents selected information taken from a company's aging schedule to estimate uncollectible accounts receivable at year-end.

Worksheet.xls

	A	B	C	D	E	F	G
1			Number of Days Outstanding				
2							
3		**Total**	**0–30**	**31–60**	**61–90**	**91–120**	**Over 120**
4	Accounts receivable	CHF383,000	CHF220,000	CHF90,000	CHF40,000	CHF18,000	CHF15,000
5	% uncollectible		1%	3%	5%	8%	10%
6	Estimated bad debts						
7							

(a) Tot. est. bad debts CHF9,840

Instructions

(a) Calculate the total estimated bad debts based on the information on page 417.

(b) Prepare the year-end adjusting journal entry to record the bad debts using the allowance method and the aged uncollectible accounts receivable determined in (a). Assume the current balance in Allowance for Doubtful Accounts is a CHF1,600 credit.

(c) Of the above accounts, CHF1,100 is determined to be specifically uncollectible. Prepare the journal entry to write off the uncollectible accounts.

(d) The company subsequently collects CHF700 on a specific account that had previously been determined to be uncollectible in (c). Prepare the journal entry(ies) necessary to restore the account and record the cash collection.

(e) Explain how establishing an allowance account satisfies the expense recognition principle.

Journalize entries to record transactions related to bad debts.

(LO 3)

P8-5B At December 31, 2017, the trial balance of Mariette SA contained the following amounts before adjustment.

	Debit	Credit
Accounts Receivable	€250,000	
Allowance for Doubtful Accounts		€ 1,900
Sales Revenue		600,000

(a) (2) €12,000

Instructions

(a) Prepare the adjusting entry at December 31, 2017, to record bad debt expense under each of the following independent assumptions.
 (1) An aging schedule indicates that €13,800 of accounts receivable will be uncollectible.
 (2) The company estimates that 2% of sales will be uncollectible.

(b) Repeat part (a) assuming that instead of a credit balance, there is a €1,900 debit balance in Allowance for Doubtful Accounts.

(c) During the next month, January 2018, a €3,000 account receivable is written off as uncollectible. Prepare the journal entry to record the write-off.

(d) Repeat part (c) assuming that Mariette uses the direct write-off method instead of the allowance method in accounting for uncollectible accounts receivable.

(e) What are the advantages of using the allowance method in accounting for uncollectible accounts as compared to the direct write-off method?

Prepare entries for various notes receivable transactions.

(LO 2, 4, 5, 8, 9)

P8-6B Gehrig Co. closes its books monthly. On June 30, selected ledger account balances are:

Notes Receivable	€60,000
Interest Receivable	435

Notes Receivable include the following.

Date	Maker	Face	Term	Interest
May 16	Fulton Ltd.	€12,000	60 days	9%
May 25	Ascot Co.	30,000	60 days	10%
June 30	Trayer Corp.	18,000	6 months	12%

During July, the following transactions were completed.

July	5	Made sales of €7,200 on Gehrig Co. credit cards.
	14	Made sales of €1,300 on Visa credit cards. The credit card service charge is 3%.
	14	Added €510 to Gehrig Co. credit card customer balances for finance charges on unpaid balances.
	15	Received payment in full from Fulton Ltd. on the amount due.
	24	Received notice that the Ascot Co. note has been dishonored. (Assume that Ascot Co. is expected to pay in the future.)

Instructions

(a) Journalize the July transactions and the July 31 adjusting entry for accrued interest receivable. (Interest is computed using 360 days.)

(b) Accounts receivable €38,210

(c) Total receivables €56,390

(b) Enter the balances at July 1 in the receivable accounts. Post the entries to all of the receivable accounts.

(c) Show the statement of financial position presentation of the receivable accounts at July 31.

P8-7B On January 1, 2017, Valdez SA had Accounts Receivable €91,000 and Allowance for Doubtful Accounts €8,100. Valdez prepares financial statements annually at December 31. During the year, the following selected transactions occurred.

Prepare entries for various receivable transactions.

(LO 2, 4, 5, 6, 7, 8)

Jan.	5	Sold €8,400 of merchandise to Patrick Co., terms n/30.
Feb.	2	Accepted an €8,400, 4-month, 5% promissory note from Patrick for the balance due.
	12	Sold €13,500 of merchandise to Marguerite SA and accepted Marguerite's €13,500, 2-month, 6% note for the balance due.
	26	Sold €7,000 of merchandise to Felton Co., terms n/10.
Apr.	5	Accepted a €7,000, 3-month, 8% note from Felton Co. for the balance due.
	12	Collected Marguerite note in full.
June	2	Collected Patrick note in full.
July	5	Felton Co. dishonors its note of April 5. It is expected that Felton will eventually pay the amount owed.
	15	Sold €11,000 of merchandise to Planke Co. and accepted Planke's €11,000, 3-month, 8% note for the amount due.
Oct.	15	Planke Co.'s note was dishonored. Planke Co. is bankrupt, and there is no hope of future settlement.

Instructions

Journalize the transactions.

COMPREHENSIVE PROBLEM

CP8 Victoria Company, Ltd.'s statement of financial position at December 31, 2016, is presented below.

VICTORIA COMPANY, LTD.
Statement of Financial Position
December 31, 2016

Inventory	£ 9,400	Share capital—ordinary	£20,000
Accounts receivable	19,780	Retained earnings	12,730
Allowance for doubtful accounts	(800)	Accounts payable	8,750
Cash	13,100		£41,480
	£41,480		

During January 2017, the following transactions occurred. Victoria uses the perpetual inventory method.

Jan.	1	Victoria accepted a 4-month, 8% note from Leon plc in payment of Leon's £1,500 account.
	3	Victoria wrote off as uncollectible the accounts of Barker Ltd. (£450) and Elmo Co. (£330).
	8	Victoria purchased £17,200 of inventory on account.
	11	Victoria sold for £25,000 on account inventory that cost £17,500.
	15	Victoria sold inventory that cost £780 to Joe Haribo for £1,200. Haribo charged this amount on his Visa First Bank card. The service fee charged Victoria by First Bank is 3%.
	17	Victoria collected £22,900 from customers on account.
	21	Victoria paid £16,300 on accounts payable.
	24	Victoria received payment in full (£330) from Elmo on the account written off on January 3.
	27	Victoria purchased supplies for £1,400 cash.
	31	Victoria paid other operating expenses, £3,218.

Adjustment data:

1. Interest is recorded for the month on the note from January 1.
2. Bad debts are expected to be 5% of the January 31, 2017, accounts receivable.
3. A count of supplies on January 31, 2017, reveals that £470 remains unused.

Instructions

(You may want to set up T-accounts to determine ending balances.)

(a) Prepare journal entries for the transactions on page 419 and the adjusting entries. (Include entries for cost of goods sold using the perpetual system.)

(b) Prepare an adjusted trial balance at January 31, 2017.

(c) Prepare an income statement and a retained earnings statement for the month ending January 31, 2017, and a classified statement of financial position as of January 31, 2017.

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–7.)

MC8 One of Mei-ling's friends, Curtis Lesperance, runs a coffee shop where he sells specialty coffees and prepares and sells muffins and cookies. He is eager to buy one of Mei-ling's fine European mixers, which would enable him to make larger batches of muffins and cookies. However, Curtis cannot afford to pay for the mixer for at least 30 days. He asks Mei-ling if she would be willing to sell him the mixer on credit. Mei-ling comes to you for advice.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem

BYP8-1 CAF AG sells office equipment and supplies to many organizations in the city and surrounding area on contract terms of 2/10, n/30. In the past, over 75% of the credit customers have taken advantage of the discount by paying within 10 days of the invoice date.

The number of customers taking the full 30 days to pay has increased within the last year. Current indications are that less than 60% of the customers are now taking the discount. Bad debts as a percentage of gross credit sales have risen from the 2.5% provided in past years to about 4.5% in the current year.

The company's Finance Committee has requested more information on the collections of accounts receivable. The controller responded to this request with the report reproduced below.

CAF AG
Accounts Receivable Collections
May 31, 2017

The fact that some credit accounts will prove uncollectible is normal. Annual bad debt write-offs have been 2.5% of gross credit sales over the past 5 years. During the last fiscal year, this percentage increased to slightly less than 4.5%. The current Accounts Receivable balance is €1,400,000. The condition of this balance in terms of age and probability of collection is as follows.

Proportion of Total	Age Categories	Probability of Collection
60%	not yet due	98%
22%	less than 30 days past due	96%
9%	30 to 60 days past due	94%
5%	61 to 120 days past due	91%
2½%	121 to 180 days past due	75%
1½%	over 180 days past due	30%

Allowance for Doubtful Accounts had a credit balance of €29,500 on June 1, 2016. CAF has provided for a monthly bad debt expense accrual during the current fiscal year based on the assumption that 4.5% of gross credit sales will be uncollectible. Total gross credit sales for the 2016–2017 fiscal year amounted to €2,800,000. Write-offs of bad accounts during the year totaled €102,000.

Instructions

(a) Prepare an accounts receivable aging schedule for CAF using the age categories identified in the controller's report to the Finance Committee showing the following.
 (1) The amount of accounts receivable outstanding for each age category and in total.
 (2) The estimated amount that is uncollectible for each category and in total.

(b) Compute the amount of the year-end adjustment necessary to bring Allowance for Doubtful Accounts to the balance indicated by the age analysis. Then prepare the necessary journal entry to adjust the accounting records.

(c) In a recessionary environment with tight credit and high interest rates:
 (1) Identify steps CAF might consider to improve the accounts receivable situation.
 (2) Then evaluate each step identified in terms of the risks and costs involved.

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP8-2 Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C.

Instructions

(a) Based on the information in these financial statements, compute the following ratios for each company for the most recent fiscal year shown. (Assume all sales are credit sales and that all receivables are trade receivables.)
 (1) Accounts receivable turnover.
 (2) Average collection period for receivables.

(b) What conclusions about managing accounts receivable can you draw from these data?

Real-World Focus

BYP8-3 ***Purpose:*** To learn more about factoring from websites that provide factoring services.

Address: **www.comcapfactoring.com**

Steps: Go to the website, click on **Invoice Factoring**, and answer the following questions.

(a) What are some of the benefits of factoring?
(b) What is the range of the percentages of the typical discount rate?
(c) If a company factors its receivables, what percentage of the value of the receivables can it expect to receive from the factor in the form of cash, and how quickly will it receive the cash?

Critical Thinking

Decision-Making Across the Organization

BYP8-4 Hilda and Tim Piwek own Campus Fashions. From its inception, Campus Fashions has sold merchandise on either a cash or credit basis, but no credit cards have been accepted. During the past several months, the Piweks have begun to question their sales policies. First, they have lost some sales because of refusing to accept credit cards. Second, representatives of two metropolitan banks have been persuasive in almost convincing them to accept their national credit cards. One bank, City National Bank, has stated that its credit card fee is 4%.

The Piweks decide that they should determine the cost of carrying their own credit sales. From the accounting records of the past 3 years, they accumulate the following data.

	2017	**2016**	**2015**
Net credit sales	€500,000	€650,000	€400,000
Collection agency fees for slow-paying customers	2,450	2,500	2,300
Salary of part-time accounts receivable clerk	4,100	4,100	4,100

Credit and collection expenses as a percentage of net credit sales are uncollectible accounts 1.6%, billing and mailing costs 0.5%, and credit investigation fee on new customers 0.15%.

Hilda and Tim also determine that the average accounts receivable balance outstanding during the year is 5% of net credit sales. The Piweks estimate that they could earn an average of 8% annually on cash invested in other business opportunities.

Instructions

With the class divided into groups, answer the following.

(a) Prepare a table showing, for each year, total credit and collection expenses in euros and as a percentage of net credit sales.

(b) Determine the net credit and collection expense in euros and as a percentage of sales after considering the revenue not earned from other investment opportunities.

(c) Discuss both the financial and non-financial factors that are relevant to the decision.

Communication Activity

BYP8-5 Lily Pao, a friend of yours, overheard a discussion at work about changes her employer wants to make in accounting for uncollectible accounts. Lily knows little about accounting, and she asks you to help make sense of what she heard. Specifically, she asks you to explain the differences between the percentage-of-sales, percentage-of-receivables, and the direct write-off methods for uncollectible accounts.

Instructions

In a letter of one page (or less), explain to Lily the three methods of accounting for uncollectibles. Be sure to discuss differences among these methods.

Ethics Case

BYP8-6 The controller of Vestin Co. believes that the yearly allowance for doubtful accounts for Vestin Co. should be 2% of net credit sales. The president of Vestin Co., nervous that the shareholders might expect the company to sustain its 10% growth rate, suggests that the controller increase the allowance for doubtful accounts to 4%. The president thinks that the lower net income, which reflects a 6% growth rate, will be a more sustainable rate for Vestin Co.

Instructions

(a) Who are the stakeholders in this case?

(b) Does the president's request pose an ethical dilemma for the controller?

(c) Should the controller be concerned with Vestin Co.'s growth rate? Explain your answer.

Answers to Insight and Accounting Across the Organization Questions

p. 394 How Does a Credit Card Work? Q: Assume that PPR prepares a bank reconciliation at the end of each month. If some credit card sales have not been processed by the bank, how should PPR treat these transactions on its bank reconciliation? **A:** PPR would treat the credit card receipts as deposits in transit. It has already recorded the receipts as cash. Its bank will increase PPR's cash account when it receives the receipts.

p. 398 Can Fair Value Be Unfair? Q: What are the arguments in favor of and against fair value accounting for loans and receivables? **A:** Arguments in favor of fair value accounting for loans and receivables are that fair value would provide a more accurate view of a company's financial position. This might provide a useful early warning of when a bank or other financial institution was in trouble because its loans were of poor quality. But, banks argue that estimating fair values is very difficult to do accurately. They are also concerned that volatile fair values could cause large swings in a bank's reported net income.

p. 400 Filling a Lending Void Q: Why do you suppose the company prefers to extend credit supported by receivables rather than intangible assets? **A:** Receivables are much more liquid in nature, that is, much easier to convert to cash. Intangible assets (such as patents) do not tend to have a readily available market for sale and thus would be much more difficult to convert to cash in the event of a default by the borrower.

A Look at U.S. GAAP

Learning Objective 10

Compare the accounting for receivables under IFRS and U.S. GAAP.

The basic accounting and reporting issues related to recognition and measurement of receivables, such as the use of allowance accounts, how to record trade and sales discounts, use of percentage-of-sales and percentage-of-receivables methods, and factoring, are essentially the same under both IFRS and GAAP.

Key Points

- Receivables are generally reported in the current assets section of the statement of financial position (balance sheet) under GAAP and IFRS. However, companies that use GAAP report receivables in the current assets section generally after cash, based on liquidity. IFRS often does not use liquidity as a basis for placement in the current assets section. As a result, receivables are often reported after inventory and other current assets except for cash.
- Like the IASB, the FASB has worked to implement fair value measurement for all financial instruments, but both Boards have faced bitter opposition from various factions. As a consequence, the Boards have adopted a piecemeal approach; the first step is disclosure of fair value information in the notes. The second step is the fair value option, which permits, but does not require, companies to record some types of financial instruments at fair value in the financial statements. Both Boards have indicated that they believe all financial instruments should be recorded and reported at fair value.
- Recently, the FASB and IASB completed a project on how to measure fair value. The project, however, was silent on when to report fair value.

Similarities

- GAAP and IFRS account for bad debts in a similar fashion. Both account for short-term receivables at amortized cost, adjusted for allowances for doubtful accounts.

Differences

- IFRS and GAAP differ in the criteria used to derecognize (generally through a sale or factoring) a receivable. IFRS uses a combination approach focused on risks and rewards and loss of control. GAAP uses loss of control as the primary criterion. In addition, IFRS permits partial derecognition; GAAP does not.
- IFRS specifies a two-step process for determining the impairment of receivables for a period. This process starts by identifying individual impairments of specific receivables and then estimating impairments of groups of receivables. GAAP does not specify a similar approach.

Looking to the Future

It appears likely that the question of recording fair values for financial instruments will continue to be an important issue to resolve as the Boards work toward convergence. Both the IASB and the FASB have indicated that they believe that financial statements would be more transparent and understandable if companies recorded and reported all financial instruments at fair value.

That said, in *IFRS 9,* which was issued in 2009, the IASB created a split model, where some financial instruments are recorded at fair value, but other financial assets, such as loans and receivables, can be accounted for at amortized cost if certain criteria are met. Critics say that this can result in two companies with identical securities accounting for those securities in different ways. A proposal by the FASB would require that practically all equity instruments be reported at fair value and that debt instruments may or may not be reported at fair value, depending on whether certain criteria are met. It has been suggested that *IFRS 9* will likely be changed or replaced as the FASB and IASB continue to deliberate the best treatment for financial instruments. In fact, one past member of the IASB said that companies should ignore *IFRS 9* and continue to report under the old standard because, in his opinion, it was extremely likely that it would be changed before the mandatory adoption date of the standard.

GAAP Practice

GAAP Self-Test Questions

1. Under GAAP, receivables are reported on the balance sheet at:
   (a) amortized cost.
   (b) amortized cost less allowance for doubtful accounts.
   (c) historical cost.
   (d) replacement cost.

2. Which of the following statements is **false**?
   (a) Receivables include equity securities purchased by the company.
   (b) Receivables include credit card receivables.
   (c) Receivables include amounts owed by employees as a result of company loans to employees.
   (d) Receivables include amounts resulting from transactions with customers.

3. In recording a factoring transaction:
   (a) IFRS focuses on loss of control.
   (b) GAAP focuses on loss of control and risks and rewards.
   (c) IFRS and GAAP allow partial derecognition.
   (d) IFRS allows partial derecognition.

4. Under IFRS:
   (a) the entry to record estimated uncollectible accounts is the same as GAAP.
   (b) receivables should only be tested for impairment as a group.
   (c) it is always acceptable to use the direct write-off method.
   (d) all financial instruments are recorded at fair value.

5. Which of the following statements is **true**?
   (a) The fair value option requires that some types of financial instruments be recorded at fair value.
   (b) The fair value option requires that some types of financial instruments be recorded at amortized cost.
   (c) The fair value option allows, but does not require, that some types of financial instruments be recorded at fair value.
   (d) The FASB and IASB would like to reduce the reliance on fair value accounting for financial instruments in the future.

GAAP Exercise

GAAP8-1 What are some steps taken by both the FASB and IASB to move to fair value measurement for financial instruments? In what ways have some of the approaches differed?

GAAP Financial Reporting Problem: Apple Inc.

GAAP8-2 The financial statements of Apple are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions

Use the company's financial statements and notes to the financial statements to answer the following questions.

(a) Calculate the accounts receivable turnover and average collection period for 2013 and 2012. Accounts receivable at September 25, 2011, was $5,369 (in millions).

(b) What conclusions can you draw from the information in part (a)?

Answers to GAAP Self-Test Questions

1. b **2.** a **3.** d **4.** a **5.** c

✔ The Navigator

✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER 9

Plant Assets, Natural Resources, and Intangible Assets

FEATURE STORY How Much for a Ride to the Beach?

It's summer vacation. Your plane has landed, you've finally found your bags, and you're dying to hit the Tylösand beach in Halmstad, Sweden—but first you need a "vehicular unit" to get you there. As you turn away from baggage claim, you see a long row of rental agency booths. First, you see booths for Hertz (USA) and Europcar (FRA). Then, a booth at the far end catches your eye—Rent-A-Wreck (USA). Now there's a company making a clear statement!

Any company that relies on equipment to generate revenues must make decisions about what kind of equipment to buy, how long to keep it, and how vigorously to maintain it. Rent-A-Wreck has decided to rent used rather than new cars and trucks. While Europcar emphasizes that all its vehicles are new, Rent-A-Wreck competes on price.

Rent-A-Wreck's message is simple: Rent a used car and save some cash. It's not a message that appeals to everyone. If you're a marketing executive wanting to impress a big client, you might choose Europcar instead of Rent-A-Wreck. But if you want to get from point A to point B for the minimum cash per mile, then Rent-A-Wreck is playing your tune. The company's message seems to be getting across to the right clientele. Revenues have increased significantly.

When you rent a car from Rent-A-Wreck or from Europcar, you are renting from an independent businessperson. This owner has paid a "franchise fee" for the right to use the Rent-A-Wreck or Europcar name. In order to gain a franchise, he or she must meet financial and other criteria, and must agree to run the rental agency according to prescribed rules. Some of these rules require that each franchise maintain its cars in a reasonable fashion. This ensures that, though you won't be cruising up to the Hotel Tylösand in a Mercedes convertible, you can be reasonably assured that you won't be calling a towtruck.

✔ The Navigator

- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 453–459
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problems
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Describe how the historical cost principle applies to plant assets.
2. Explain the concept of depreciation and how to compute it.
3. Distinguish between revenue and capital expenditures, and explain the entries for each.
4. Explain how to account for the disposal of a plant asset.
5. Compute periodic depletion of extractable natural resources.
6. Explain the basic issues related to accounting for intangible assets.
7. Indicate how plant assets, natural resources, and intangible assets are reported.

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David Trood/Getty Images, Inc.

PREVIEW OF CHAPTER 9

The accounting for non-current assets has important implications for a company's reported results. In this chapter, we explain the application of the historical cost principle of accounting to property, plant, and equipment, such as Rent-A-Wreck or Europcar vehicles, as well as to natural resources and intangible assets, such as the "Europcar" trademark. We also describe the methods that companies may use to allocate an asset's cost over its useful life. In addition, we discuss the accounting for expenditures incurred during the useful life of assets, such as the cost of replacing tires and brake pads on rental cars.

The content and organization of Chapter 9 are as follows.

PLANT ASSETS, NATURAL RESOURCES, AND INTANGIBLE ASSETS

Plant Assets	Extractable Natural Resources	Intangible Assets	Statement Presentation and Analysis
• Determining the cost of plant assets • Depreciation • Revaluation of plant assets • Expenditures during useful life • Plant asset disposals	• Depletion	• Accounting for intangibles • Research and development costs	• Presentation • Analysis

✔ The Navigator

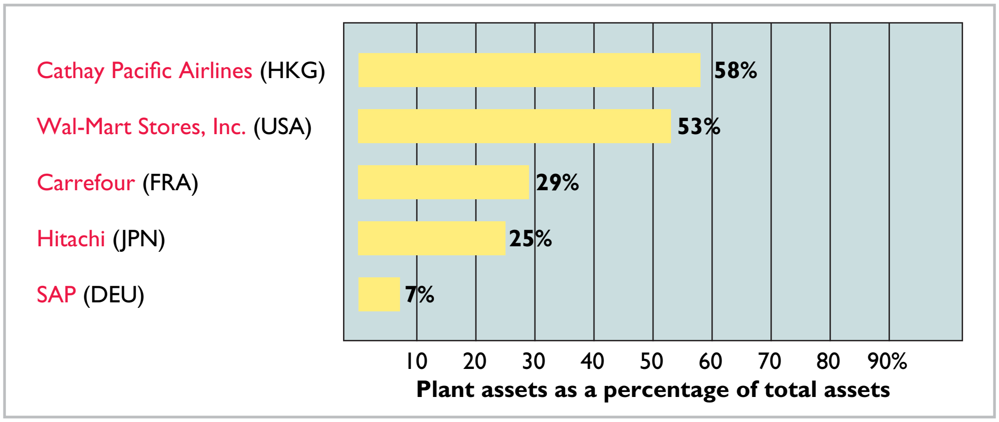
Plant Assets

Learning Objective 1
Describe how the historical cost principle applies to plant assets.

Plant assets are resources that have three characteristics. They have a physical substance (a definite size and shape), are used in the operations of a business, and are not intended for sale to customers. They are also called **property, plant, and equipment**; **plant and equipment**; and **fixed assets**. These assets are expected to be of use to the company for a number of years. Except for land, plant assets decline in service potential over their useful lives.

Because plant assets play a key role in ongoing operations, companies keep plant assets in good operating condition. They also replace worn-out or outdated plant assets, and expand productive resources as needed. Many companies have substantial investments in plant assets. Illustration 9-1 shows the percentages of plant assets in relation to total assets of companies in a number of industries during a recent year.

Illustration 9-1
Percentages of plant assets in relation to total assets



Determining the Cost of Plant Assets

The historical cost principle requires that companies record plant assets at cost. Thus, Europcar (FRA) records its vehicles at cost. **Cost consists of all expenditures necessary to acquire the asset and make it ready for its intended use.** For example, the cost of factory machinery includes the purchase price, freight costs paid by the purchaser, and installation costs. Once cost is established, the company generally uses that amount as the basis of accounting for the plant asset over its useful life.

In the following sections, we explain the application of the historical cost principle to each of the major classes of plant assets.

LAND

Companies often use **land** as a site for a manufacturing plant or office building. The cost of land includes (1) the cash purchase price, (2) closing costs such as title and attorney's fees, (3) real estate brokers' commissions, and (4) accrued property taxes and other liens assumed by the purchaser. For example, if the cash price is $50,000 and the purchaser agrees to pay accrued taxes of $5,000, the cost of the land is $55,000.

Companies record as debits (increases) to the Land account all necessary costs incurred to make land **ready for its intended use**. When a company acquires vacant land, these costs include expenditures for clearing, draining, filling, and grading. Sometimes, the land has a building on it that must be removed before construction of a new building. In this case, the company debits to the Land account all demolition and removal costs, less any proceeds from salvaged materials.

• HELPFUL HINT
Management's intended use is important in applying the historical cost principle to plant assets.

To illustrate, assume that Lew Company Ltd. acquires real estate at a cash cost of HK$2,000,000. The property contains an old warehouse that is razed at a net cost of HK$60,000 (HK$75,000 in costs less HK$15,000 proceeds from salvaged materials). Additional expenditures are the attorney's fee, HK$10,000, and the real estate broker's commission, HK$80,000. The cost of the land is HK$2,150,000, as computed in Illustration 9-2.

Illustration 9-2
Computation of cost of land

Land	
Cash price of property	HK$ 2,000,000
Net removal cost of warehouse (HK$75,000 − HK$15,000)	60,000
Attorney's fee	10,000
Real estate broker's commission	80,000
Cost of land	**HK$2,150,000**

Lew makes the following entry to record the acquisition of the land.

Land	2,150,000	
Cash		2,150,000
(To record purchase of land)		

A	=	L	+	E
+2,150,000				
−2,150,000				

Cash Flows
−2,150,000

LAND IMPROVEMENTS

Land improvements are structural additions made to land. Examples are driveways, parking lots, fences, landscaping, and underground sprinklers. The cost of land improvements includes all expenditures necessary to make the improvements ready for their intended use. For example, the cost of a new parking lot for a Hero Supermarket (IDN) includes the amount paid for paving, fencing, and lighting. Thus, Hero Supermarket debits to Land Improvements the total of all of these costs.

Land improvements have limited useful lives. Even when well-maintained, they will eventually be replaced. As a result, companies expense (depreciate) the cost of land improvements over their useful lives.

BUILDINGS

Buildings are facilities used in operations, such as stores, offices, factories, warehouses, and airplane hangars. Companies debit to the Buildings account all necessary expenditures related to the purchase or construction of a building. When a building is **purchased**, such costs include the purchase price, closing costs (attorney's fees, title insurance, etc.), and the real estate broker's commission. Costs to make the building ready for its intended use include expenditures for remodeling and replacing or repairing the roof, floors, electrical wiring, and plumbing. When a new building is **constructed**, costs consist of the contract price plus payments for architects' fees, building permits, and excavation costs.

In addition, companies charge certain interest costs to the Buildings account. Interest costs incurred to finance the project are included in the cost of the building when a significant period of time is required to get the building ready for use. In these circumstances, interest costs are considered as necessary as materials and labor. However, the inclusion of interest costs in the cost of a constructed building is **limited to the construction period**. When construction has been completed, the company records subsequent interest payments on funds borrowed to finance the construction as debits (increases) to Interest Expense.

EQUIPMENT

Equipment includes assets used in operations, such as store check-out counters, office furniture, factory machinery, delivery trucks, and airplanes. The cost of equipment, such as Europcar vehicles, consists of the cash purchase price, sales taxes, freight charges, and insurance during transit paid by the purchaser. It also includes expenditures required in assembling, installing, and testing the unit. However, Europcar does not include motor vehicle licenses and accident insurance on company vehicles in the cost of equipment. These costs represent annual recurring expenditures and do not benefit future periods. Thus, they are treated as **expenses** as they are incurred.

To illustrate, assume Zhang Company Ltd. purchases factory machinery at a cash price of HK$500,000. Related expenditures are for sales taxes HK$30,000, insurance during shipping HK$5,000, and installation and testing HK$10,000. The cost of the factory machinery is HK$545,000, computed in Illustration 9-3.

Illustration 9-3
Computation of cost of factory machinery

Factory Machinery	
Cash price	HK$ 500,000
Sales taxes	30,000
Insurance during shipping	5,000
Installation and testing	10,000
Cost of factory machinery	**HK$545,000**

Zhang makes the following summary entry to record the purchase and related expenditures.

A	=	L	+	E
+545,000				
−545,000				

Cash Flows
−545,000

Equipment	545,000	
Cash		545,000
(To record purchase of factory machinery)		

For another example, assume that Huang Company purchases a delivery truck at a cash price of HK$420,000. Related expenditures consist of sales taxes HK$13,200, painting and lettering HK$5,000, motor vehicle license HK$800, and a three-year accident insurance policy HK$16,000. The cost of the delivery truck is HK$438,200, computed as follows.

Illustration 9-4
Computation of cost of delivery truck

Delivery Truck	
Cash price	HK$ 420,000
Sales taxes	13,200
Painting and lettering	5,000
Cost of delivery truck	**HK$438,200**

Huang treats the cost of the motor vehicle license as an expense and the cost of the insurance policy as a prepaid asset. Thus, Huang makes the following entry to record the purchase of the truck and related expenditures:

A	=	L	+	E
+438,200				
				−800 Exp
+ 16,000				
−455,000				

Cash Flows
−455,000

Equipment	438,200	
License Expense	800	
Prepaid Insurance	16,000	
Cash		455,000
(To record purchase of delivery truck and related expenditures)		

Accounting Across the Organization **Many Firms Use Leases**


© Brian Raisbeck/iStockphoto

Leasing is big business. Who does the most leasing? AWAS (IRL), J.P. Morgan Leasing (USA), and ICBC (CHN) are major lessors. Also, many companies have established separate leasing companies, such as Boeing Capital Corporation (USA), Mitsubishi Heavy Industries (JPN), and John Deere Capital Corporation (USA). And, as an excellent example of the magnitude of leasing, leased planes account for a high percentage of commercial airlines. Leasing is also becoming more common in the hotel industry. Marriott (USA), Hilton (USA), and InterContinental (GBR) are increasingly choosing to lease hotels that are owned by someone else.

Q Why might airline managers choose to lease rather than purchase their planes? (See page 476.)

> DO IT!

Cost of Plant Assets

Assume that Jing Feng Heating and Cooling Co. purchases a delivery truck for ¥150,000 cash, plus sales taxes of ¥9,000 and delivery costs of ¥5,000. The buyer also pays ¥2,000 for painting and lettering, ¥6,000 for an annual insurance policy, and ¥800 for a motor vehicle license. Explain how each of these costs would be accounted for.

Action Plan

✔ Identify expenditures made in order to get delivery equipment ready for its intended use.

✔ Treat operating costs as expenses.

Solution

The first four payments (¥150,000, ¥9,000, ¥5,000, and ¥2,000) are expenditures necessary to make the truck ready for its intended use. Thus, the cost of the truck is ¥166,000. The payments for insurance and the license are operating costs and therefore are expensed.

Related exercise material: **BE9-1, BE9-2, E9-1, E9-2, E9-3, and DO IT! 9-1.**

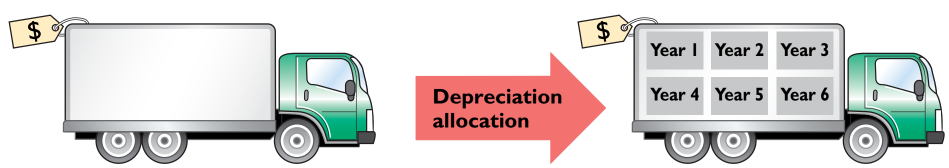
✔ The Navigator

Depreciation

Learning Objective 2
Explain the concept of depreciation and how to compute it.

As explained in Chapter 3, **depreciation is the process of allocating to expense the cost of a plant asset over its useful (service) life in a rational and systematic manner**. Cost allocation enables companies to properly match expenses with revenues in accordance with the expense recognition principle, as shown in Illustration 9-5.

Illustration 9-5
Depreciation as a cost allocation concept



It is important to understand that **depreciation is a process of cost allocation**. **It is not a process of asset valuation.** No attempt is made to measure the change in an asset's fair value during ownership. So, the **book value** (cost less accumulated depreciation) of a plant asset may be quite different from its fair value. In fact, if an asset is fully depreciated, it can have a zero book value but still have a positive fair value.

> **Ethics Note**
>
> When a business is acquired, proper allocation of the purchase price to various asset classes is important since different depreciation treatments can materially affect income. For example, buildings are depreciated, but land is not.

Depreciation applies to three classes of plant assets: land improvements, buildings, and equipment. Each asset in these classes is considered to be a **depreciable asset**. Why? Because the usefulness to the company and revenue-producing ability of each asset will decline over the asset's useful life. Depreciation **does not apply to land** because its usefulness and revenue-producing ability generally remain intact over time. In fact, in many cases, the usefulness of land is greater over time because of the scarcity of good land sites. Thus, **land is not a depreciable asset**.

During a depreciable asset's useful life, its revenue-producing ability declines because of **wear and tear**. A delivery truck that has been driven 100,000 miles will be less useful to a company than one driven only 800 miles.

Revenue-producing ability may also decline because of obsolescence. **Obsolescence** is the process of becoming out of date before the asset physically wears out. For example, major airlines moved from Chicago's Midway Airport to Chicago-O'Hare International Airport because Midway's runways were too short for jumbo jets. Similarly, many companies replace their computers long before they originally planned to do so because technological improvements make the old computers obsolete.

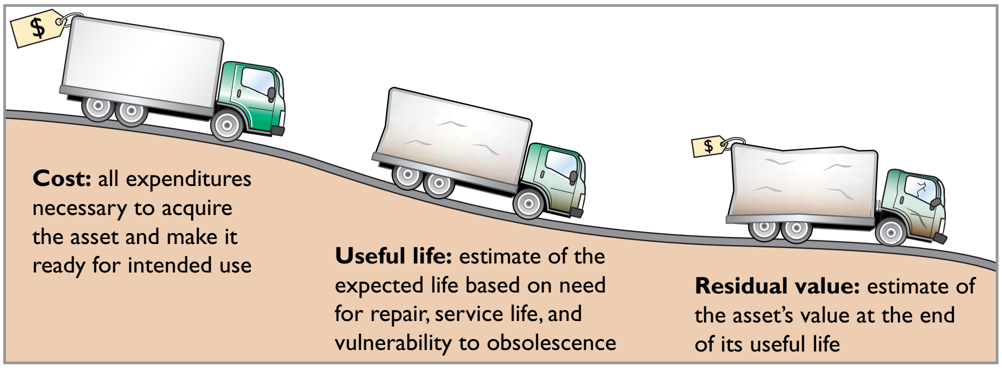
Recognizing depreciation on an asset does not result in an accumulation of cash for replacement of the asset. The balance in Accumulated Depreciation represents the total amount of the asset's cost that the company has charged to expense. It is not a cash fund.

Note that the concept of depreciation is consistent with the going concern assumption. The **going concern assumption** states that the company will continue in operation for the foreseeable future. If a company does not use a going concern assumption, then plant assets should be stated at their fair value. In that case, depreciation of these assets is not needed.

FACTORS IN COMPUTING DEPRECIATION

Three factors affect the computation of depreciation, as shown in Illustration 9-6.

Illustration 9-6
Three factors in computing depreciation



> **• HELPFUL HINT**
> Depreciation expense is reported on the income statement. Accumulated depreciation is reported on the statement of financial position as a deduction from plant assets.

1. **Cost.** Earlier, we explained the issues affecting the cost of a depreciable asset. Recall that companies record plant assets at cost, in accordance with the historical cost principle.
2. **Useful life.** **Useful life** is an estimate of the expected productive life, also called service life, of the asset for its owner. Useful life may be expressed in terms of time, units of activity (such as machine hours), or units of output. Useful life is an estimate. In making the estimate, management considers such factors as the

intended use of the asset, its expected repair and maintenance, and its vulnerability to obsolescence. Past experience with similar assets is often helpful in deciding on expected useful life. We might reasonably expect Rent-A-Wreck and Europcar to use different estimated useful lives for their vehicles.

3. **Residual value.** **Residual value** is an estimate of the asset's value at the end of its useful life. This value may be based on the asset's worth as scrap or on its expected trade-in value. Like useful life, residual value is an estimate. In making the estimate, management considers how it plans to dispose of the asset and its experience with similar assets.

• Alternative Terminology
Another term sometimes used for residual value is *salvage value*.

DEPRECIATION METHODS

Depreciation is generally computed using one of the following methods:

1. Straight-line
2. Units-of-activity
3. Declining-balance

Each method is acceptable under IFRS. Management selects the method(s) it believes to be appropriate. The objective is to select the method that best measures an asset's contribution to revenue over its useful life. Once a company chooses a method, it should apply it consistently over the useful life of the asset. Consistency enhances the comparability of financial statements. Depreciation affects the statement of financial position through accumulated depreciation and the income statement through depreciation expense.

We will compare the three depreciation methods using the following data for a small delivery truck purchased by Barb's Florists on January 1, 2017.

Illustration 9-7
Delivery truck data

Cost	€ 13,000
Expected residual value	€ 1,000
Estimated useful life in years	5
Estimated useful life in miles	100,000

No matter which method is used, the total amount depreciated over the useful life of the asset is its depreciable cost. **Depreciable cost** is equal to the cost of the asset less its residual value.

STRAIGHT-LINE METHOD Under the **straight-line method**, companies expense the same amount of depreciation for each year of the asset's useful life. It is measured solely by the passage of time.

To compute depreciation expense under the straight-line method, companies need to determine depreciable cost. As indicated above, depreciable cost is the cost of the asset less its residual value. It represents the total amount subject to depreciation. Under the straight-line method, to determine annual depreciation expense, we divide depreciable cost by the asset's useful life. Illustration 9-8 shows the computation of the first year's depreciation expense for Barb's Florists.

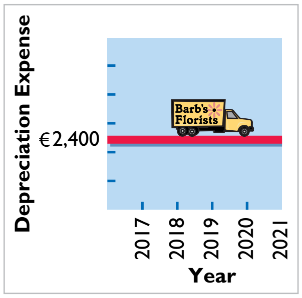
Illustration 9-8
Formula for straight-line method

Cost	−	Residual Value	=	Depreciable Cost
€13,000	−	€1,000	=	€12,000

Depreciable Cost	÷	Useful Life (in years)	=	Annual Depreciation Expense
€12,000	÷	5	=	€2,400

Alternatively, we also can compute an annual **rate** of depreciation. In this case, the rate is 20% (100% ÷ 5 years). When a company uses an annual straight-line rate, it applies the percentage rate to the depreciable cost of the asset. Illustration 9-9 shows a **depreciation schedule** using an annual rate.

Illustration 9-9
Straight-line depreciation schedule



BARB'S FLORISTS

	Computation					End of Year	
Year	Depreciable Cost	×	Depreciation Rate	=	Annual Depreciation Expense	Accumulated Depreciation	Book Value
2017	€12,000		20%		**€2,400**	€ 2,400	€10,600*
2018	12,000		20		**2,400**	4,800	8,200
2019	12,000		20		**2,400**	7,200	5,800
2020	12,000		20		**2,400**	9,600	3,400
2021	12,000		20		**2,400**	12,000	**1,000**

*Book value = Cost − Accumulated depreciation = (€13,000 − €2,400).

Note that the depreciation expense of €2,400 is the same each year. The book value (computed as cost minus accumulated depreciation) at the end of the useful life is equal to the expected €1,000 residual value.

What happens to these computations for an asset purchased **during** the year, rather than on January 1? In that case, it is necessary to **prorate the annual depreciation** on a time basis. If Barb's Florists had purchased the delivery truck on April 1, 2017, the company would own the truck for nine months of the first year (April–December). Thus, depreciation for 2017 would be €1,800 (€12,000 × 20% × 9/12 of a year).

The straight-line method predominates in practice. Large companies such as Daimler (DEU), Anheuser-Busch InBev (BEL), and General Mills (USA) use the straight-line method. It is simple to apply, and it matches expenses with revenues when the use of the asset is reasonably uniform throughout the service life.

> **DO IT!**

Straight-Line Depreciation

On January 1, 2017, Iron Mountain Ski AG purchased a new snow-grooming machine for €50,000. The machine is estimated to have a 10-year life with a €2,000 residual value. What journal entry would Iron Mountain Ski make at December 31, 2017, if it uses the straight-line method of depreciation?

Action Plan

✔ Calculate depreciable cost (Cost − Residual value).

✔ Divide the depreciable cost by the asset's estimated useful life.

Solution

$$\text{Depreciation expense} = \frac{\text{Cost} - \text{Residual value}}{\text{Useful life}} = \frac{€50{,}000 - €2{,}000}{10} = €4{,}800$$

The entry to record the first year's depreciation would be:

Dec. 31	Depreciation Expense	4,800	
	Accumulated Depreciation—Equipment		4,800
	(To record annual depreciation on snow-grooming machine)		

Related exercise material: **BE9-3, BE9-4, E9-4, E9-6, E9-7, E9-10, and DO IT! 9-2.**

✔ The Navigator

UNITS-OF-ACTIVITY METHOD Under the **units-of-activity method**, useful life is expressed in terms of the total units of production or use expected from the asset, rather than as a time period. The units-of-activity method is ideally suited to factory machinery. Manufacturing companies can measure production in units of output or in machine hours. This method can also be used for such assets as delivery equipment (miles driven) and airplanes (hours in use). The units-of-activity method is generally not suitable for buildings or furniture because depreciation for these assets is more a function of time than of use.

• Alternative Terminology
Another term often used is the *units-of-production method*.

To use this method, companies estimate the total units of activity for the entire useful life and then divide these units into depreciable cost. The resulting number represents the depreciable cost per unit. The depreciable cost per unit is then applied to the units of activity during the year to determine the annual depreciation expense.

• HELPFUL HINT
Under any method, depreciation stops when the asset's book value equals expected residual value.

To illustrate, assume that Barb's Florists drives its delivery truck 15,000 miles in the first year. Illustration 9-10 shows the units-of-activity formula and the computation of the first year's depreciation expense.

Illustration 9-10
Formula for units-of-activity method

Depreciable Cost	÷	Total Units of Activity	=	Depreciable Cost per Unit
€12,000	÷	100,000 miles	=	€0.12

Depreciable Cost per Unit	×	Units of Activity during the Year	=	Annual Depreciation Expense
€0.12	×	15,000 miles	=	€1,800

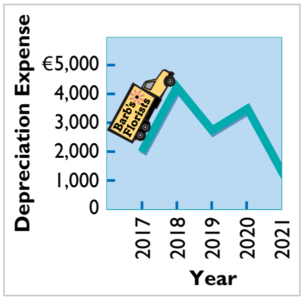
The units-of-activity depreciation schedule, using assumed mileage, is as follows.

Illustration 9-11
Units-of-activity depreciation schedule

BARB'S FLORISTS

	Computation				Annual	End of Year	
Year	Units of Activity	×	Depreciation Cost/Unit	=	Depreciation Expense	Accumulated Depreciation	Book Value
2017	15,000		€0.12		**€1,800**	€ 1,800	€11,200*
2018	30,000		0.12		**3,600**	5,400	7,600
2019	20,000		0.12		**2,400**	7,800	5,200
2020	25,000		0.12		**3,000**	10,800	2,200
2021	10,000		0.12		**1,200**	12,000	**1,000**

*(€13,000 − €1,800).



This method is easy to apply for assets purchased mid-year. In such a case, the company computes the depreciation using the productivity of the asset for the partial year.

The units-of-activity method is not nearly as popular as the straight-line method primarily because it is often difficult for companies to reasonably estimate total activity. However, some very large companies, such as Chevron (USA), do use this method. When the productivity of an asset varies significantly from one period to another, the units-of-activity method results in the best matching of expenses with revenues.

DECLINING-BALANCE METHOD The **declining-balance method** produces a decreasing annual depreciation expense over the asset's useful life. The method is so named because the periodic depreciation is based on a **declining book value** (cost less accumulated depreciation) of the asset. With this method, companies compute annual depreciation expense by multiplying the book value at the beginning of the year by the declining-balance depreciation rate. **The depreciation rate remains constant from year to year, but the book value to which the rate is applied declines each year.**

At the beginning of the first year, book value is the cost of the asset. This is because the balance in accumulated depreciation at the beginning of the asset's useful life is zero. In subsequent years, book value is the difference between cost and accumulated depreciation to date. Unlike the other depreciation methods, the declining-balance method **ignores residual value in determining the amount to which the declining-balance rate is applied**. Residual value, however, does limit the total depreciation that can be taken. Depreciation stops when the asset's book value equals expected residual value.

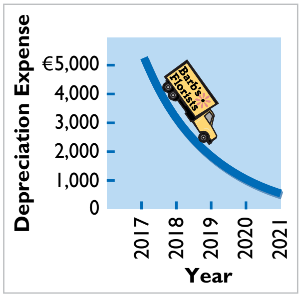
A common declining-balance rate is double the straight-line rate. The method is often called the **double-declining-balance method**. If Barb's Florists uses the double-declining-balance method, it uses a depreciation rate of 40% (2 × the straight-line rate of 20%). Illustration 9-12 shows the declining-balance formula and the computation of the first year's depreciation on the delivery truck.[1]

Illustration 9-12
Formula for declining-balance method

Book Value at Beginning of Year	×	Declining-Balance Rate	=	Annual Depreciation Expense
€13,000	×	40%	=	€5,200

The depreciation schedule under this method is as follows.

Illustration 9-13
Double-declining-balance depreciation schedule



BARB'S FLORISTS

	Computation					End of Year	
Year	**Book Value Beginning of Year**	×	**Depreciation Rate**	=	**Annual Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
2017	€13,000		40%		**€5,200**	€ 5,200	€7,800
2018	7,800		40		**3,120**	8,320	4,680
2019	4,680		40		**1,872**	10,192	2,808
2020	2,808		40		**1,123**	11,315	1,685
2021	1,685		40		**685***	12,000	**1,000**

*Computation of €674 (€1,685 × 40%) is adjusted to €685 in order for book value to equal residual value

• HELPFUL HINT
The method recommended for an asset that is expected to be significantly more productive in the first half of its useful life is the declining-balance method.

The delivery equipment is 69% depreciated (€8,320 ÷ €12,000) at the end of the second year. Under the straight-line method, the truck would be depreciated 40% (€4,800 ÷ €12,000) at that time. Because the declining-balance method produces higher depreciation expense in the early years than in the later years, it is considered an **accelerated-depreciation method**. The declining-balance

[1]IFRS refers to an alternative method of accelerated depreciation, called the *diminishing-balance method*. Under this method, a rate is multiplied times the remaining book value to determine depreciation. The rate is calculated using the formula Rate $= \left(1 - \sqrt[n]{\frac{\text{Residual value}}{\text{Cost}}}\right)$, where n is the estimated useful life. Because financial calculators do not typically solve for the n^{th} root, we have chosen to present the declining-balance method.

method is compatible with the expense recognition principle. It matches the higher depreciation expense in early years with the higher benefits received in these years. It also recognizes lower depreciation expense in later years, when the asset's contribution to revenue is less. Some assets lose usefulness rapidly because of obsolescence. In these cases, the declining-balance method provides the most appropriate depreciation amount.

When a company purchases an asset during the year, it must prorate the first year's declining-balance depreciation on a time basis. For example, if Barb's Florists had purchased the truck on April 1, 2017, depreciation for 2017 would become €3,900 (€13,000 × 40% × 9/12). The book value at the beginning of 2018 is then €9,100 (€13,000 − €3,900), and the 2018 depreciation is €3,640 (€9,100 × 40%). Subsequent computations would follow from those amounts.

COMPARISON OF METHODS Illustration 9-14 compares annual and total depreciation expense under each of the three methods for Barb's Florists.

Illustration 9-14
Comparison of depreciation methods

Year	Straight-Line	Units-of-Activity	Declining-Balance
2017	€ 2,400	€ 1,800	€ 5,200
2018	2,400	3,600	3,120
2019	2,400	2,400	1,872
2020	2,400	3,000	1,123
2021	2,400	1,200	685
	€12,000	€12,000	€12,000

Annual depreciation varies considerably among the methods, but **total depreciation expense is the same (€12,000) for the five-year period** under all three methods. Each method is acceptable in accounting because each recognizes in a rational and systematic manner the decline in service potential of the asset. Illustration 9-15 graphs the depreciation expense pattern under each method.

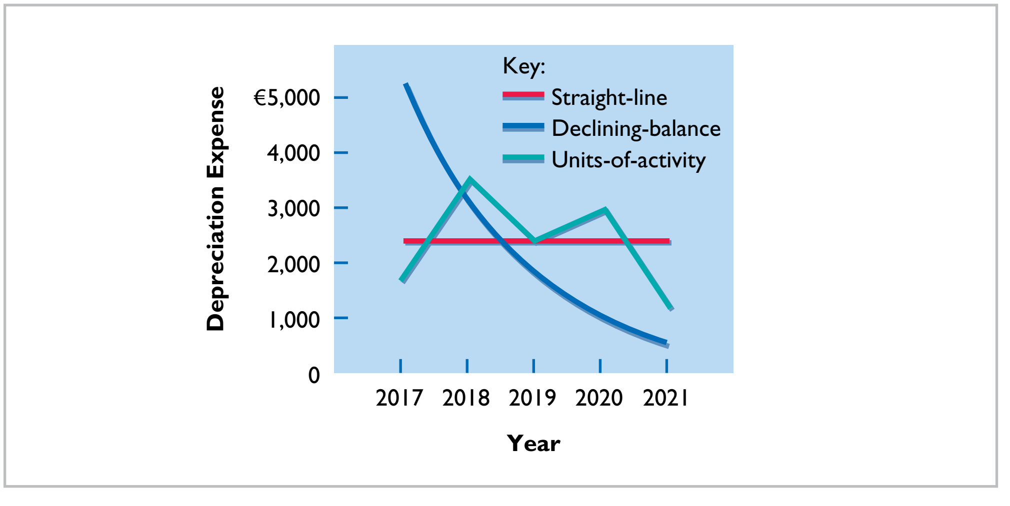


Illustration 9-15
Patterns of depreciation

COMPONENT DEPRECIATION

Thus far, we have assumed that plant assets use a single depreciation rate. However, IFRS requires component depreciation for plant assets. **Component depreciation** requires that any significant parts of a plant asset that have significantly different estimated useful lives should be separately depreciated.

To illustrate component depreciation, assume that Lexure Construction builds an office building for HK$4,000,000, not including the cost of the land. If the

HK$4,000,000 is allocated over the 40-year useful life of the building, Lexure reports HK$100,000 (HK$4,000,000 ÷ 40) of depreciation per year, assuming straight-line depreciation and no residual value. However, assume that HK$320,000 of the cost of the building relates to personal property and HK$600,000 relates to land improvements. Because the personal property has a depreciable life of five years and the land improvements have a depreciable life of 10 years, Lexure must use component depreciation. It must reclassify HK$320,000 of the cost of the building to personal property and HK$600,000 to the cost of land improvements. Assuming that Lexure uses straight-line depreciation, component depreciation for the first year of the office building is computed as follows.

Illustration 9-16
Component depreciation computation

Building cost adjusted (HK$4,000,000 − HK$320,000 − HK$600,000)	HK$3,080,000
Building cost depreciation per year (HK$3,080,000 ÷ 40)	HK$ 77,000
Personal property depreciation (HK$320,000 ÷ 5)	64,000
Land improvements depreciation (HK$600,000 ÷ 10)	60,000
Total component depreciation in first year	**HK$ 201,000**

DEPRECIATION AND INCOME TAXES

Tax laws allow corporate taxpayers to deduct depreciation expense when they compute taxable income. However, tax laws often do not require taxpayers to use the same depreciation method on the tax return that is used in preparing financial statements.

Many corporations use straight-line in their financial statements to maximize net income. At the same time, they use an accelerated-depreciation method on their tax returns to minimize their income taxes.

REVISING PERIODIC DEPRECIATION

Depreciation is one example of the use of estimation in the accounting process. Management should periodically review annual depreciation expense. If wear and tear or obsolescence indicate that annual depreciation estimates are inadequate or excessive, the company should change the amount of depreciation expense.

When a change in an estimate is required, the company makes the change in **current and future years**. **It does not change depreciation in prior periods.** The rationale is that continual restatement of prior periods would adversely affect confidence in financial statements.

• HELPFUL HINT
Use a step-by-step approach: (1) determine new depreciable cost; (2) divide by remaining useful life.

To determine the new annual depreciation expense, the company first computes the asset's depreciable cost at the time of the revision. It then allocates the revised depreciable cost to the remaining useful life.

To illustrate, assume that Barb's Florists decides on January 1, 2020, to extend the useful life of the truck by one year (a total life of six years) and increase its residual value to €2,200. The company has used the straight-line method to depreciate the asset to date. Depreciation per year was €2,400 [(€13,000 − €1,000) ÷ 5]. Accumulated depreciation after three years (2017–2019) is €7,200 (€2,400 × 3), and book value is €5,800 (€13,000 − €7,200). The new annual depreciation is €1,200, as shown in Illustration 9-17.

Illustration 9-17
Revised depreciation computation

Book value, 1/1/20	€ 5,800	
Less: Residual value	2,200	
Depreciable cost	€ 3,600	
Remaining useful life	3 years	(2020–2022)
Revised annual depreciation (€3,600 ÷ 3)	**€ 1,200**	

Barb's Florists makes no entry for the change in estimate. On December 31, 2020, during the preparation of adjusting entries, it records depreciation expense of €1,200. Companies must describe in the financial statements significant changes in estimates.

DO IT!

Revised Depreciation

Chambers plc purchased a piece of equipment for £36,000. It estimated a 6-year life and £6,000 residual value. Thus, straight-line depreciation was £5,000 per year [(£36,000 − £6,000) ÷ 6]. At the end of year three (before the depreciation adjustment), it estimated the new total life to be 10 years and the new residual value to be £2,000. Compute the revised depreciation.

Action Plan

✔ Calculate depreciable cost.

✔ Divide depreciable cost by new remaining life.

Solution

Original depreciation expense = [(£36,000 − £6,000) ÷ 6] = £5,000
Accumulated depreciation after 2 years = 2 × £5,000 = £10,000
Book value = £36,000 − £10,000 = £26,000

Book value after 2 years of depreciation	£26,000
Less: New residual value	2,000
Depreciable cost	£24,000
Remaining useful life (10 − 2)	8 years
Revised annual depreciation (£24,000 ÷ 8)	£ 3,000

Related exercise material: **BE9-8, E9-9, and DO IT! 9-3.**

✔ The Navigator

Revaluation of Plant Assets

IFRS allows companies to revalue plant assets to fair value at the reporting date. Companies that choose to use the revaluation framework must follow revaluation procedures. If revaluation is used, it must be applied to all assets in a class of assets. Assets that are experiencing rapid price changes must be revalued on an annual basis. Otherwise, less frequent revaluation is acceptable.

GAIN SITUATION

To illustrate asset revaluation accounting, assume that Pernice Ltd. applies revaluation to equipment purchased on January 1, 2017, for HK$1,000,000. The equipment has a useful life of five years and no residual value. On December 31, 2017, Pernice makes the following journal entry to record depreciation expense, assuming straight-line depreciation.

Dec. 31	Depreciation Expense	200,000	
	Accumulated Depreciation—Equipment		200,000
	(To record depreciation expense in 2017)		

After this entry, Pernice's equipment has a carrying amount of HK$800,000 (HK$1,000,000 − HK$200,000). At the end of 2017, independent appraisers determine that the asset has a fair value of HK$850,000. To report the equipment at its fair value of HK$850,000 on December 31, 2017, Pernice eliminates the Accumulated Depreciation—Equipment account, reduces Equipment to its fair value of HK$850,000, and records Revaluation Surplus of HK$50,000. The entry to record the revaluation is as follows.

Dec. 31	Accumulated Depreciation—Equipment	200,000	
	Equipment		150,000
	Revaluation Surplus		50,000
	(To adjust the equipment to its fair value)		

Thus, Pernice follows a two-step process. First, Pernice records depreciation based on the cost basis of HK$1,000,000. As a result, it reports depreciation expense of HK$200,000 on the income statement. Second, it records the revaluation. It does this by eliminating any accumulated depreciation, adjusting the recorded value of the equipment to its fair value, and debiting or crediting the revaluation surplus account. In this example, the revaluation surplus is HK$50,000, which is the difference between the fair value of HK$850,000 and the book value of HK$800,000. Revaluation surplus is an example of an item reported as other comprehensive income, as discussed in Chapter 5. Pernice now reports the following information in its statement of financial position at the end of 2017.

Illustration 9-18
Statement presentation of plant assets (equipment) and revaluation surplus

Equipment (HK$1,000,000 − HK$150,000)	HK$850,000
Accumulated depreciation—equipment	0
	HK$850,000
Revaluation surplus (equity)	HK$ 50,000

Pernice reports depreciation expense of HK$200,000 in the income statement and HK$50,000 in other comprehensive income. As indicated, HK$850,000 is the new basis of the asset. Assuming no change in the total useful life, depreciation in 2018 will be HK$212,500 (HK$850,000 ÷ 4).

LOSS SITUATION

Assume again that Pernice's equipment has a carrying amount of HK$800,000 (HK$1,000,000 − HK$200,000). However, at the end of 2017, independent appraisers determine that the asset has a fair value of HK$775,000, which results in an impairment loss of HK$25,000 (HK$800,000 − HK$775,000). To record the equipment at fair value and to record this loss, Pernice first eliminates the balance in the Accumulated Depreciation—Equipment account of HK$200,000. Next, it reduces the Equipment account by HK$225,000 to report the equipment at HK$775,000 (HK$1,000,000 − HK$225,000). The entry to record the equipment and report the impairment loss is as follows

Dec. 31	Accumulated Depreciation—Equipment	200,000	
	Impairment Loss	25,000	
	Equipment		225,000
	(To record impairment loss of equipment)		

The impairment loss of HK$25,000 reduces net income.

Comparison of this loss situation with the previous gain situation illustrates an important point. Losses are reported in net income, whereas gains are reported in other comprehensive income. The accounting for gains and losses continues this practice in subsequent periods with additional complications. As a result, the treatment of accounting for revaluation gains and losses in subsequent periods is addressed in advanced accounting classes.

Expenditures During Useful Life

Learning Objective 3

Distinguish between revenue and capital expenditures, and explain the entries for each.

During the useful life of a plant asset, a company may incur costs for ordinary repairs, additions, or improvements. **Ordinary repairs** are expenditures to **maintain** the operating efficiency and productive life of the unit. They usually are fairly small amounts that occur frequently. Examples are motor tune-ups and oil changes, the painting of buildings, and the replacing of worn-out gears on machinery. Companies record such repairs as debits to Maintenance and Repairs Expense as they are incurred. Because they are immediately charged as an expense against revenues, these costs are often referred to as **revenue expenditures**.

In contrast, **additions and improvements** are costs incurred to **increase** the operating efficiency, productive capacity, or useful life of a plant asset. They are usually material in amount and occur infrequently. Additions and improvements increase the company's investment in productive facilities. Companies generally debit these amounts to the plant asset affected. They are often referred to as **capital expenditures**.

Companies must use good judgment in deciding between a revenue expenditure and capital expenditure. For example, assume that Rodriguez Co. purchases a number of wastepaper baskets. Although the proper accounting would appear to be to capitalize and then depreciate these wastepaper baskets over their useful lives, it would be more usual for Rodriguez to expense them immediately. This practice is justified on the basis of **materiality**. Materiality refers to the impact of an item's size on a company's financial operations. The **materiality concept** states that if an item would not make a difference in decision-making, the company does not have to follow IFRS in reporting that item.

ANATOMY OF A FRAUD

Bernie Ebbers was the founder and CEO of the phone company WorldCom (USA). The company engaged in a series of increasingly large, debt-financed acquisitions of other companies. These acquisitions made the company grow quickly, which made the share price increase dramatically. However, because the acquired companies all had different accounting systems, WorldCom's financial records were a mess. When WorldCom's performance started to flatten out, Bernie coerced WorldCom's accountants to engage in a number of fraudulent activities to make net income look better than it really was and thus prop up the share price. One of these frauds involved treating $7 billion of line costs as capital expenditures. The line costs, which were rental fees paid to other phone companies to use their phone lines, had always been properly expensed in previous years. Capitalization delayed expense recognition to future periods and thus boosted current-period profits.

Total take: $7 billion

THE MISSING CONTROLS

Documentation procedures. The company's accounting system was a disorganized collection of non-integrated systems, which resulted from a series of corporate acquisitions. Top management took advantage of this disorganization to conceal its fraudulent activities.

Independent internal verification. A fraud of this size should have been detected by a routine comparison of the actual physical assets with the list of physical assets shown in the accounting records.

Plant Asset Disposals

Learning Objective 4

Explain how to account for the disposal of a plant asset.

Companies dispose of plant assets that are no longer useful to them. Illustration 9-19 (page 442) shows the three ways in which companies make plant asset disposals.

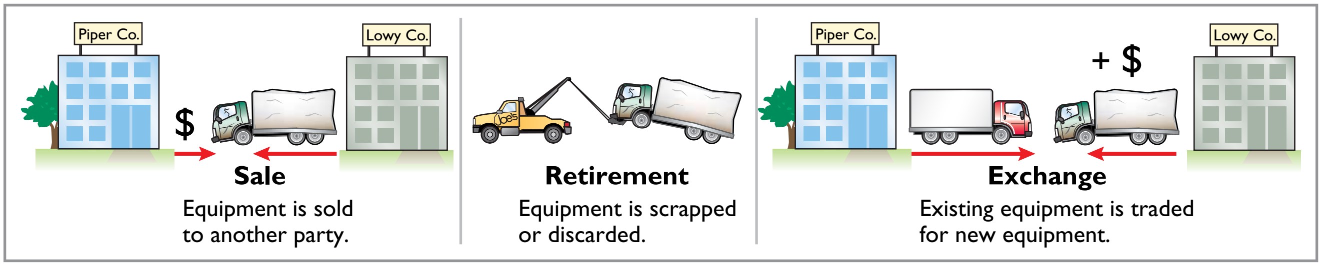


Illustration 9-19
Methods of plant asset disposal

Whatever the disposal method, the company must determine the book value of the plant asset at the disposal date to determine the gain or loss. Recall that the book value is the difference between the cost of the plant asset and the accumulated depreciation to date. If the disposal does not occur on the first day of the year, the company must record depreciation for the fraction of the year to the date of disposal. The company then eliminates the book value by reducing (debiting) Accumulated Depreciation for the total depreciation associated with that asset to the date of disposal and reducing (crediting) the asset account for the cost of the asset.

In this chapter, we examine the accounting for the retirement and sale of plant assets. In the appendix to the chapter, we discuss and illustrate the accounting for exchanges of plant assets.

RETIREMENT OF PLANT ASSETS

To illustrate the retirement of plant assets, assume that Hobart ASA retires its computer printers, which cost €32,000. The accumulated depreciation on these printers is €32,000. The equipment, therefore, is fully depreciated (zero book value). The entry to record this retirement is as follows.

A = L + E
+32,000
−32,000

Cash Flows
no effect

Accumulated Depreciation—Equipment	32,000	
Equipment		32,000
(To record retirement of fully depreciated equipment)		

• HELPFUL HINT
When disposing of a plant asset, the company removes all amounts related to the asset. This includes the original cost and the total depreciation to date in the accumulated depreciation account.

What happens if a fully depreciated plant asset is still useful to the company? In this case, the asset and its accumulated depreciation continue to be reported on the statement of financial position, without further depreciation adjustment, until the company retires the asset. Reporting the asset and related accumulated depreciation on the statement of financial position informs the financial statement reader that the asset is still in use. Once fully depreciated, no additional depreciation should be taken, even if an asset is still being used. In no situation can the accumulated depreciation on a plant asset exceed its cost.

If a company retires a plant asset before it is fully depreciated, and no cash is received for scrap or residual value, a loss on disposal occurs. For example, assume that Sunset A/S discards delivery equipment that cost €18,000 and has accumulated depreciation of €14,000. The entry is as follows.

A = L + E
+14,000
−4,000 Exp
−18,000

Cash Flows
no effect

Accumulated Depreciation—Equipment	14,000	
Loss on Disposal of Plant Assets	4,000	
Equipment		18,000
(To record retirement of delivery equipment at a loss)		

Companies report a loss on disposal of plant assets in the "Other income and expense" section of the income statement.

SALE OF PLANT ASSETS

In a disposal by sale, the company compares the book value of the asset with the proceeds received from the sale. If the proceeds of the sale **exceed** the book value of the plant asset, **a gain on disposal occurs**. If the proceeds of the sale **are less than** the book value of the plant asset sold, **a loss on disposal occurs**.

Only by coincidence will the book value and the fair value of the asset be the same when the asset is sold. Gains and losses on sales of plant assets are therefore quite common. For example, Delta Airlines (USA) reported a $94,343,000 gain on the sale of 10 aircraft.

GAIN ON SALE To illustrate a gain on sale of plant assets, assume that on July 1, 2017, Wright Company sells office furniture for €16,000 cash. The office furniture originally cost €60,000. As of January 1, 2017, it had accumulated depreciation of €41,000. Depreciation for the first six months of 2017 is €8,000. Wright records depreciation expense and updates accumulated depreciation to July 1 with the following entry.

July 1	Depreciation Expense	8,000	
	Accumulated Depreciation—Equipment		8,000
	(To record depreciation expense for the first 6 months of 2017)		

A	=	L	+	E
				−8,000 Exp
−8,000				

Cash Flows
no effect

After the accumulated depreciation balance is updated, the company computes the gain or loss. The gain or loss is the difference between the proceeds from the sale and the book value at the date of disposal. Illustration 9-20 shows this computation for Wright Company, which has a gain on disposal of €5,000.

Illustration 9-20
Computation of gain on disposal

Cost of office furniture	€60,000
Less: Accumulated depreciation (€41,000 + €8,000)	49,000
Book value at date of disposal	11,000
Proceeds from sale	16,000
Gain on disposal of plant asset	**€ 5,000**

Wright records the sale and the gain on disposal of the plant asset as follows.

July 1	Cash	16,000	
	Accumulated Depreciation—Equipment	49,000	
	Equipment		60,000
	Gain on Disposal of Plant Assets		5,000
	(To record sale of office furniture at a gain)		

A	=	L	+	E
+16,000				
+49,000				
−60,000				
				+5,000 Rev

Cash Flows
+16,000

Companies report a gain on disposal of plant assets in the "Other income and expense" section of the income statement.

LOSS ON SALE Assume that instead of selling the office furniture for €16,000, Wright sells it for €9,000. In this case, Wright computes a loss of €2,000 as follows.

Illustration 9-21
Computation of loss on disposal

Cost of office furniture	€60,000
Less: Accumulated depreciation	49,000
Book value at date of disposal	11,000
Proceeds from sale	9,000
Loss on disposal of plant asset	**€ 2,000**

A	=	L	+	E
+ 9,000				
+49,000				
				−2,000 Exp
−60,000				

Cash Flows
+9,000

Wright records the sale and the loss on disposal of the plant asset as follows.

July 1	Cash	9,000	
	Accumulated Depreciation—Equipment	49,000	
	Loss on Disposal of Plant Assets	2,000	
	Equipment		60,000
	(To record sale of office furniture at a loss)		

Companies report a loss on disposal of plant assets in the "Other income and expense" section of the income statement.

DO IT!

Plant Asset Disposal

Overland Trucking has an old truck that cost £30,000, and it has accumulated depreciation of £16,000 on this truck. Overland has decided to sell the truck. (a) What entry would Overland Trucking make to record the sale of the truck for £17,000 cash? (b) What entry would Overland Trucking make to record the sale of the truck for £10,000 cash?

Action Plan

✔ At the time of disposal, determine the book value of the asset.

✔ Compare the asset's book value with the proceeds received to determine whether a gain or loss has occurred.

Solution

(a) Sale of truck for cash at a gain:

Cash	17,000	
Accumulated Depreciation—Equipment	16,000	
Equipment		30,000
Gain on Disposal of Plant Assets [£17,000 − (£30,000 − £16,000)]		3,000
(To record sale of truck at a gain)		

(b) Sale of truck for cash at a loss:

Cash	10,000	
Accumulated Depreciation—Equipment	16,000	
Loss on Disposal of Plant Assets [£10,000 − (£30,000 − £16,000)]	4,000	
Equipment		30,000
(To record sale of truck at a loss)		

Related exercise material: BE9-11, BE9-12, E9-12, E9-13, and DO IT! 9-4.

✔ The Navigator

Extractable Natural Resources

Learning Objective 5

Compute periodic depletion of extractable natural resources.

Common **natural resources** consist of standing timber and resources extracted from the ground, such as oil, gas, and minerals. Standing timber is considered a biological asset under IFRS. In the years before they are harvested, the recorded value of biological assets is adjusted to fair value each period. The additional details of accounting for biological assets are beyond the scope of this textbook.

IFRS defines extractive industries as those businesses involved in finding and removing natural resources located in or near the earth's crust. The acquisition cost of an extractable natural resource is the price needed to acquire the resource **and** prepare it for its intended use. For an already-discovered resource, such as an existing coal mine, cost is the price paid for the property.

The allocation of the cost of natural resources in a rational and systematic manner over the resource's useful life is called **depletion**. (That is, depletion is to natural resources what depreciation is to plant assets.) **Companies generally use the units-of-activity method** (discussed earlier in the chapter) **to compute depletion.** The reason is that **depletion generally is a function of the units extracted during the year**.

• HELPFUL HINT

On a statement of financial position, natural resources may be described more specifically as *timberlands, mineral deposits, oil reserves*, and so on.

Under the units-of-activity method, companies divide the total cost of the natural resource minus residual value by the number of units estimated to be in the resource. The result is a **depletion cost per unit**. To compute depletion, the cost per unit is then multiplied by the number of units extracted.

To illustrate, assume that Lane Coal Company invests HK$50 million in a mine estimated to have 10 million tons of coal and no residual value. Illustration 9-22 shows the computation of the depletion cost per unit.

Ethics Note

Investors were stunned at news that Royal Dutch Shell (NLD and GBR) had significantly overstated its reported oil reserves.

Illustration 9-22
Computation of depletion cost per unit

$$\frac{\textbf{Total Cost} - \textbf{Residual Value}}{\textbf{Total Estimated Units Available}} = \textbf{Depletion Cost per Unit}$$

$$\frac{\text{HK\$50,000,000}}{10{,}000{,}000} = \text{HK\$5.00 per ton}$$

If Lane extracts 250,000 tons in the first year, then the depletion for the year is HK$1,250,000 (250,000 tons × HK$5). It records the depletion as follows.

Inventory (coal)	1,250,000	
Accumulated Depletion		1,250,000

A	=	L	+	E
+1,250,000				
−1,250,000				

Cash Flows
no effect

Lane debits Inventory for the total depletion for the year and credits Accumulated Depletion to reduce the carrying value of the natural resource. Accumulated Depletion is a contra asset similar to Accumulated Depreciation. Lane credits Inventory when it sells the inventory and debits Cost of Goods Sold. The amount not sold remains in inventory and is reported in the current assets section of the statement of financial position.

Some companies do not use an Accumulated Depletion account. In such cases, the company credits the amount of depletion directly to the natural resources account.

People, Planet, and Profit Insight **Sustainability Report Please** BHP Billiton (AUS)

© Christian Uhrig/iStockphoto

Sustainability reports identify how the company is meeting its corporate social responsibilities. Many companies, both large and small, are now issuing these reports. For example, companies such as Microsoft (USA), Tata (IND), BP (GBR), Nestlé (CHE), and Samsung (KOR) issue these reports. Presented below is an adapted section of a recent BHP Billiton (AUS) (a global mining, oil, and gas company) sustainability report on its environmental policies. These policies are to (1) take action to address the challenges of climate change, (2) set and achieve targets that reduce pollution, and (3) enhance biodiversity by assessing and considering ecological values and land-use aspects. Here is how BHP Billiton measures the success or failure of some of these policies:

Environment	Commentary	Target Date
We will maintain total greenhouse gas emissions below FY2006 levels.	FY2013 greenhouse gas emissions were lower than the FY2006 baseline.	30 June 2017
All operations to offset impacts to biodiversity and the related benefits derived from ecosystems.	Land and Biodiversity Management Plans were developed at all our operations.	Annual
We will finance the conservation and continuing management of areas of high biodiversity and ecosystem value.	Two projects of international conservation significance were established—the Five Rivers Conservation Project, in Australia, and the Valdivian Coastal Reserve Conservation Project, in Chile.	30 June 2017

In addition to the environment, BHP Billiton has sections in its sustainability report that discuss people, safety, health, and community.

Q Why do you believe companies issue sustainability reports? (See page 476.)

Intangible Assets

Learning Objective 6
Explain the basic issues related to accounting for intangible assets.

Intangible assets are rights, privileges, and competitive advantages that result from the ownership of long-lived assets that do not possess physical substance. Evidence of intangibles may exist in the form of contracts or licenses. Intangibles may arise from the following sources:

1. Government grants, such as patents, copyrights, licenses, trademarks, and trade names.
2. Acquisition of another business, in which the purchase price includes a payment for **goodwill**.
3. Private monopolistic arrangements arising from contractual agreements, such as franchises and leases.

Some widely known intangibles are SAP's (DEU) patents, Spar's (NLD) convenience store franchises, Apple's (USA) trade name iPod, J.K. Rowlings' copyrights on the *Harry Potter* books, and the trademark Europcar in the Feature Story.

Accounting for Intangible Assets

Companies record intangible assets at cost. This cost consists of all expenditures necessary for the company to acquire the right, privilege, or competitive advantage. Intangibles are categorized as having either a limited life or an indefinite life. If an intangible has a **limited life**, the company allocates its cost over the asset's useful life using a process similar to depreciation. The process of allocating the cost of intangibles is referred to as **amortization**. The cost of intangible assets with **indefinite lives should not be amortized**.

• **HELPFUL HINT**
Amortization is to intangibles what *depreciation* is to plant assets and *depletion* is to extractable natural resources.

To record amortization of an intangible asset, a company increases (debits) Amortization Expense and decreases (credits) the specific intangible asset. (Unlike depreciation, no contra account, such as Accumulated Amortization, is usually used.)

Intangible assets are typically amortized on a straight-line basis. For example, the legal life of a patent is 20 years in many countries. Companies **amortize the cost of a patent over its 20-year life or its useful life, whichever is shorter**. To illustrate the computation of patent amortization, assume that National Labs purchases a patent at a cost of NT$720,000. If National estimates the useful life of the patent to be eight years, the annual amortization expense is NT$90,000 (NT$720,000 ÷ 8). National records the annual amortization as follows.

A	=	L	+	E
				−90,000 Exp
−90,000				

Cash Flows
no effect

Dec. 31	Amortization Expense	90,000	
	Patents		90,000
	(To record patent amortization)		

Companies classify amortization expense as an operating expense in the income statement. Similar to property, plant, and equipment, IFRS permits revaluation of intangible assets to fair value, except for goodwill.

When intangible assets are acquired through a purchase, the determination of cost is similar to that of property, plant, and equipment. Cost includes the purchase price, as well as costs incurred to get the asset ready for use. However, special rules are used to determine cost when an intangible asset is generated internally, as a result of a company's own research and development efforts. These rules are discussed in a later section.

PATENTS

A **patent** is an exclusive right issued by a patent office that enables the recipient to manufacture, sell, or otherwise control an invention for a specified number of years from the date of the grant. These "legal lives" sometimes vary across countries, but the legal life in many countries is 20 years. A patent is non-renewable. But, companies can extend the legal life of a patent by obtaining new patents for improvements or other changes in the basic design. **The initial cost of a patent is the cash or cash equivalent price paid to acquire the patent.**

The saying, "A patent is only as good as the money you're prepared to spend defending it," is very true. Many patents are subject to litigation by competitors. Any legal costs an owner incurs in successfully defending a patent in an infringement suit are considered necessary to establish the patent's validity. **The owner adds those costs to the Patents account and amortizes them over the remaining life of the patent.**

The patent holder amortizes the cost of a patent over its legal life or its useful life, whichever is shorter. Companies consider obsolescence and inadequacy in determining useful life. These factors may cause a patent to become economically ineffective before the end of its legal life.

COPYRIGHTS

Governments grant **copyrights**, which give the owner the exclusive right to reproduce and sell an artistic or published work. Copyrights extend for the life of the creator plus a specified number of years, which can vary by country but is commonly 70 years. The cost of a copyright is the **cost of acquiring and defending it**. The cost may be only the small fee paid to a copyright office. Or, it may amount to much more if an infringement suit is involved.

The useful life of a copyright generally is significantly shorter than its legal life. Therefore, copyrights usually are amortized over a relatively short period of time.

TRADEMARKS AND TRADE NAMES

A **trademark** or **trade name** is a word, phrase, jingle, or symbol that identifies a particular enterprise or product. Trade names like Big Mac, Coca-Cola, and Jetta create immediate product identification. They also generally enhance the sale of the product. The creator or original user may obtain exclusive legal right to the trademark or trade name by registering it with a patent office or similar governmental agency. Such registration provides a specified number of years of protection, which can vary by country but is commonly 20 years. The registration may be renewed indefinitely as long as the trademark or trade name is in use.

If a company purchases the trademark or trade name, its cost is the purchase price. If a company develops and maintains the trademark or trade name, any costs related to these activities are expensed as incurred. Because trademarks and trade names have indefinite lives, they are not amortized.

FRANCHISES AND LICENSES

When you fill up your tank at the BP (GBR) station, eat lunch at Subway (USA), or rent a car from Europcar, you are dealing with franchises. A **franchise** is a contractual arrangement between a franchisor and a franchisee. The franchisor grants the franchisee the right to sell certain products, perform specific services, or use certain trademarks or trade names, usually within a designated geographic area.

Another type of franchise is that entered into between a governmental body (commonly municipalities) and a company. This franchise permits the company to use public property in performing its services. Examples are the use of city streets for a bus line or taxi service, use of public land for telephone and electric lines, and the use of airwaves for radio or TV broadcasting. Such operating rights are referred to as **licenses**. Franchises and licenses may by granted for a definite period of time, an indefinite period, or perpetually.

When a company incurs costs in connection with the purchase of a franchise or license, it should recognize an intangible asset. Companies should amortize the cost of a limited-life franchise (or license) over its useful life. If the life is indefinite, the cost is not amortized. Annual payments made under a franchise agreement are recorded as **operating expenses** in the period in which they are incurred.

GOODWILL

Usually, the largest intangible asset that appears on a company's statement of financial position is goodwill. **Goodwill** represents the value of all favorable attributes that relate to a company that is not tied to any other specific asset. These attributes include exceptional management, desirable location, good customer relations, skilled employees, high-quality products, and harmonious relations with labor unions. Goodwill is unique. Unlike assets such as investments and plant assets, which can be sold **individually** in the marketplace, goodwill can be identified only with the business **as a whole**.

If goodwill can be identified only with the business as a whole, how can its amount be determined? Management could try to put a monetary value on the factors listed above (exceptional management, desirable location, and so on). But, the results would be very subjective, and such subjective valuations would not contribute to the reliability of financial statements. **Therefore, companies record goodwill only when an entire business is purchased. In that case, goodwill is the excess of cost over the fair value of the net assets (assets less liabilities) acquired.**

In recording the purchase of a business, the company debits (increases) the identifiable acquired assets, credits liabilities at their fair values, credits cash for the purchase price, and records the difference as goodwill. **Goodwill is not amortized** because it is considered to have an indefinite life, but its value should be written down if impaired. Companies report goodwill in the statement of financial position under intangible assets.

Global Insight Should Companies Write Up Goodwill? SoftBank Corp. (JPN)

© Pixtal/SuperStock

SoftBank Corp. (JPN) at one time was the country's largest Internet company. It boosted the profit margin of its mobile-phone unit from 3.2% to 11.2% through what appeared to some as accounting tricks. What did it do? It wrote down the value of its mobile-phone-unit assets by half. This would normally result in a huge loss. But rather than take a loss, the company wrote up goodwill by the same amount. How did this move increase earnings? The assets were being depreciated over 10 years, but the company amortizes goodwill over 20 years. (Amortization of goodwill was allowed under the accounting standards it followed at that time.) While the new treatment did not break any rules, the company was criticized by investors for not providing sufficient justification or a detailed explanation for the sudden shift in policy.

Source: Andrew Morse and Yukari Iwatani Kane, "SoftBank's Accounting Shift Raises Eyebrows," *Wall Street Journal* (August 28, 2007), p. C1.

Q Which aspects of this treatment are allowed under IFRS? (See page 476.)

Research and Development Costs

Research and development costs are expenditures that may lead to patents, copyrights, new processes, and new products. Many companies spend considerable sums of money on research and development (R&D). For example, in a recent year Bayer (DEU) spent over €2.6 billion on R&D.

Research and development costs present accounting problems as it is sometimes difficult to assign these costs to specific projects. Also, there are uncertainties in identifying the amount and timing of future benefits. Costs in the research phase are always expensed as incurred. Costs in the development phase are expensed until specific criteria are met, primarily that technological feasibility is achieved. Development costs incurred after technological feasibility has been achieved are capitalized to Development Costs, which is considered an intangible asset.

To illustrate, assume that Laser Scanner Ltd. spent NT$1 million on research and NT$2 million on development of new products. Of the NT$2 million in development costs, NT$400,000 was incurred prior to technological feasibility and NT$1,600,000 was incurred after technological feasibility had been demonstrated. The company would record these costs as follows.

Research and Development Expense	1,400,000	
Development Costs	1,600,000	
Cash		3,000,000
(To record research and development costs)		

A	=	L	+	E
				−1,400,000 Exp
+1,600,000				
−3,000,000				

Cash Flows
−3,000,000

DO IT!

Classification Concepts

Match the statement with the term most directly associated with it.

Copyrights	Depletion
Intangible assets	Franchises
Research costs	

1. _______ The allocation of the cost of an extractable natural resource in a rational and systematic manner.
2. _______ Rights, privileges, and competitive advantages that result from the ownership of long-lived assets that do not possess physical substance.
3. _______ An exclusive right granted by a government to reproduce and sell an artistic or published work.
4. _______ A right to sell certain products or services or to use certain trademarks or trade names within a designated geographic area.
5. _______ Costs incurred by a company that often lead to patents or new products. These costs must be expensed as incurred.

Action Plan

✔ Know that the accounting for intangibles often depends on whether the item has a finite or indefinite life.

✔ Recognize the many similarities and differences between the accounting for natural resources, plant assets, and intangible assets.

Solution

1. Depletion.	4. Franchises.
2. Intangible assets.	5. Research costs.
3. Copyrights.	

Related exercise material: **BE9-13, BE9-14, BE9-15, E9-14, E9-15, E9-16, and DO IT! 9-5.**

✔ The Navigator

Statement Presentation and Analysis

Learning Objective 7

Indicate how plant assets, natural resources, and intangible assets are reported.

Presentation

Usually, companies combine plant assets and natural resources under "Property, plant, and equipment" in the statement of financial position. They show intangibles separately. Companies disclose either in the statement of financial position or the notes to the financial statements the balances of the major classes of assets, such as land, buildings, and equipment, and accumulated depreciation by major classes or in total. In addition, they should describe the depreciation and amortization methods that were used, as well as disclose the amount of depreciation and amortization expense for the period.

Illustration 9-23 shows a typical financial statement presentation of property, plant, and equipment and intangibles. The notes to the company's financial statements present greater details about the accounting for its non-current tangible and intangible assets.

Illustration 9-23
Presentation of property, plant, and equipment, and intangible assets

STANDARD LTD.
Statement of Financial Position (partial)
(in billions)

	June 30	
	2017	**2016**
Goodwill and intangible assets		
Goodwill	¥59,700	¥56,500
Trademarks and other intangible assets, net	34,300	33,600
Net goodwill and intangible assets	94,000	90,100
Property, plant, and equipment		
Land	900	900
Buildings	7,000	6,300
Machinery and equipment	30,000	27,000
	37,900	34,200
Accumulated depreciation	(18,000)	(15,100)
Net property, plant, and equipment	¥19,900	¥19,100

Analysis

Using ratios, we can analyze how efficiently a company uses its assets to generate sales. The **asset turnover** analyzes the productivity of a company's assets. It tells us, as shown below for LG (KOR), how many Korean won of sales the company generates for each Korean won invested in assets. This ratio is computed by dividing net sales by average total assets for the period, as shown in Illustration 9-24. LG's net sales for a recent year were ₩58,140 billion. Its total ending assets were ₩35,528 billion, and beginning assets were ₩34,766 billion.

Illustration 9-24
Asset turnover formula and computation

Net Sales	÷	Average Total Assets	=	Asset Turnover
₩58,140	÷	$\frac{₩35,528 + ₩34,766}{2}$	=	1.65 times

Thus, each Korean won invested in assets produced ₩1.65 in sales for LG. If a company is using its assets efficiently, each investment in assets will create a high amount of sales. This ratio varies greatly among different industries—from those that are asset-intensive (utilities) to those that are not (services).

> **DO IT!**

Asset Turnover

Paramour Company reported net income of $180,000, net sales of $420,000, and had total assets of $460,000 on January 1, 2017, and total assets on December 31, 2017, of $540,000 billion. Determine Paramour's asset turnover for 2017.

Action Plan

✔ Recognize that the asset turnover analyzes the productivity of a company's assets.

✔ Know the formula Net sales ÷ Average total assets equals Asset turnover.

Solution

The asset turnover for Paramour Company is computed as follows.

Net Sales	÷	Average Total Assets	=	Asset Turnover
$420,000	÷	$\frac{\$460,000 + \$540,000}{2}$	=	.84

Related exercise material: **BE9-17, E9-17, and DO IT! 9-6.**

✔ The Navigator

APPENDIX 9A Exchange of Plant Assets

Learning Objective *8

Explain how to account for the exchange of plant assets.

Ordinarily, companies record a gain or loss on the exchange of plant assets. The rationale for recognizing a gain or loss is that most exchanges have **commercial substance**. An exchange has commercial substance if the future cash flows change as a result of the exchange.

To illustrate, Ramos Co. exchanges some of its equipment for land held by Brodhead AG. It is likely that the timing and amount of the cash flows arising from the land will differ significantly from the cash flows arising from the equipment. As a result, both Ramos and Brodhead are in different economic positions. Therefore, **the exchange has commercial substance**, and the companies recognize a gain or loss in the exchange. Because most exchanges have commercial substance (even when similar assets are exchanged), we illustrate only this type of situation for both a loss and a gain.

Loss Treatment

To illustrate an exchange that results in a loss, assume that Roland NV exchanged a set of used trucks plus cash for a new semi-truck. The used trucks have a combined book value of €42,000 (cost €64,000 less €22,000 accumulated depreciation). Roland's purchasing agent, experienced in the secondhand market, indicates that the used trucks have a fair value of €26,000. In addition to the trucks, Roland must pay €17,000 for the semi-truck. Roland computes the cost of the semi-truck as follows.

Illustration 9A-1
Cost of semi-truck

Fair value of used trucks	€26,000
Cash paid	17,000
Cost of semi-truck	€43,000

Roland incurs a loss on disposal of plant assets of €16,000 on this exchange. The reason is that the book value of the used trucks is greater than the fair value of these trucks. The computation is as follows.

Illustration 9A-2
Computation of loss on disposal

Book value of used trucks (€64,000 − €22,000)	€ 42,000
Fair value of used trucks	26,000
Loss on disposal of plant assets	**€16,000**

In recording an exchange at a loss, three steps are required: (1) eliminate the book value of the asset given up, (2) record the cost of the asset acquired, and (3) recognize the loss on disposal of plant assets. Roland thus records the exchange on the loss as follows.

A	= L + E
+43,000	
+22,000	
	−16,000 Exp
−64,000	
−17,000	

Cash Flows
−17,000

Equipment (new)	43,000	
Accumulated Depreciation—Equipment	22,000	
Loss on Disposal of Plant Assets	16,000	
Equipment (old)		64,000
Cash		17,000
(To record exchange of used trucks for semi-truck)		

Gain Treatment

To illustrate a gain situation, assume that Mark Express decides to exchange its old delivery equipment plus cash of €3,000 for new delivery equipment. The book value of the old delivery equipment is €12,000 (cost €40,000 less accumulated depreciation €28,000). The fair value of the old delivery equipment is €19,000.

The cost of the new asset is the fair value of the old asset exchanged plus any cash paid (or other consideration given up). The cost of the new delivery equipment is €22,000, computed as follows.

Illustration 9A-3
Cost of new delivery equipment

Fair value of old delivery equipment	€ 19,000
Cash paid	3,000
Cost of new delivery equipment	**€22,000**

A gain results when the fair value of the old delivery equipment is greater than its book value. For Mark Express, there is a gain of €7,000 on disposal of plant assets, computed as follows.

Illustration 9A-4
Computation of gain on disposal

Fair value of old delivery equipment	€19,000
Book value of old delivery equipment (€40,000 − €28,000)	12,000
Gain on disposal of plant assets	**€ 7,000**

Mark Express records the exchange as follows.

A	= L + E
+22,000	
+28,000	
−40,000	
	+7,000 Rev
− 3,000	

Cash Flows
−3,000

Equipment (new)	22,000	
Accumulated Depreciation—Equipment (old)	28,000	
Equipment (old)		40,000
Gain on Disposal of Plant Assets		7,000
Cash		3,000
(To record exchange of old delivery equipment for new delivery equipment)		

In recording an exchange at a gain, the following three steps are involved: (1) eliminate the book value of the asset given up, (2) record the cost of the asset acquired, and (3) recognize the gain on disposal of plant assets. Accounting for exchanges of plant assets becomes more complex if the transaction does not have commercial substance. This issue is discussed in more advanced accounting classes.

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Describe how the historical cost principle applies to plant assets.** The cost of plant assets includes all expenditures necessary to acquire the asset and make it ready for its intended use. Once cost is established, a company uses that amount as the basis of accounting for the plant asset over its useful life.

2 **Explain the concept of depreciation and how to compute it.** Depreciation is the allocation of the cost of a plant asset to expense over its useful (service) life in a rational and systematic manner. Depreciation is not a process of valuation, nor is it a process that results in an accumulation of cash.

Companies make revisions of periodic depreciation in present and future periods, not retroactively. They determine the new annual depreciation by dividing the depreciable cost at the time of the revision by the remaining useful life.

Three depreciation methods are:

Method	Effect on Annual Depreciation	Formula
Straight-line	Constant amount	Depreciable cost ÷ Useful life (in years)
Units-of-activity	Varying amount	Depreciable cost per unit × Units of activity during the year
Declining-balance	Decreasing amount	Book value at beginning of year × Declining-balance rate

3 **Distinguish between revenue and capital expenditures, and explain the entries for each.** Companies incur revenue expenditures to maintain the operating efficiency and productive life of an asset. They debit these expenditures to Maintenance and Repairs Expense as incurred. Capital expenditures increase the operating efficiency, productive capacity, or expected useful life of the asset. Companies generally debit these expenditures to the plant asset affected.

4 **Explain how to account for the disposal of a plant asset.** The accounting for disposal of a plant asset through retirement or sale is as follows. (a) Eliminate the book value of the plant asset at the date of disposal. (b) Record cash proceeds, if any. (c) Account for the difference between the book value and the cash proceeds as a gain or loss on disposal.

5 **Compute periodic depletion of extractable natural resources.** Companies compute depletion cost per unit by dividing the total cost of the natural resource minus residual value by the number of units estimated to be in the resource. They then multiply the depletion cost per unit by the number of units extracted and sold.

6 **Explain the basic issues related to accounting for intangible assets.** The process of allocating the cost of an intangible asset is referred to as amortization. The cost of intangible assets with indefinite lives is not amortized. Companies normally use the straight-line method for amortizing intangible assets.

7 **Indicate how plant assets, natural resources, and intangible assets are reported.** Companies usually combine plant assets and natural resources under property, plant, and equipment. They show intangibles separately under intangible assets. Either within the statement of financial position or in the notes to the financial statements, companies should disclose the balances of the major classes of assets, such as land, buildings, and equipment, and accumulated depreciation by major classes or in total. They also should describe the depreciation and amortization methods used, and should disclose the amount of depreciation and amortization expense for the period. The asset turnover measures the productivity of a company's assets in generating sales.

*8 **Explain how to account for the exchange of plant assets.** Ordinarily, companies record a gain or loss on the exchange of plant assets. The rationale for recognizing a gain or loss is that most exchanges have commercial substance. An exchange has commercial substance if the future cash flows change as a result of the exchange.

GLOSSARY REVIEW

Accelerated-depreciation method Depreciation method that produces higher depreciation expense in the early years than in the later years. (p. 436).

Additions and improvements Costs incurred to increase the operating efficiency, productive capacity, or useful life of a plant asset. (p. 441).

Amortization The allocation of the cost of an intangible asset to expense over its useful life in a systematic and rational manner. (p. 446).

Asset turnover A measure of how efficiently a company uses its assets to generate sales; calculated as net sales divided by average total assets. (p. 450).

Capital expenditures Expenditures that increase the company's investment in productive facilities. (p. 441).

Component depreciation Depreciation method in which any significant parts of a plant asset that have significantly different useful lives are separately depreciated. (p. 437).

Copyrights Exclusive grant from the government that allows the owner to reproduce and sell an artistic or published work. (p. 447).

Declining-balance method Depreciation method that applies a constant rate to the declining book value of the asset and produces a decreasing annual depreciation expense over the useful life of the asset. (p. 436).

Depletion The allocation of the cost of an extractable natural resource to expense in a rational and systematic manner over the resource's useful life. (p. 444).

Depreciable cost The cost of a plant asset less its residual value. (p. 433).

Depreciation The process of allocating to expense the cost of a plant asset over its useful (service) life in a rational and systematic manner. (p. 431).

Franchise (license) A contractual arrangement under which the franchisor grants the franchisee the right to sell certain products, perform specific services, or use certain trademarks or trade names, usually within a designated geographic area. (p. 447).

Going concern assumption States that the company will continue in operation for the foreseeable future. (p. 432).

Goodwill The value of all favorable attributes that relate to a company that is not attributable to any other specific asset. (p. 448).

Intangible assets Rights, privileges, and competitive advantages that result from the ownership of long-lived assets that do not possess physical substance. (p. 446).

Licenses Operating rights to use public property, granted to a business by a governmental agency. (p. 447).

Materiality concept If an item would not make a difference in decision-making, a company does not have to follow IFRS in reporting it. (p. 441).

Natural resources Assets that consist of standing timber and underground deposits of oil, gas, or minerals. (p. 444).

Ordinary repairs Expenditures to maintain the operating efficiency and productive life of the plant asset. (p. 441).

Patent An exclusive right issued by a patent office that enables the recipient to manufacture, sell, or otherwise control an invention for a specified number of years from the date of the grant. (p. 446).

Plant assets Tangible resources that are used in the operations of the business and are not intended for sale to customers. (p. 428).

Research and development (R&D) costs Expenditures that may lead to patents, copyrights, new processes, or new products. (p. 449).

Residual value An estimate of an asset's value at the end of its useful life. (p. 433).

Revenue expenditures Expenditures that are immediately charged against revenues as an expense. (p. 441).

Straight-line method Depreciation method in which periodic depreciation is the same for each year of the asset's useful life. (p. 433).

Trademark (trade name) A word, phrase, jingle, or symbol that identifies a particular enterprise or product. (p. 447).

Units-of-activity method Depreciation method in which useful life is expressed in terms of the total units of production or use expected from an asset. (p. 435).

Useful life An estimate of the expected productive life, also called service life, of an asset. (p. 432).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Erin Danielle Company purchased equipment and incurred the following costs.

Cash price	€24,000
Sales taxes	1,200
Insurance during transit	200
Installation and testing	400
Total costs	€25,800

What amount should be recorded as the cost of the equipment?
(a) €24,000. (c) €25,400.
(b) €25,200. (d) €25,800.

(LO 2) **2.** Depreciation is a process of:
(a) valuation. (c) cash accumulation.
(b) cost allocation. (d) appraisal.

(LO 2) **3.** Micah Bartlett Ltd. purchased equipment on January 1, 2016, at a total invoice cost of £400,000. The equipment has an estimated residual value of £10,000 and an estimated useful life of 5 years. The amount of accumulated depreciation at December 31, 2017, if the straight-line method of depreciation is used, is:
(a) £80,000. (c) £78,000.
(b) £160,000. (d) £156,000.

4. Ann Torbert purchased a truck for €11,000 on January 1, 2016. The truck will have an estimated residual value of €1,000 at the end of 5 years. Using the units-of-activity method, the balance in accumulated depreciation at December 31, 2017, can be computed by the following formula: (LO 2)
(a) (€11,000 ÷ Total estimated activity) × Units of activity for 2017.
(b) (€10,000 ÷ Total estimated activity) × Units of activity for 2017.
(c) (€11,000 ÷ Total estimated activity) × Units of activity for 2016 and 2017.
(d) (€10,000 ÷ Total estimated activity) × Units of activity for 2016 and 2017.

(LO 2) **5.** Chang Company purchased a piece of equipment on January 1, 2017. The equipment cost HK$600,000 and has an estimated life of 8 years and a residual value of HK$80,000. What was the depreciation expense for the asset for 2018 under the double-declining-balance method?
(a) HK$65,000. (c) HK$150,000.
(b) HK$112,500. (d) HK$65,620.

(LO 2) **6.** When there is a change in estimated depreciation:
(a) previous depreciation should be corrected.
(b) current and future years' depreciation should be revised.
(c) only future years' depreciation should be revised.
(d) None of the above.

(LO 2) **7.** Able Towing plc purchased a tow truck for £60,000 on January 1, 2015. It was originally depreciated on a straight-line basis over 10 years with an assumed residual value of £12,000. On December 31, 2017, before adjusting entries had been made, the company decided to change the remaining estimated life to 4 years (including 2017) and the residual value to £2,000. What was the depreciation expense for 2017?
(a) £6,000. (c) £15,000.
(b) £4,800. (d) £12,100.

(LO 2) **8.** Wales plc applies revaluation accounting to equipment that is recorded on its books at €800,000, with €100,000 of accumulated depreciation after depreciation for the year recorded. It has determined that the asset is now worth €775,000. The entry to record the revaluation would include a:
(a) credit to Equipment of €25,000.
(b) debit to Equipment of €75,000.
(c) credit to Accumulated Depreciation of €100,000.
(d) debit to Revaluation Surplus of €75,000.

(LO 3) **9.** Additions to plant assets are:
(a) revenue expenditures.
(b) debited to the Maintenance and Repairs Expense account.
(c) debited to the Purchases account.
(d) capital expenditures.

(LO 4) **10.** Bennie Razor Company has decided to sell one of its old manufacturing machines on June 30, 2017. The machine was purchased for €80,000 on January 1, 2013, and was depreciated on a straight-line basis for 10 years assuming no residual value. If the machine was sold for €26,000, what was the amount of the gain or loss recorded at the time of the sale?
(a) €18,000. (c) €22,000.
(b) €54,000. (d) €46,000.

(LO 5) **11.** Maggie Sharrer Ltd. expects to extract 20 million tons of coal from a mine that cost NT$12 million. If no residual value is expected and 2 million tons are mined in the first year, the entry to record depletion will include a:
(a) debit to Accumulated Depletion of NT$2,000,000.
(b) credit to Depletion Expense of NT$1,200,000.
(c) debit to Inventory of NT$1,200,000.
(d) credit to Accumulated Depletion of NT$2,000,000.

12. Which of the following statements is **false**? (LO 6)
(a) If an intangible asset has a finite life, it should be amortized.
(b) The amortization period of an intangible asset can exceed 20 years.
(c) Goodwill is recorded only when a business is purchased.
(d) Development costs are always expensed when incurred.

13. Indicate which of the following statements is **true**. (LO 7)
(a) Since intangible assets lack physical substance, they need be disclosed only in the notes to the financial statements.
(b) Goodwill should be reported as a contra account in the equity section.
(c) Totals of major classes of assets can be shown in the statement of financial position, with asset details disclosed in the notes to the financial statements.
(d) Intangible assets are typically combined with plant assets and extractable natural resources and shown in the property, plant, and equipment section.

14. Tianzi Coffee Ltd. reported net sales of HK$1,800,000, net income of HK$540,000, beginning total assets of HK$2,000,000, and ending total assets of HK$3,000,000. What was the company's asset turnover? (LO 7)
(a) 0.90. (c) 0.72.
(b) 0.20. (d) 1.39.

***15.** Schopenhauer NV exchanged an old machine, with a book value of €39,000 and a fair value of €35,000, and paid €10,000 cash for a similar new machine. The transaction has commercial substance. At what amount should the machine acquired in the exchange be recorded on Schopenhauer's books? (LO 8)
(a) €45,000. (c) €49,000.
(b) €46,000. (d) €50,000.

***16.** In exchanges of assets in which the exchange has commercial substance: (LO 8)
(a) neither gains nor losses are recognized immediately.
(b) gains, but not losses, are recognized immediately.
(c) losses, but not gains, are recognized immediately.
(d) both gains and losses are recognized immediately.

Solutions

1. (d) All of the costs (€1,200 + €200 + €400) in addition to the cash price (€24,000) should be included in the cost of the equipment because they were necessary expenditures to acquire the asset and make it ready for its intended use. The other choices are therefore incorrect.

2. (b) Depreciation is a process of allocating the cost of an asset over its useful life, not a process of (a) valuation, (c) cash accumulation, or (d) appraisal.

3. (d) Accumulated depreciation will be the sum of 2 years of depreciation expense. Annual depreciation for this asset is (£400,000 − £10,000)/5 = £78,000. The sum of 2 years' depreciation is therefore £156,000 (£78,000 + £78,000), not (a) £80,000, (b) £160,000, or (c) £78,000.

4. (d) The units-of-activity method takes residual value into consideration; therefore, the depreciable cost is €10,000. This amount is divided by total estimated activity. The resulting number is multiplied by the units of activity used in 2016 and 2017 to compute the accumulated depreciation at the end of 2017, the second year of the asset's use. The other choices are therefore incorrect.

5. (b) For the double-declining method, the depreciation rate would be 25% or (1/8 × 2). For 2017, annual depreciation expense is HK$150,000 (HK$600,000 book value × 25%); for 2018, annual depreciation expense is HK$112,500 [(HK$600,000 − HK$150,000) × 25%], not (a) HK$65,000, (c) HK$150,000, or (d) HK$65,620.

6. (b) When there is a change in estimated depreciation, the current and future years' depreciation computation should reflect the new estimates. The other choices are incorrect because (a) previous years' depreciation should not be adjusted when new estimates are made for depreciation, and (c) when there is a change in estimated depreciation, the current and future years' depreciation computation should reflect the new estimates. Choice (d) is wrong because there is a correct answer.

7. (d) First, calculate accumulated depreciation from January 1, 2015, through December 31, 2016, which is £9,600 {[(£60,000 − £12,000)/10 years] × 2 years}. Next, calculate the revised depreciable cost, which is £48,400 (£60,000 − £9,600 − £2,000). Thus, the depreciation expense for 2017 is £12,100 (£48,400/4), not (a) £6,000, (b) £4,800, or (c) £15,000.

8. (a) The entry to record the revaluation would include a credit to Equipment of €25,000, as well as a debit (not credit) to Accumulated Depreciation of €100,000 and a credit (not debit) to Revaluation Surplus of €75,000.

9. (d) When an addition is made to plant assets, it is intended to increase productive capacity, increase the assets' useful life, or increase the efficiency of the assets. This is called a capital expenditure. The other choices are incorrect because (a) additions to plant assets are not revenue expenditures because the additions will have a long-term useful life whereas revenue expenditures are minor repairs and maintenance that do not prolong the life of the assets; (b) additions to plant assets are debited to Plant Assets, not Maintenance and Repairs Expense, because the Maintenance and Repairs Expense account is used to record expenditures not intended to increase the life of the assets; and (c) additions to plant assets are debited to Plant Assets, not Purchases, because the Purchases account is used to record assets intended for resale (inventory).

10. (a) First, the book value needs to be determined. The accumulated depreciation as of June 30, 2017, is €36,000 [(€80,000/10) × 4.5 years]. Thus, the cost of the machine less accumulated depreciation equals €44,000 (€80,000 − €36,000). The loss recorded at the time of sale is €18,000 (€26,000 − €44,000), not (b) €54,000, (c) €22,000, or (d) €46,000.

11. (c) The amount of depletion is determined by computing the depletion per unit (NT$12 million/20 million tons = NT$0.60 per ton) and then multiplying that amount times the number of units extracted during the year (2 million tons × NT$0.60 = NT$1,200,000). This amount is debited to Inventory and credited to Accumulated Depletion. The other choices are therefore incorrect.

12. (d) Development costs are expensed when incurred until technological feasibility is achieved. After that point, development costs are capitalized. The other choices are true statements.

13. (c) Reporting only totals of major classes of assets in the statement of financial position is appropriate. Additional details can be shown in the notes to the financial statements. The other choices are false statements.

14. (c) Asset turnover = Net sales (HK$1,800,000)/Average total assets [(HK$2,000,000 + HK$3,000,000)/2] = 0.72 times, not (a) 0.90, (b) 0.20, or (d) 1.39 times.

***15. (a)** When an exchange has commercial substance, the debit to the new asset is equal to the fair value of the old asset plus the cash paid (€35,000 + €10,000 = €45,000), not (b) €46,000, (c) €49,000, or (d) €50,000.

***16. (d)** Both gains and losses are recognized immediately when an exchange of assets has commercial substance. The other choices are therefore incorrect.

PRACTICE EXERCISES

Determine depreciation for partial periods.

(LO 2)

1. Winston plc purchased a new machine on October 1, 2017, at a cost of £120,000. The company estimated that the machine will have a residual value of £12,000. The machine is expected to be used for 12,000 working hours during its 4-year life.

Instructions

Compute the depreciation expense under the following methods for the year indicated.

(a) Straight-line for 2017.
(b) Units-of-activity for 2017, assuming machine usage was 1,700 hours.
(c) Declining-balance using double the straight-line rate for 2017 and 2018.

Solution

1. (a) Straight-line method:

$$\left(\frac{£120{,}000 - £12{,}000}{4}\right) = £27{,}000 \text{ per year}$$

2017 depreciation = £27,000 × 3/12 = £6,750

(b) Units-of-activity method:

$$\left(\frac{£120{,}000 - £12{,}000}{12{,}000}\right) = £9 \text{ per hour}$$

2017 depreciation = 1,700 hours × £9 = £15,300

(c) Declining-balance method:

2017 depreciation = £120,000 × 50% × 3/12 = £15,000

Book value January 1, 2018 = £120,000 − £15,000 = £105,000

2018 depreciation = £105,000 × 50% = £52,500

2. Sun Moon Lake Ltd., organized in 2017, has the following transactions related to intangible assets.

Prepare entries to set up appropriate accounts for different intangibles; amortize intangible assets.

(LO 6)

1/2/17	Purchased patent (8-year life)	NT$560,000
4/1/17	Goodwill purchased (indefinite life)	360,000
7/1/17	10-year franchise; expiration date 7/1/2027	440,000
9/1/17	Research and development costs	185,000

Instructions

Prepare the necessary entries to record these intangibles. All costs incurred were for cash. Make the adjusting entries as of December 31, 2017, recording any necessary amortization and reflecting all balances accurately as of that date. Assume all development costs were incurred prior to technological feasibility.

Solution

2. 1/2/17	Patents	560,000	
	Cash		560,000
4/1/17	Goodwill	360,000	
	Cash		360,000
	(Part of the entry to record purchase of another company)		
7/1/17	Franchises	440,000	
	Cash		440,000
9/1/17	Research and Development Expense	185,000	
	Cash		185,000
12/31/17	Amortization Expense		
	(NT$560,000 ÷ 8) + [(NT$440,000 ÷ 10) × 1/2]	92,000	
	Patents		70,000
	Franchises		22,000

Ending balances, 12/31/17:
Patents = NT$490,000 (NT$560,000 − NT$70,000)
Goodwill = NT$360,000
Franchises = NT$418,000 (NT$440,000 − NT$22,000)
Research and development expense = NT$185,000

PRACTICE PROBLEMS

1. DuPage SA purchases a factory machine at a cost of €18,000 on January 1, 2017. DuPage expects the machine to have a residual value of €2,000 at the end of its 4-year useful life.

Compute depreciation under different methods.

(LO 2)

During its useful life, the machine is expected to be used 160,000 hours. Actual annual hourly use was 2017, 40,000; 2018, 60,000; 2019, 35,000; and 2020, 25,000.

Instructions

Prepare depreciation schedules for the following methods: (a) straight-line, (b) units-of-activity, and (c) declining-balance using double the straight-line rate.

Solution

1. (a)

Straight-Line Method

	Computation					End of Year	
Year	Depreciable Cost*	×	Depreciation Rate	=	Annual Depreciation Expense	Accumulated Depreciation	Book Value
2017	€16,000		25%		€4,000	€ 4,000	€14,000**
2018	16,000		25%		4,000	8,000	10,000
2019	16,000		25%		4,000	12,000	6,000
2020	16,000		25%		4,000	16,000	2,000

*€18,000 – €2,000.
**€18,000 – €4,000.

(b)

Units-of-Activity Method

	Computation					End of Year	
Year	Units of Activity	×	Depreciable Cost/Unit	=	Annual Depreciation Expense	Accumulated Depreciation	Book Value
2017	40,000		€0.10*		€4,000	€ 4,000	€14,000
2018	60,000		0.10		6,000	10,000	8,000
2019	35,000		0.10		3,500	13,500	4,500
2020	25,000		0.10		2,500	16,000	2,000

*(€18,000 − €2,000) ÷ 160,000.

(c)

Declining-Balance Method

	Computation					End of Year	
Year	Book Value Beginning of Year	×	Depreciation Rate*	=	Annual Depreciation Expense	Accumulated Depreciation	Book Value
2017	€18,000		50%		€9,000	€ 9,000	€9,000
2018	9,000		50%		4,500	13,500	4,500
2019	4,500		50%		2,250	15,750	2,250
2020	2,250		50%		250**	16,000	2,000

*¼ × 2.
**Adjusted to €250 because ending book value should not be less than expected residual value.

Record disposal of plant asset.
(LO 4)

2. On January 1, 2017, Hong Kong International Airport Limousine Co. purchased a limo at an acquisition cost of HK$280,000. The vehicle has been depreciated by the straight-line method using a 4-year service life and a HK$40,000 residual value. The company's fiscal year ends on December 31.

Instructions

Prepare the journal entry or entries to record the disposal of the limousine assuming that it was:

(a) Retired and scrapped with no residual value on January 1, 2021.
(b) Sold for HK$50,000 on July 1, 2020.

Solution

2. (a) 1/1/21	Accumulated Depreciation—Equipment	240,000	
	Loss on Disposal of Plant Assets	40,000	
	Equipment		280,000
	(To record retirement of limousine)		

		Debit	Credit
(b) 7/1/20	Depreciation Expense*	30,000	
	Accumulated Depreciation—Equipment		30,000
	(To record depreciation to date of disposal)		
	Cash	50,000	
	Accumulated Depreciation—Equipment**	210,000	
	Loss on Disposal of Plant Assets	20,000	
	Equipment		280,000
	(To record sale of limousine)		

*[(HK$280,000 − HK$40,000) ÷ 4] × ½.
**[(HK$280,000 − HK$40,000) ÷ 4] × 3 = HK$180,000; HK$180,000 + HK$30,000.

WileyPLUS Brief Exercises, DO IT! Review, Exercises, and Problems, and many additional resources are available for practice in WileyPLUS.

NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendix to the chapter.

QUESTIONS

1. Rick Baden is uncertain about the applicability of the historical cost principle to plant assets. Explain the principle to Rick.
2. What are some examples of land improvements?
3. Lexa Company acquires the land and building owned by Malta Company. What types of costs may be incurred to make the asset ready for its intended use if Lexa Company wants to use (a) only the land, and (b) both the land and the building?
4. In a recent newspaper release, the president of Wanzo OAO asserted that something has to be done about depreciation. The president said, "Depreciation does not come close to accumulating the cash needed to replace the asset at the end of its useful life." What is your response to the president?
5. Jeremy is studying for the next accounting examination. He asks your help on two questions: (a) What is residual value? (b) Is residual value used in determining periodic depreciation under each depreciation method? Answer Jeremy's questions.
6. Contrast the straight-line method and the units-of-activity method as to (a) useful life, and (b) the pattern of periodic depreciation over useful life.
7. Contrast the effects of the three depreciation methods on annual depreciation expense.
8. What is component depreciation, and when must it be used?
9. In the fourth year of an asset's 5-year useful life, the company decides that the asset will have a 6-year service life. How should the revision of depreciation be recorded? Why?
10. What is revaluation of plant assets? When should revaluation be applied?
11. Distinguish between revenue expenditures and capital expenditures during an asset's useful life.
12. How is a gain or loss on the sale of a plant asset computed?
13. Luis SA owns a machine that is fully depreciated but is still being used. How should Luis account for this asset and report it in the financial statements?
14. What are extractable natural resources, and what are their distinguishing characteristics?
15. Explain the concept of depletion and how it is computed.
16. What are the similarities and differences between the terms depreciation, depletion, and amortization?
17. Spectrum Company hires an accounting intern who says that intangible assets should always be amortized over their legal lives. Is the intern correct? Explain.
18. Goodwill has been defined as the value of all favorable attributes that relate to a business. What types of attributes could result in goodwill?
19. Mark Gannon, a business major, is working on a case problem for one of his classes. In the case problem, the company needs to raise cash to market a new product it developed. Sara Bates, an engineering major, takes one look at the company's statement of financial position and says, "This company has an awful lot of goodwill. Why don't you recommend that it sell some of it to raise cash?" How should Mark respond to Sara?
20. Under what conditions is goodwill recorded?
21. Often, research and development costs provide companies with benefits that last a number of years. (For example, these costs can lead to the development of a patent that will increase the company's income for many years.) However, IFRS requires that many such costs be recorded as an expense when incurred. Why?
22. Some product development expenditures are recorded as research and development expenses, and others as development costs. Explain the difference between these accounts, and how a company decides which classification is appropriate.
23. McDonald's Corporation (USA) reports total average assets of $28.9 billion and net sales of $20.5 billion. What is the company's asset turnover?
24. Alpha SE and Zito SE operate in the same industry. Alpha uses the straight-line method to account for depreciation; Zito uses an accelerated method. Explain what complications might arise in trying to compare the results of these two companies.
25. Wanzo ASA uses straight-line depreciation for financial reporting purposes but an accelerated method for tax purposes. Is it acceptable to use different methods for the two purposes? What is Wanzo's motivation for doing this?

26. You are comparing two companies in the same industry. You have determined that Lam Ltd. depreciates its plant assets over a 40-year life, whereas Shuey Ltd. depreciates its plant assets over a 20-year life. Discuss the implications this has for comparing the results of the two companies.
27. Zelm Company is doing significant work to revitalize its warehouses. It is not sure whether it should capitalize these costs or expense them. What are the implications for current-year net income and future net income of expensing versus capitalizing these costs?
*28. When assets are exchanged in a transaction involving commercial substance, how is the gain or loss on disposal of plant assets computed?
*29. Morris Refrigeration Company trades in an old machine on a new model when the fair value of the old machine is greater than its book value. The transaction has commercial substance. Should Morris recognize a gain on disposal of plant assets? If the fair value of the old machine is less than its book value, should Morris recognize a loss on disposal of plant assets?

BRIEF EXERCISES

Determine the cost of land.
(LO 1)

BE9-1 The following expenditures were incurred by Rosenberg AG in purchasing land: cash price €64,000, accrued taxes €3,000, attorneys' fees €2,500, real estate broker's commission €2,000, and clearing and grading €4,400. What is the cost of the land?

Determine the cost of a truck.
(LO 1)

BE9-2 Jawson plc incurs the following expenditures in purchasing a truck: cash price £30,000, accident insurance £2,000, sales taxes £1,800, motor vehicle license £160, and painting and lettering £400. What is the cost of the truck?

Compute straight-line depreciation.
(LO 2)

BE9-3 Weller Company acquires a delivery truck at a cost of €42,000. The truck is expected to have a residual value of €9,000 at the end of its 5-year useful life. Compute annual depreciation expense for the first and second years using the straight-line method.

Compute depreciation and evaluate treatment.
(LO 2)

BE9-4 Kowloon Ltd. purchased land and a building on January 1, 2017. Management's best estimate of the value of the land was HK$1,000,000 and of the building HK$2,000,000. However, management told the accounting department to record the land at HK$2,250,000 and the building at HK$750,000. The building is being depreciated on a straight-line basis over 20 years with no residual value. Why do you suppose management requested this accounting treatment? Is it ethical?

Compute declining-balance depreciation.
(LO 2)

BE9-5 Depreciation information for Weller Company is given in BE9-3. Assuming the declining-balance depreciation rate is double the straight-line rate, compute annual depreciation for the first and second years under the declining-balance method.

Compute depreciation using the units-of-activity method.
(LO 2)

BE9-6 Freemont Taxi Service uses the units-of-activity method in computing depreciation on its taxicabs. Each cab is expected to be driven 150,000 miles. Taxi no. 10 cost €33,500 and is expected to have a residual value of €500. Taxi no. 10 is driven 36,000 miles in year 1 and 22,000 miles in year 2. Compute the depreciation for each year.

Compute depreciation using component method.
(LO 2)

BE9-7 Mandall Ltd. constructed a warehouse for £280,000. Mandall estimates that the warehouse has a useful life of 20 years and no residual value. Construction records indicate that £40,000 of the cost of the warehouse relates to its heating, ventilation, and air conditioning (HVAC) system, which has an estimated useful life of only 8 years. Compute the first year of depreciation expense using straight-line component depreciation.

Compute revised depreciation.
(LO 2)

BE9-8 On January 1, 2017, the Vasquez SA ledger shows Equipment €32,000 and Accumulated Depreciation—Equipment €9,000. The depreciation resulted from using the straight-line method with a useful life of 10 years and residual value of €2,000. On this date, the company concludes that the equipment has a remaining useful life of only 4 years with the same residual value. Compute the revised annual depreciation.

Prepare entries for revaluation of plant assets.
(LO 2)

BE9-9 At the end of its first year of operations, Brianna Company chose to use the revaluation framework allowed under IFRS. Brianna's ledger shows Equipment £480,000 and Accumulated Depreciation—Equipment £60,000. Prepare journal entries to record the following.

(a) Independent appraisers determine that the plant assets have a fair value of £468,000.
(b) Independent appraisers determine that the plant assets have a fair value of £400,000.

Prepare entries for delivery truck costs.
(LO 3)

BE9-10 Tong Company had the following two transactions related to its delivery truck.

1. Paid €45 for an oil change.
2. Paid €580 to install special gear unit, which increases the operating efficiency of the truck.

Prepare Tong's journal entries to record these two transactions.

BE9-11 Prepare journal entries to record the following.

Prepare entries for disposal by retirement.
(LO 4)

(a) Matterhorn AG retires its delivery equipment, which cost CHF44,000. Accumulated depreciation is also CHF44,000 on this delivery equipment. No residual value is received.
(b) Assume the same information as (a), except that accumulated depreciation is CHF37,000, instead of CHF44,000, on the delivery equipment.

BE9-12 Arma Ltd. sells equipment on September 30, 2017, for £20,000 cash. The equipment originally cost £72,000 and as of January 1, 2017, had accumulated depreciation of £42,000. Depreciation for the first 9 months of 2017 is £4,800. Prepare the journal entries to (a) update depreciation to September 30, 2017, and (b) record the sale of the equipment.

Prepare entries for disposal by sale.
(LO 4)

BE9-13 Jackie Chan Mining Co. purchased for ¥7 million a mine that is estimated to have 28 million tons of ore and no residual value. In the first year, 4.7 million tons of ore are extracted.
(a) Prepare the journal entry to record depletion for the first year.
(b) Show how this mine is reported on the statement of financial position at the end of the first year.

Prepare depletion entry and statement of financial position presentation for natural resources.
(LO 5)

BE9-14 Felipe SA purchases a patent for R$120,000 on January 2, 2017. Its estimated useful life is 8 years.
(a) Prepare the journal entry to record amortization expense for the first year.
(b) Show how this patent is reported on the statement of financial position at the end of the first year.

Prepare amortization expense entry and statement of financial position presentation for intangibles.
(LO 6)

BE9-15 Newell Industries spent €260,000 on research and €600,000 on development of a new product. Of the €600,000 in development costs, €400,000 was incurred prior to technological feasibility and €200,000 after technological feasibility had been demonstrated. Prepare the journal entry to record research and development costs.

Prepare entry for research and development costs.
(LO 6)

BE9-16 Information related to plant assets, extractable natural resources, and intangibles at the end of 2017 for Loomis Company is as follows: buildings £1,300,000, accumulated depreciation—buildings £650,000, goodwill £410,000, coal mine £500,000, and accumulated depletion—coal mine £122,000. Prepare a partial statement of financial position of Loomis Company, Ltd. for these items.

Classify long-lived assets on statement of financial position.
(LO 7)

BE9-17 In its 2013 annual report, Target (USA) reported beginning total assets of $48.2 billion; ending total assets of $44.6 billion; and net sales of $72.6 billion. Compute Target's asset turnover.

Analyze long-lived assets.
(LO 7)

***BE9-18** Cordero Company SLU exchanges old delivery equipment for new delivery equipment. The book value of the old delivery equipment is €33,000 (cost €61,000 less accumulated depreciation €28,000). Its fair value is €19,000, and cash of €5,000 is paid. Prepare the entry to record the exchange, assuming the transaction has commercial substance.

Prepare entry for disposal by exchange.
(LO 8)

***BE9-19** Assume the same information as BE9-18, except that the fair value of the old delivery equipment is €37,200. Prepare the entry to record the exchange.

Prepare entry for disposal by exchange.
(LO 8)

> DO IT! REVIEW

DO IT! 9-1 Yockey Company Ltd. purchased a delivery truck. The total cash payment was £28,220 including the following items.

Explain accounting for cost of plant assets.
(LO 1)

Negotiated purchase price	£24,000
Installation of special shelving	1,200
Painting and lettering	780
Motor vehicle license	140
Annual insurance policy	800
Sales tax	1,300
Total paid	£28,220

Explain how each of these costs would be accounted for.

DO IT! 9-2 On January 1, 2017, Rolling Hills Country Club purchased a new riding mower for £18,000. The mower is expected to have an 8-year life with a £2,000 residual value. What journal entry would Rolling Hills make at December 31, 2017, if it uses straight-line depreciation?

Calculate depreciation expense and make journal entry.
(LO 2)

Calculate revised depreciation.
(LO 2)

DO IT! 9-3 Savin NV purchased a piece of equipment for €50,000. It estimated a 5-year life and €2,000 residual value. At the end of year four (before the depreciation adjustment), it estimated the new total life to be 8 years and the new residual value to be €4,000. Compute the revised depreciation.

Make journal entries to record plant asset disposal.
(LO 4)

DO IT! 9-4 Forgetta Manufacturing has old equipment that cost €48,000. The equipment has accumulated depreciation of €28,000. Forgetta has decided to sell the equipment.

(a) What entry would Forgetta make to record the sale of the equipment for €26,000 cash?
(b) What entry would Forgetta make to record the sale of the equipment for €15,000 cash?

Match intangibles classifications concepts.
(LO 6)

DO IT! 9-5 Match the statement with the term most directly associated with it.

(a) Goodwill	(d) Amortization
(b) Intangible assets	(e) Franchises
(c) Development expenses	(f) Development costs

1. ______ Rights, privileges, and competitive advantages that result from the ownership of long-lived assets that do not possess physical substance.
2. ______ The allocation of the cost of an intangible asset to expense in a rational and systematic manner.
3. ______ A right to sell certain products or services, or use certain trademarks or trade names within a designated geographic area.
4. ______ Costs incurred after technological feasibility to complete the development of a new product.
5. ______ The excess of the cost of a company over the fair value of the net assets acquired.
6. ______ Costs incurred after research to bring a new product to a state of technological feasibility.

Calculate asset turnover.
(LO 7)

DO IT! 9-6 For 2017, Sale Company reported beginning total assets of $300,000 and ending total assets of $340,000. Its net income for this period was $50,000, and its net sales were $400,000. Compute the company's asset turnover for 2017.

EXERCISES

Determine cost of plant acquisitions.
(LO 1)

E9-1 The following expenditures (in thousands) relating to plant assets were made by Lee Jung Ltd. during the first 2 months of 2017.

1. Paid ₩5,000 of accrued taxes at time plant site was acquired.
2. Paid ₩400 insurance to cover possible accident loss on new factory machinery while the machinery was in transit.
3. Paid ₩850 sales taxes on new delivery truck.
4. Paid ₩17,500 for parking lots and driveways on new plant site.
5. Paid ₩310 to have company name and advertising slogan painted on new delivery truck.
6. Paid ₩8,000 for installation of new factory machinery.
7. Paid ₩900 for one-year accident insurance policy on new delivery truck.
8. Paid ₩90 motor vehicle license fee on the new truck.

Instructions

(a) Explain the application of the historical cost principle in determining the acquisition cost of plant assets.
(b) List the numbers of the foregoing transactions, and opposite each indicate the account title to which each expenditure should be debited.

Determine property, plant, and equipment costs.
(LO 1)

E9-2 Bliesmer SE incurred the following costs.

1. Sales tax on factory machinery purchased	€ 5,000
2. Painting of and lettering on truck immediately upon purchase	700
3. Installation and testing of factory machinery	2,000
4. Real estate broker's commission on land purchased	3,500
5. Insurance premium paid for first year's insurance on new truck	1,100

6. Cost of landscaping on property purchased	7,200
7. Cost of paving parking lot for new building constructed	17,900
8. Cost of clearing, draining, and filling land	12,600
9. Architect's fees on self-constructed building	10,000

Instructions
Indicate to which account Bliesmer would debit each of the costs.

E9-3 On March 1, 2017, Rollinger Company acquired real estate on which it planned to construct a small office building. The company paid €86,000 in cash. An old warehouse on the property was razed at a cost of €9,400; the salvaged materials were sold for €1,700. Additional expenditures before construction began included €1,100 attorney's fee for work concerning the land purchase, €5,100 real estate broker's fee, €7,800 architect's fee, and €12,700 to put in driveways and a parking lot.

Determine acquisition costs of land.

(LO 1)

Instructions
(a) Determine the amount to be reported as the cost of the land.
(b) For each cost not used in part (a), indicate the account to be debited.

E9-4 Ann Tremel has prepared the following list of statements about depreciation.

Understand depreciation concepts.

(LO 2)

1. Depreciation is a process of asset valuation, not cost allocation.
2. Depreciation provides for the proper matching of expenses with revenues.
3. The book value of a plant asset should approximate its fair value.
4. Depreciation applies to three classes of plant assets: land, buildings, and equipment.
5. Depreciation does not apply to a building because its usefulness and revenue-producing ability generally remain intact over time.
6. The revenue-producing ability of a depreciable asset will decline due to wear and tear and to obsolescence.
7. Recognizing depreciation on an asset results in an accumulation of cash for replacement of the asset.
8. The balance in accumulated depreciation represents the total cost that has been charged to expense.
9. Depreciation expense and accumulated depreciation are reported on the income statement.
10. Three factors affect the computation of depreciation: cost, useful life, and residual value.

Instructions
Identify each statement as true or false. If false, indicate how to correct the statement.

E9-5 Copacabana Bus Lines uses the units-of-activity method in depreciating its buses. One bus was purchased on January 1, 2017, at a cost of R$145,000. Over its 4-year useful life, the bus is expected to be driven 100,000 miles. Residual value is expected to be R$15,000.

Compute depreciation under units-of-activity method.

(LO 2)

Instructions
(a) Compute the depreciable cost per unit.
(b) Prepare a depreciation schedule assuming actual mileage was 2017, 27,000; 2018, 32,000; 2019, 24,000; and 2020, 17,000.

E9-6 Xanadu A/S purchased a new machine on October 1, 2017, at a cost of €96,000. The company estimated that the machine will have a residual value of €12,000. The machine is expected to be used for 10,000 working hours during its 5-year life.

Determine depreciation for partial periods.

(LO 2)

Instructions
Compute the depreciation expense under the following methods for the year indicated.
(a) Straight-line for 2017.
(b) Units-of-activity for 2017, assuming machine usage was 1,700 hours.
(c) Declining-balance using double the straight-line rate for 2017 and 2018.

E9-7 Tanger Company purchased a delivery truck for R$38,000 on January 1, 2017. The truck has an expected residual value of R$6,000, and is expected to be driven 100,000 miles over its estimated useful life of 8 years. Actual miles driven were 15,000 in 2017 and 12,000 in 2018.

Compute depreciation using different methods.

(LO 2)

Instructions

(a) Compute depreciation expense for 2017 and 2018 using (1) the straight-line method, (2) the units-of-activity method, and (3) the double-declining-balance method.

(b) Assume that Tanger uses the straight-line method.
   (1) Prepare the journal entry to record 2017 depreciation.
   (2) Show how the truck would be reported in the December 31, 2017, statement of financial position.

Compute depreciation under component method.
(LO 2)

E9-8 Mooney Ltd. completed construction of an office building for £2,400,000 on December 31, 2016. The company estimated that the building would have a residual value of £0 and a useful life of 40 years. A more detailed review of the expenditures related to the building indicates that £300,000 of the total cost was used for personal property and £180,000 for land improvements. The personal property has a depreciable life of 5 years and land improvements have a depreciable life of 10 years.

Instructions

Compute depreciation expense for 2017 using component depreciation and the straight-line method.

Compute revised annual depreciation.
(LO 2)

E9-9 Steve Grant, the new controller of Greenbriar Ltd., has reviewed the expected useful lives and residual values of selected depreciable assets at the beginning of 2017. His findings are as follows.

Type of Asset	Date Acquired	Cost	Accumulated Depreciation 1/1/17	Total Useful Life in Years		Residual Value	
				Old	Proposed	Old	Proposed
Building	1/1/07	£800,000	£190,000	40	50	£40,000	£18,000
Warehouse	1/1/12	100,000	18,000	25	20	10,000	3,700

All assets are depreciated by the straight-line method. Greenbriar uses a calendar year in preparing annual financial statements. After discussion, management has agreed to accept Grant's proposed changes.

Instructions

(a) Compute the revised annual depreciation on each asset in 2017. (Show computations.)

(b) Prepare the entry (or entries) to record depreciation on the building in 2017.

Journalize entries for straight-line depreciation and revaluation.
(LO 2)

E9-10 Barton Enterprises purchased equipment on January 1, 2017, at a cost of €350,000. Barton uses the straight-line depreciation method, a 5-year estimated useful life, and no residual value. At the end of 2017, independent appraisers determined that the assets have a fair value of €320,000.

Instructions

(a) Prepare the journal entry to record 2017 depreciation using the straight-line method.

(b) Prepare the journal entry to record the revaluation of the equipment.

(c) Prepare the journal entry to record 2018 depreciation, assuming no additional revaluation.

Journalize entries for straight-line depreciation and revaluation.
(LO 2)

E9-11 At December 31, 2017, the end of its first year of operations, Franklin SA chose to use the revaluation framework allowed under IFRS. Franklin's ledger shows Equipment €750,000 and Accumulated Depreciation—Equipment €150,000.

Instructions

(a) Independent appraisers determine that the plant assets have a fair value of €660,000. Record the revaluation.

(b) Using your answer from part (a), what would be the amount of Franklin's 2018 depreciation? Assume no change in the value of Franklin's equipment in 2018, a 4-year remaining life, and no residual value.

(c) Independent appraisers determine that the plant assets have a fair value of €520,000. Record the revaluation. (Ignore your answers to parts (a) and (b).)

(d) Using your answer from part (c), what would be the amount of Franklin's 2018 depreciation? Assume no change in the value of Franklin's equipment in 2018, a 4-year remaining life, and no residual value.

E9-12 Presented below are selected transactions at Ingles Company for 2017.

Journalize entries for disposal of plant assets.

(LO 4)

Jan. 1 Retired a piece of machinery that was purchased on January 1, 2007. The machine cost £58,000 on that date. It had a useful life of 10 years with no residual value.

June 30 Sold a computer that was purchased on January 1, 2014. The computer cost £40,000. It had a useful life of 5 years with no residual value. The computer was sold for £14,600.

Dec. 31 Discarded a delivery truck that was purchased on January 1, 2013. The truck cost £34,000. It was depreciated based on a 6-year useful life with a £4,000 residual value.

Instructions

Journalize all entries required on the above dates, including entries to update depreciation, where applicable, on assets disposed of. Ingles Company uses straight-line depreciation. (Assume depreciation is up to date as of December 31, 2016.)

E9-13 Francis Company owns equipment that cost €50,000 when purchased on January 1, 2014. It has been depreciated using the straight-line method based on an estimated residual value of €8,000 and an estimated useful life of 5 years.

Journalize entries for disposal of equipment.

(LO 4)

Instructions

Prepare Francis Company's journal entries to record the sale of the equipment in these four independent situations.

(a) Sold for €28,000 on January 1, 2017.
(b) Sold for €28,000 on May 1, 2017.
(c) Sold for €11,000 on January 1, 2017.
(d) Sold for €11,000 on October 1, 2017.

E9-14 On July 1, 2017, Ticino AG invested CHF736,000 in a mine estimated to have 800,000 tons of ore of uniform grade. During the last 6 months of 2017, 124,000 tons of ore were mined.

Journalize entries for extractable natural resources depletion.

(LO 5)

Instructions

(a) Prepare the journal entry to record depletion.
(b) Assume that the 124,000 tons of ore were mined, but only 90,000 units were sold. How are the costs applicable to the 34,000 unsold units reported?

E9-15 The following are selected 2017 transactions of Yosuke Ltd.

Prepare adjusting entries for amortization.

(LO 6)

Jan. 1 Purchased a small company and recorded goodwill of €150,000. Its useful life is indefinite.

May 1 Purchased for €84,000 a patent with an estimated useful life of 5 years and a legal life of 20 years.

Instructions

Prepare necessary adjusting entries at December 31 to record amortization required by the events above.

E9-16 Nelson Company, organized in 2017, has the following transactions related to intangible assets.

Prepare entries to set up appropriate accounts for different intangibles; amortize intangible assets.

(LO 6)

1/2/17	Purchased patent (7-year life)	$560,000
4/1/17	Goodwill purchased (indefinite life)	360,000
7/1/17	8-year franchise; expiration date 7/1/2025	440,000
11/1/17	Research and development costs incurred prior to technological feasibility	448,000

Instructions

Prepare the necessary entries to record these intangibles. All costs incurred were for cash. Make the adjusting entries as of December 31, 2017, recording any necessary amortization and reflecting all balances accurately as of that date.

E9-17 During 2017, Otaki Ltd. reported net sales of €5,200,000 and net income of €1,500,000. Its statement of financial position reported average total assets of €1,600,000.

Calculate asset turnover.

(LO 7)

Instructions

Calculate the asset turnover.

Journalize entries for exchanges.
(LO 8)

***E9-18** Presented below are two independent transactions. Both transactions have commercial substance.

1. Global Co. exchanged old trucks (cost £64,000 less £22,000 accumulated depreciation) plus cash of £17,000 for new trucks. The old trucks had a fair value of £37,400.
2. Rijo Ltd. trades its used machine (cost £12,000 less £4,000 accumulated depreciation) for a new machine. In addition to exchanging the old machine (which had a fair value of £9,000), Rijo also paid cash of £3,200.

Instructions
(a) Prepare the entry to record the exchange of assets by Global Co.
(b) Prepare the entry to record the exchange of assets by Rijo Ltd.

Journalize entries for the exchange of plant assets.
(LO 8)

***E9-19** Jay's Delivery Company and Astro's Express Delivery exchanged delivery trucks on January 1, 2017. Jay's truck cost €22,000. It has accumulated depreciation of €16,000 and a fair value of €4,000. Astro's truck cost €10,000. It has accumulated depreciation of €7,000 and a fair value of €4,000. The transaction has commercial substance.

Instructions
(a) Journalize the exchange for Jay's Delivery Company.
(b) Journalize the exchange for Astro's Express Delivery.

PROBLEMS: SET A

Determine acquisition costs of land and building.
(LO 1)

P9-1A Diaz SLU was organized on January 1. During the first year of operations, the following plant asset expenditures and receipts were recorded in random order.

Debit	
1. Cost of filling and grading the land	€ 6,600
2. Full payment to building contractor	780,000
3. Real estate taxes on land paid for the current year	5,000
4. Cost of real estate purchased as a plant site (land €100,000 and building €45,000)	145,000
5. Excavation costs for new building	35,000
6. Architect's fees on building plans	10,500
7. Accrued real estate taxes paid at time of purchase of real estate	2,800
8. Cost of parking lots and driveways	14,000
9. Cost of demolishing building to make land suitable for construction of new building	15,000
	€1,013,900
Credit	
10. Proceeds from salvage of demolished building	€ 3,600

Instructions
Analyze the foregoing transactions using the following column headings. Insert the number of each transaction in the Item column, and then insert the amounts in the other appropriate columns. For amounts entered in the Other Accounts column, also indicate the account titles.

Totals
Land €165,800
Buildings €825,500

Item	Land	Buildings	Other Accounts

Compute depreciation under different methods.
(LO 2)

P9-2A In recent years, Freeman Transportation purchased three used buses. Because of frequent turnover in the accounting department, a different accountant selected the depreciation method for each bus, and various methods were selected. Information concerning the buses is summarized below.

Bus	Acquired	Cost	Residual Value	Useful Life in Years	Depreciation Method
1	1/1/15	£ 96,000	£ 6,000	5	Straight-line
2	1/1/15	140,000	10,000	4	Declining-balance
3	1/1/16	92,000	8,000	5	Units-of-activity

For the declining-balance method, the company uses the double-declining rate. For the units-of-activity method, total miles are expected to be 120,000. Actual miles of use in the first 3 years were 2016, 24,000; 2017, 36,000; and 2018, 31,000.

Instructions

(a) Compute the amount of accumulated depreciation on each bus at December 31, 2017.

(a) Bus 2, 2016, £105,000

(b) If Bus 2 was purchased on April 1 instead of January 1, what is the depreciation expense for this bus in (1) 2015 and (2) 2016?

P9-3A On January 1, 2017, Pele SA purchased the following two machines for use in its production process.

Compute depreciation under different methods.

(LO 2)

Machine A: The cash price of this machine was R$35,000. Related expenditures included: sales tax R$2,200, shipping costs R$150, insurance during shipping R$80, installation and testing costs R$70, and R$100 of oil and lubricants to be used with the machinery during its first year of operations. Pele estimates that the useful life of the machine is 5 years with a R$5,000 residual value remaining at the end of that time period. Assume that the straight-line method of depreciation is used.

Machine B: The recorded cost of this machine was R$80,000. Pele estimates that the useful life of the machine is 4 years with a R$5,000 residual value remaining at the end of that time period.

Instructions

(a) Prepare the following for Machine A.
   (1) The journal entry to record its purchase on January 1, 2017.
   (2) The journal entry to record annual depreciation at December 31, 2017.

(b) Calculate the amount of depreciation expense that Pele should record for Machine B each year of its useful life under the following assumptions.
   (1) Pele uses the straight-line method of depreciation.
   (2) Pele uses the declining-balance method. The rate used is twice the straight-line rate.
   (3) Pele uses the units-of-activity method and estimates that the useful life of the machine is 125,000 units. Actual usage is as follows: 2017, 42,000 units; 2018, 37,000 units; 2019, 28,000 units; and 2020, 18,000 units.

(b) (2) 2017 DDB depreciation R$40,000

(c) Which method used to calculate depreciation on Machine B reports the highest amount of depreciation expense in year 1 (2017)? The highest amount in year 4 (2020)? The highest total amount over the 4-year period?

P9-4A At the beginning of 2015, Mansen plc acquired equipment costing £80,000. It was estimated that this equipment would have a useful life of 6 years and a residual value of £8,000 at that time. The straight-line method of depreciation was considered the most appropriate to use with this type of equipment. Depreciation is to be recorded at the end of each year.

Calculate revisions to depreciation expense.

(LO 2)

During 2017 (the third year of the equipment's life), the company's engineers reconsidered their expectations, and estimated that the equipment's useful life would probably be 7 years (in total) instead of 6 years. The estimated residual value was not changed at that time. However, during 2020 the estimated residual value was reduced to £4,400.

Instructions

Indicate how much depreciation expense should be recorded each year for this equipment, by completing the following table.

Year	**Depreciation Expense**	**Accumulated Depreciation**
2015		
2016		
2017		
2018		
2019		
2020		
2021		

2021 depreciation expense, £11,400

Journalize a series of equipment transactions related to purchase, sale, retirement, and depreciation.
(LO 2, 4, 7)

P9-5A At December 31, 2016, Jimenez SA reported the following as plant assets.

Land		€ 3,000,000
Buildings	€26,500,000	
Less: Accumulated depreciation—buildings	12,100,000	14,400,000
Equipment	40,000,000	
Less: Accumulated depreciation—equipment	5,000,000	35,000,000
Total plant assets		€52,400,000

During 2017, the following selected cash transactions occurred.

April 1	Purchased land for €2,200,000.
May 1	Sold equipment that cost €750,000 when purchased on January 1, 2013. The equipment was sold for €466,000.
June 1	Sold land purchased on June 1, 2007 for €1,800,000. The land cost €300,000.
July 1	Purchased equipment for €2,450,000.
Dec. 31	Retired equipment that cost €500,000 when purchased on December 31, 2007. No residual value was received.

Instructions

(a) Journalize the above transactions. The company uses straight-line depreciation for buildings and equipment. The buildings are estimated to have a 50-year life and no residual value. The equipment is estimated to have a 10-year useful life and no residual value. Update depreciation on assets disposed of at the time of sale or retirement.
(b) Record adjusting entries for depreciation for 2017.
(c) Prepare the plant assets section of Jimenez's statement of financial position at December 31, 2017.

(b) Depreciation Expense—Buildings €530,000; Equipment €3,997,500
(c) Total plant assets €51,772,500

Record disposals
(LO 4)

P9-6A Yount Co. has equipment that cost €50,000 and that has been depreciated €22,000.

Instructions

Record the disposal under the following assumptions.

(a) It was scrapped as having no value.
(b) It was sold for €25,000.
(c) It was sold for €31,000.

Prepare entries to record transactions related to acquisition and amortization of intangibles; prepare the intangible assets section.
(LO 6, 7)

P9-7A The intangible assets section of Glover Ltd. at December 31, 2016, is presented below.

Patents (£60,000 cost less £6,000 amortization)	£54,000
Franchises (£48,000 cost less £19,200 amortization)	28,800
Total	£82,800

The patent was acquired in January 2016 and has a useful life of 10 years. The franchise was acquired in January 2013 and also has a useful life of 10 years. The following cash transactions may have affected intangible assets during 2017.

Jan. 2	Paid £45,000 legal costs to successfully defend the patent against infringement by another company.
Jan.–June	Developed a new product, incurring £100,000 in research costs and £68,000 in development costs prior to technological feasibility. A patent was granted for the product on July 1. Its useful life is equal to its 20-year legal life.
Sept. 1	Paid £58,000 to an extremely large defensive lineman to appear in commercials advertising the company's products. The commercials will air in September and October.
Oct. 1	Acquired a franchise for £100,000. The franchise has a useful life of 40 years.

Instructions

(a) Prepare journal entries to record the transactions above.
(b) Prepare journal entries to record the 2017 amortization expense.
(c) Prepare the intangible assets section of the statement of financial position at December 31, 2017.

(b) Amortization Expense (patents) £11,000 Amortization Expense (franchises) £5,425
(c) Total intangible assets £211,375

Prepare entries to correct errors made in recording and amortizing intangible assets.
(LO 6)

P9-8A Due to rapid turnover in the accounting department, a number of transactions involving intangible assets were improperly recorded by the Buek Company in 2017.

1. Buek developed a new manufacturing process, incurring research costs of €97,000 and development costs prior to technological feasibility of €50,000. The company

also purchased a patent for €60,000. In early January, Buek capitalized €207,000 as the cost of the patents. Patent amortization expense of €10,350 was recorded based on a 20-year useful life.

2. On July 1, 2017, Buek purchased a small company and as a result acquired goodwill of €80,000. Buek recorded a half-year's amortization in 2017, based on a 50-year life (€800 amortization). The goodwill has an indefinite life.

Instructions

Prepare all journal entries necessary to correct any errors made during 2017. Assume the books have not yet been closed for 2017.

Research and Develop. Exp. €147,000

P9-9A Luó Ltd. and Zhào Ltd., two corporations of roughly the same size, are both involved in the manufacture of in-line skates. Each company depreciates its plant assets using the straight-line approach. An investigation of their financial statements reveals the following information.

Calculate and comment on asset turnover.

(LO 7)

	Luó Ltd.	**Zhào Ltd.**
Net income	HK$ 400,000	HK$ 450,000
Sales revenue	1,240,000	1,110,000
Average total assets	2,000,000	1,500,000
Average plant assets	1,500,000	800,000

Instructions

(a) For each company, calculate the asset turnover.

(b) Based on your calculations in part (a), comment on the relative effectiveness of the two companies in using their assets to generate sales and produce net income.

PROBLEMS: SET B

P9-1B Foxx Ltd. was organized on January 1. During the first year of operations, the following plant asset expenditures and receipts were recorded in random order.

Determine acquisition costs of land and building.

(LO 1)

Debit

1.	Accrued real estate taxes paid at time of purchase of real estate	£ 9,000
2.	Real estate taxes on land paid for the current year	6,100
3.	Full payment to building contractor	520,000
4.	Excavation costs for new building	19,000
5.	Cost of real estate purchased as a plant site (land £75,000 and building £25,000)	100,000
6.	Cost of parking lots and driveways	18,000
7.	Architect's fees on building plans	9,000
8.	Installation cost of fences around property	6,000
9.	Cost of demolishing building to make land suitable for construction of new building	19,000
		£706,100

Credit

10.	Proceeds from salvage of demolished building	£ 4,200

Instructions

Analyze the foregoing transactions using the following column headings. Insert the number of each transaction in the Item column, and then insert the amounts in the other appropriate columns. For amounts entered in the Other Accounts column, also indicate the account title.

Item	**Land**	**Buildings**	**Other Accounts**

Totals

Land £123,800

Buildings £548,000

P9-2B In recent years, Wáng Company purchased three machines. Because of heavy turnover in the accounting department, a different accountant was in charge of selecting the

Compute depreciation under different methods.

(LO 2)

depreciation method for each machine, and each selected a different method. Information concerning the machines is summarized below.

Machine	Acquired	Cost	Residual Value	Useful Life in Years	Depreciation Method
1	1/1/14	¥105,000	¥ 5,000	8	Straight-line
2	1/1/15	150,000	10,000	10	Declining-balance
3	11/1/17	100,000	15,000	6	Units-of-activity

For the declining-balance method, the company uses the double-declining rate. For the units-of-activity method, total machine hours are expected to be 25,000. Actual hours of use in the first 3 years were 2017, 1,300; 2018, 4,100; and 2019, 5,500.

Instructions

(a) Machine 2, 2016, ¥54,000

(a) Compute the amount of accumulated depreciation on each machine at December 31, 2017.

(b) If Machine 2 had been purchased on May 1 instead of January 1, what would be the depreciation expense for this machine in (1) 2015 and (2) 2016?

Compute depreciation under different methods.

(LO 2)

P9-3B On January 1, 2017, Abraham SA purchased the following two machines for use in its production process.

Machine A: The cash price of this machine was €55,000. Related expenditures included: sales tax €3,300, shipping costs €325, insurance during shipping €75, installation and testing costs €1,300, and €90 of oil and lubricants to be used with the machinery during its first year of operation. Abraham estimates that the useful life of the machine is 4 years with a €6,000 residual value remaining at the end of that time period.

Machine B: The recorded cost of this machine was €130,000. Abraham estimates that the useful life of the machine is 5 years with a €10,000 residual value remaining at the end of that time period.

Instructions

(a) Prepare the following for Machine A.
   (1) The journal entry to record its purchase on January 1, 2017.

(a) (2) €13,500

   (2) The journal entry to record annual depreciation at December 31, 2017, assuming the straight-line method of depreciation is used.

(b) Calculate the amount of depreciation expense that Abraham should record for Machine B each year of its useful life under the following assumption.
   (1) Abraham uses the straight-line method of depreciation.
   (2) Abraham uses the declining-balance method. The rate used is twice the straight-line rate.
   (3) Abraham uses the units-of-activity method and estimates the useful life of the machine is 24,000 units. Actual usage is as follows: 2017, 4,700 units; 2018, 8,200 units; 2019, 6,800 units; 2020, 2,500 units; and 2021, 1,800 units.

(c) Which method used to calculate depreciation on Machine B reports the lowest amount of depreciation expense in year 1 (2017)? The lowest amount in year 5 (2021)? The lowest total amount over the 5-year period?

Calculate revisions to depreciation expense.

(LO 2)

P9-4B At the beginning of 2015, Bellamy Company acquired equipment costing £60,000. It was estimated that this equipment would have a useful life of 6 years and a residual value of £6,000 at that time. The straight-line method of depreciation was considered the most appropriate to use with this type of equipment. Depreciation is to be recorded at the end of each year.

During 2017 (the third year of the equipment's life), the company's engineers reconsidered their expectations, and estimated that the equipment's useful life would probably be 7 years (in total) instead of 6 years. The estimated residual value was not changed at that time. However, during 2020 the estimated residual value was reduced to £3,000.

Instructions

Indicate how much depreciation expense should be recorded for this equipment each year by completing the following table.

Year	Depreciation Expense	Accumulated Depreciation
2015		
2016		
2017		
2018		
2019		
2020		
2021		

2021 depreciation expense, £8,700

Journalize a series of equipment transactions related to purchase, sale, retirement, and depreciation.

(LO 2, 4, 7)

P9-5B At December 31, 2016, Durango Ltd. reported the following as plant assets.

Land		£ 2,000,000
Buildings	£28,500,000	
Less: Accumulated depreciation—buildings	12,100,000	16,400,000
Equipment	30,000,000	
Less: Accumulated depreciation—equipment	4,000,000	26,000,000
Total plant assets		£44,400,000

During 2017, the following selected cash transactions occurred.

Mar. 1	Purchased land for £1,350,000.
April 1	Sold equipment that cost £420,000 when purchased on January 1, 2013. The equipment was sold for £248,000.
June 1	Sold land purchased on June 1, 2007, for £1,000,000. The land cost £310,000.
Oct. 1	Purchased equipment for £1,260,000.
Dec. 31	Retired equipment that cost £300,000 when purchased on December 31, 2007. No residual value was received.

Instructions

(a) Journalize the above transactions. Durango uses straight-line depreciation for buildings and equipment. The buildings are estimated to have a 50-year useful life and no residual value. The equipment is estimated to have a 10-year useful life and no residual value. Update depreciation on assets disposed of at the time of sale or retirement.
(b) Record adjusting entries for depreciation for 2017.
(c) Prepare the plant assets section of Durango's statement of financial position at December 31, 2017.

(b) Depreciation Expense—Buildings £570,000; Equipment £2,959,500
(c) Total plant assets £42,888,500

Record disposals.

(LO 4)

P9-6B Vermeer NV has equipment that cost €40,000 and that has been depreciated €29,000.

Instructions

Record the disposal under the following assumptions.

(a) It was scrapped as having no value.
(b) It was sold for €24,000.
(c) It was sold for €10,000.

Prepare entries to record transactions related to acquisition and amortization of intangibles; prepare the intangible assets section.

(LO 6, 7)

P9-7B The intangible assets section of Whitley Company at December 31, 2016, is presented below.

Patents (£100,000 cost less £10,000 amortization)	£ 90,000
Copyrights (£80,000 cost less £32,000 amortization)	48,000
Total	£138,000

The patent was acquired in January 2016 and has a useful life of 10 years. The copyright was acquired in January 2013 and also has a useful life of 10 years. The following cash transactions may have affected intangible assets during 2017.

Jan. 2	Paid £48,600 legal costs to successfully defend the patent against infringement by another company.
Jan.–June	Developed a new product, incurring £110,000 in research costs and £120,000 in development costs prior to technological feasibility. A patent was granted for the product on July 1. Its useful life is equal to its legal life.
Sept. 1	Paid £125,000 to an X-Games star to appear in commercials advertising the company's products. The commercials will air in September and October.
Oct. 1	Acquired a copyright for £192,000. The copyright has a useful life of 40 years.

(b) Amortization Expense (patents) £15,400; Amortization Expense (copyrights) £9,200

(c) Total intangible assets, £354,000

Instructions

(a) Prepare journal entries to record the transactions above.
(b) Prepare journal entries to record the 2017 amortization expense for intangible assets.
(c) Prepare the intangible assets section of the statement of financial position at December 31, 2017.
(d) Prepare the note to the financials on Whitley's intangibles as of December 31, 2017.

Prepare entries to correct errors made in recording and amortizing intangible assets.

(LO 6)

P9-8B Due to rapid turnover in the accounting department, a number of transactions involving intangible assets were improperly recorded by Kaya A.Ş. in 2017.

1. Kaya developed a new manufacturing process, incurring research and development costs of ₺110,000 before reaching technological feasibility. The company also purchased a patent for ₺70,000. In early January, Kaya capitalized ₺180,000 as the cost of the patents. Patent amortization expense of ₺9,000 was recorded based on a 20-year useful life.
2. On July 1, 2017, Kaya purchased a small company and as a result acquired goodwill of ₺200,000. Kaya recorded a half-year's amortization in 2017, based on a 40-year life (₺2,500 amortization). The goodwill has an indefinite life.

Research and Develop. Exp. ₺110,000

Instructions

Prepare all journal entries necessary to correct any errors made during 2017. Assume the books have not yet been closed for 2017.

Calculate and comment on asset turnover.

(LO 7)

P9-9B Ling Ltd. and Tseng Ltd., two corporations of roughly the same size, are both involved in the manufacture of canoes and sea kayaks. Each company depreciates its plant assets using the straight-line approach. An investigation of their financial statements reveals the following information.

	Ling Ltd.	Tseng Ltd.
Net income	NT$ 9,000,000	NT$ 9,750,000
Sales revenue	36,000,000	27,900,000
Average total assets	30,000,000	30,600,000
Average plant assets	22,500,000	23,100,000

Instructions

(a) For each company, calculate the asset turnover.
(b) Based on your calculations in part (a), comment on the relative effectiveness of the two companies in using their assets to generate sales and produce net income.

COMPREHENSIVE PROBLEM: CHAPTERS 3 TO 9

CP9 Raymond Company's trial balance at December 31, 2017, is presented below. All 2017 transactions have been recorded except for the items described below and on page 473.

	Debit	Credit
Cash	£ 28,000	
Accounts Receivable	36,800	
Notes Receivable	10,000	
Interest Receivable	−0−	
Inventory	36,200	
Prepaid Insurance	4,400	
Land	20,000	
Buildings	160,000	
Equipment	60,000	
Patents	8,000	
Allowance for Doubtful Accounts		£ 300
Accumulated Depreciation—Buildings		49,000
Accumulated Depreciation—Equipment		24,000

	Debit	Credit
Accounts Payable		28,300
Income Taxes Payable		–0–
Salaries and Wages Payable		–0–
Unearned Rent Revenue		6,000
Notes Payable (due in 2018)		11,000
Interest Payable		–0–
Notes Payable (due after 2018)		35,000
Share Capital—Ordinary		50,000
Retained Earnings		63,600
Dividends	12,000	
Sales Revenue		910,000
Interest Revenue		–0–
Rent Revenue		–0–
Gain on Disposal of Plant Assets		–0–
Bad Debt Expense	–0–	
Cost of Goods Sold	630,000	
Depreciation Expense	–0–	
Income Tax Expense	–0–	
Insurance Expense	–0–	
Interest Expense	–0–	
Other Operating Expenses	61,800	
Amortization Expense	–0–	
Salaries and Wages Expense	110,000	
Total	£1,177,200	£1,177,200

Unrecorded transactions:

1. On May 1, 2017, Raymond purchased equipment for £13,000 plus sales taxes of £780 (all paid in cash).
2. On July 1, 2017, Raymond sold for £3,500 equipment which originally cost £5,000. Accumulated depreciation on this equipment at January 1, 2017, was £1,800; 2017 depreciation prior to the sale of the equipment was £450.
3. On December 31, 2017, Raymond sold on account £9,400 of inventory that cost £6,600.
4. Raymond estimates that uncollectible accounts receivable at year-end is £4,000.
5. The note receivable is a one-year, 8% note dated April 1, 2017. No interest has been recorded.
6. The balance in prepaid insurance represents payment of a £4,400 6-month premium on October 1, 2017.
7. The building is being depreciated using the straight-line method over 40 years. The residual value is £20,000.
8. The equipment owned prior to this year is being depreciated using the straight-line method over 5 years. The residual value is 10% of cost.
9. The equipment purchased on May 1, 2017, is being depreciated using the straight-line method over 5 years, with a residual value of £1,000.
10. The patent was acquired on January 1, 2017, and has a useful life of 10 years from that date.
11. Unpaid salaries and wages at December 31, 2017, total £2,200.
12. The unearned rent revenue of £6,000 was received on December 1, 2017, for 4 months rent.
13. Both the short-term and long-term notes payable are dated January 1, 2017, and carry a 9% interest rate. All interest is payable in the next 12 months.
14. Income tax expense was £17,000. It was unpaid at December 31.

Instructions

(a) Prepare journal entries for the transactions listed above.

(b) Prepare a December 31, 2017, adjusted (entries 4–14 are adjustments) trial balance. — (b) Totals £1,228,294

(c) Prepare a 2017 income statement and a 2017 retained earnings statement. — (c) Net income £68,256

(d) Prepare a December 31, 2017, classified statement of financial position. — (d) Total assets £271,996

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–8.)

MC9 Mei-ling is also thinking of buying a van that will be used only for business. Mei-ling is concerned about the impact of the van's cost on her income statement and statement of financial position. She has come to you for advice on calculating the van's depreciation.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP9-1 The financial statements of TSMC are presented in Appendix A. The notes to the financial statements appear in the 2013 annual report, which can be found in the Investors section of the company's website, *www.tsmc.com*.

Instructions
Refer to TSMC's financial statements and answer the following questions.

(a) What was the total cost and book value of property, plant, and equipment at December 31, 2013?
(b) What method or methods of depreciation are used by the company for financial reporting purposes?
(c) What was the amount of depreciation expense for each of the years 2013 and 2012?
(d) Using the statement of cash flows, what is the amount of capital spending in 2013 and 2012?
(e) Where does the company disclose its intangible assets, and what types of intangibles did it have at December 31, 2013?

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP9-2 Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C.

Instructions
(a) Compute the asset turnover for each company for the most recent fiscal year presented.
(b) What conclusions concerning the efficiency of assets can be drawn from these data?

Real-World Focus

BYP9-3 ***Purpose:*** Use an annual report to identify a company's plant assets and the depreciation method used.

Address: **www.annualreports.com**, or go to **www.wiley.com/college/weygandt**

Steps
1. Select a particular company.
2. Search by company name.
3. Follow instructions below.

Instructions
Answer the following questions.

(a) What is the name of the company?
(b) What is the Internet address of the annual report?
(c) At fiscal year-end, what is the net amount of its plant assets?
(d) What is the accumulated depreciation?
(e) Which method of depreciation does the company use?

Critical Thinking

Decision-Making Across the Organization

BYP9-4 Givens Company and Runge Company are two companies that are similar in many respects. One difference is that Givens Company uses the straight-line method, and Runge Company uses the declining-balance method at double the straight-line rate. On January 2, 2015, both companies acquired the following depreciable assets.

Asset	Cost	Residual Value	Useful Life
Buildings	£320,000	£20,000	40 years
Equipment	125,000	10,000	10 years

Including the appropriate depreciation charges, annual net income for the companies in the years 2015, 2016, and 2017 and total income for the 3 years were as follows.

	2015	2016	2017	Total
Givens Company	£84,000	£88,400	£90,000	£262,400
Runge Company	68,000	76,000	85,000	229,000

At December 31, 2017, the statements of financial position of the two companies are similar except that Runge Company has more cash than Givens Company.

Linda Yanik is interested in buying one of the companies. She comes to you for advice.

Instructions

With the class divided into groups, answer the following.

(a) Determine the annual and total depreciation recorded by each company during the 3 years.

(b) Assuming that Runge Company also uses the straight-line method of depreciation instead of the declining-balance method as in (a), prepare comparative income data for the 3 years.

(c) Which company should Linda Yanik buy? Why?

Communication Activity

BYP9-5 The following was published with the financial statements to American Exploration Company (USA).

AMERICAN EXPLORATION COMPANY
Notes to the Financial Statements

Property, Plant, and Equipment—The Company accounts for its oil and gas exploration and production activities using the successful efforts method of accounting. Under this method, acquisition costs for proved and unproved properties are capitalized when incurred. . . . The costs of drilling exploratory wells are capitalized pending determination of whether each well has discovered proved reserves. If proved reserves are not discovered, such drilling costs are charged to expense. . . . Depletion of the cost of producing oil and gas properties is computed on the units-of-activity method.

Instructions

Write a brief memo to your instructor discussing American Exploration Company's note regarding property, plant, and equipment. Your memo should address what is meant by the "successful efforts method" and "units-of-activity method."

Ethics Case

BYP9-6 Dieker Container AG is suffering declining sales of its principal product, non-biodegradeable plastic cartons. The president, Edward Mohling, instructs his controller, Betty Fetters, to lengthen asset lives to reduce depreciation expense. A processing line of automated plastic extruding equipment, purchased for €3.1 million in January 2017, was originally estimated to have a useful life of 8 years and a residual value of €300,000. Depreciation has been recorded for 2 years on that basis. Edward wants the estimated life changed to 12 years total, and the straight-line method continued. Betty is hesitant to make the change, believing it is unethical to increase net income in this manner. Edward says, "Hey, the life is only an estimate, and I've heard that our competition uses a 12-year life on their production equipment."

Instructions

(a) Who are the stakeholders in this situation?
(b) Is the change in asset life unethical, or is it simply a good business practice by an astute president?
(c) What is the effect of Edward Mohling's proposed change on income before taxes in the year of change?

Answers to Insight and Accounting Across the Organization Questions

p. 431 Many Firms Use Leases Q: Why might airline managers choose to lease rather than purchase their planes? **A:** The reasons for leasing include favorable tax treatment, better financing options, increased flexibility, reduced risk of obsolescence, and often less debt shown on the statement of financial position.

p. 445 Sustainability Report Please Q: Why do you believe companies issue sustainability reports? **A:** It is important that companies clearly describe the things they value in addition to overall profitability. Most companies recognize that the health, safety, and environmental protections of their workforce and community are important components in developing strategies for continued growth and longevity. Without a strong commitment to the principles of corporate social responsibility, it is unlikely that a company will be able to maintain long-term stability and profitability. The development of a sustainability report helps companies to consider these issues and develop measures to assess whether they are meeting their goals in this area.

p. 448 Should Companies Write Up Goodwill? Q: Which aspects of this treatment are allowed under IFRS? **A:** The write-down of assets is allowed if it could be shown that the assets had declined in value (an impairment). However, the creation of goodwill to offset the write-down would not be allowed. Goodwill can be recorded only when it results from the acquisition of a business. It cannot be recorded as the result of being created internally. Also, goodwill is not amortized under IFRS.

A Look at U.S. GAAP

Learning Objective 9

Compare the accounting for long-lived assets under IFRS and U.S. GAAP.

GAAP follows most of the same principles as IFRS in the accounting for property, plant, and equipment. There are, however, some significant differences in the implementation: IFRS allows the use of revaluation of property, plant, and equipment, and it also requires the use of component depreciation. In addition, there are some significant differences in the accounting for both intangible assets and impairments.

Key Points

- Under both GAAP and IFRS, changes in the depreciation method used and changes in useful life are handled in current and future periods. Prior periods are not affected. GAAP recently conformed to IFRS in the accounting for changes in depreciation methods.
- The accounting for plant asset disposals is essentially the same under GAAP and IFRS.
- Initial costs to acquire natural resources are essentially the same under GAAP and IFRS.
- The definition of intangible assets is essentially the same under GAAP and IFRS.

- The accounting for exchanges of non-monetary assets has converged between IFRS and GAAP. GAAP now requires that gains on exchanges of non-monetary assets be recognized if the exchange has commercial substance. This is the same framework used in IFRS.
- Both IFRS and GAAP follow the historical cost principle when accounting for property, plant, and equipment at date of acquisition. Cost consists of all expenditures necessary to acquire the asset and make it ready for its intended use.
- Under both GAAP and IFRS, interest costs incurred during construction are capitalized. Recently, IFRS converged to GAAP requirements in this area.

Similarities

- The definition for plant assets for both GAAP and IFRS is essentially the same.
- GAAP, like IFRS, capitalizes all direct costs in self-constructed assets such as raw materials and labor. IFRS does not address the capitalization of fixed overhead although in practice these costs are generally capitalized.
- GAAP also views depreciation as an allocation of cost over an asset's useful life. GAAP permits the same depreciation methods (e.g., straight-line, accelerated, and units-of-activity) as IFRS.
- The accounting for subsequent expenditures, such as ordinary repairs and additions, are essentially the same under GAAP and IFRS.

Differences

- Under GAAP, an item of property, plant, and equipment with multiple parts is generally depreciated over the useful life of the total asset. Thus, component depreciation is generally not used. However, GAAP permits companies to use component depreciation.
- GAAP uses the term **salvage value**, rather than residual value, to refer to an owner's estimate of an asset's value at the end of its useful life for that owner.
- IFRS allows companies to revalue plant assets to fair value at the reporting date.
- As in IFRS, under GAAP the costs associated with research and development are segregated into the two components. Costs in the research phase are always expensed under both GAAP and IFRS. Under IFRS, however, costs in the development phase are capitalized as Development Costs once technological feasibility is achieved. Under GAAP, all development costs are expensed as incurred.
- IFRS permits revaluation of intangible assets (except for goodwill). GAAP prohibits revaluation of intangible assets.
- IFRS requires an impairment test at each reporting date for plant assets and intangibles and records an impairment if the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell or its value-in-use. Value-in-use is the future cash flows to be derived from the particular asset, discounted to present value. Under GAAP, impairment loss is measured as the excess of the carrying amount over the asset's fair value.
- IFRS allows reversal of impairment losses when there has been a change in economic conditions or in the expected use of the asset. Under GAAP, impairment losses cannot be reversed for assets to be held and used; the impairment loss results in a new cost basis for the asset. IFRS and GAAP are similar in the accounting for impairments of assets held for disposal.

Looking to the Future

With respect to revaluations, as part of the conceptual framework project, the Boards will examine the measurement bases used in accounting. It is too early to say whether a converged conceptual framework will recommend fair value measurement (and revaluation accounting) for plant assets and intangibles. However, this is likely to be one of the more contentious issues, given the long-standing use of historical cost as a measurement basis in GAAP.

The IASB and FASB have identified a project that would consider expanded recognition of internally generated intangible assets. IFRS permits more recognition of intangibles compared to GAAP. Thus, it will be challenging to develop converged standards for intangible assets, given the long-standing prohibition on capitalizing internally generated intangible assets and research and development costs in GAAP.

GAAP Practice

GAAP Self-Test Questions

1. Which of the following statements is **correct**?
   (a) Both IFRS and GAAP permit revaluation of property, plant, and equipment and intangible assets (except for goodwill).
   (b) IFRS permits revaluation of property, plant, and equipment and intangible assets (except for goodwill).
   (c) Both IFRS and GAAP permit revaluation of property, plant, and equipment but not intangible assets.
   (d) GAAP permits revaluation of property, plant, and equipment but not intangible assets.
2. Rando Company has land that cost $450,000 but now has a fair value of $600,000. Rando Company follows GAAP to account for the land. Which of the following statements is **correct**?
   (a) Rando Company must continue to report the land at $450,000.
   (b) Rando Company would report a net income increase of $150,000 due to an increase in the value of the land.
   (c) Rando Company would report the land at $600,000.
   (d) Rando Company would credit Retained Earnings by $150,000.
3. Francisco Corporation is constructing a new building at a total initial cost of $10,000,000. The building is expected to have a useful life of 50 years with no salvage value. The building's finished surfaces (e.g., roof cover and floor cover) are 5% of this cost and have a useful life of 20 years. Building services systems (e.g., electric, heating, and plumbing) are 20% of the cost and have a useful life of 25 years. The depreciation in the first year using GAAP (without component depreciation), assuming straight-line depreciation with no salvage value, is:
   (a) $200,000.
   (b) $215,000.
   (c) $255,000.
   (d) None of the above.
4. Research and development costs are:
   (a) expensed under GAAP.
   (b) expensed under IFRS.
   (c) expensed under both GAAP and IFRS.
   (d) None of the above.
5. Value-in-use is defined as:
   (a) net realizable value.
   (b) fair value.
   (c) future cash flows discounted to present value.
   (d) total future undiscounted cash flows.

GAAP Exercises

GAAP9-1 Is component depreciation required under IFRS and GAAP? Explain.

GAAP9-2 What is revaluation of plant assets? Should revaluation be applied under GAAP?

GAAP9-3 Some product development expenditures are recorded as development expenses and others as development costs. Explain the difference between these accounts and how development costs are reported under GAAP.

GAAP9-4 Mandall Company constructed a warehouse for $280,000. Mandall estimates that the warehouse has a useful life of 20 years and no salvage (residual) value. Construction records indicate that $40,000 of the cost of the warehouse relates to its heating, ventilation, and air conditioning (HVAC) system, which has an estimated useful life of only 10 years. Compute the first year of depreciation expense using straight-line component depreciation using IFRS. How might GAAP differ from IFRS?

GAAP9-5 Newell Industries spent $300,000 on research and $600,000 on development of a new product. Of the $600,000 in development costs, $400,000 was incurred prior to technological feasibility and $200,000 after technological feasibility had been demonstrated. (a) Prepare the journal entry to record research and development costs under IFRS. (b) Prepare the journal entry to record research and development costs under GAAP.

GAAP Financial Statement Analysis: Apple Inc.

GAAP9-6 The financial statements of Apple are presented in Appendix D.

Instructions

Use the company's financial statements and notes to the financial statements, available at *http://investor.apple.com*, to answer the following questions.

(a) What were the total cost and book value of property, plant, and equipment at September 28, 2013?
(b) What method or methods of depreciation are used by Apple for financial reporting purposes?
(c) What was the amount of depreciation and amortization expense for each of the 3 years 2011–2013? (*Hint:* Use the statement of cash flows.)
(d) Using the statement of cash flows, what are the amounts of property, plant, and equipment purchased (capital expenditures) in 2013 and 2012?
(e) Explain how Apple accounted for its intangible assets in 2013.

Answers to GAAP Self-Test Questions

1. b **2.** a **3.** a **4.** a **5.** c

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✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER

10 Liabilities

FEATURE STORY Financing His Dreams

What would you do if you had a great idea for a new product but couldn't come up with the cash to get the business off the ground? Small businesses often cannot attract investors. Nor can they obtain traditional debt financing through bank loans or bond issuances. Instead, they often resort to unusual, and costly, forms of non-traditional financing.

Such was the case for Wilbert Murdock. Murdock grew up in a low-income housing project but always had high goals. His entrepreneurial spirit led him into some business ventures that failed, such as a device to keep people from falling asleep while driving. Another idea was computerized golf clubs that analyze a golfer's swing and provide immediate feedback. Murdock saw great potential in the idea. Many golfers are willing to shell out considerable sums of money for devices that might improve their game. But Murdock had no cash to develop his product, and banks and other lenders had shied away. Rather than give up, Murdock resorted to credit cards—in a big way. He quickly owed $25,000 to credit card companies.

While funding a business with credit cards might sound unusual, it isn't. A recent study by the London-based Institute of Directors found that more than half of companies seeking bank financing had been turned down. About 20% of the 1,000 companies studied relied, at least in part, on credit card financing.

Murdock's credit card debt forced him to sacrifice nearly everything in order to keep his business afloat. His car stopped running, he barely had enough money to buy food, and he lived and worked out of a dimly lit apartment in his mother's basement. Through it all he tried to maintain a positive spirit, joking that, if he becomes successful, he might some day get to appear in an American Express (USA) commercial.

Sources: Rodney Ho, "Banking on Plastic: To Finance a Dream, Many Entrepreneurs Binge on Credit Cards," *Wall Street Journal* (March 9, 1998), p. A1; Brian Groom, "Banks Fail to Help Half of Companies, Say IoD," *Financial Times Online (FT.com)* (February 16, 2010).

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- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 510–515
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Explain a current liability, and identify the major types of current liabilities.
2. Describe the accounting for notes payable.
3. Explain the accounting for other current liabilities.
4. Explain why bonds are issued, and identify the types of bonds.
5. Prepare the entries for the issuance of bonds and interest expense.
6. Describe the entries when bonds are redeemed.
7. Describe the accounting for long-term notes payable.
8. Identify the methods for the presentation and analysis of non-current liabilities.

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PREVIEW OF CHAPTER 10

Inventor-entrepreneur Wilbert Murdock, as you can tell from the Feature Story, had to use multiple credit cards to finance his business ventures. Murdock's credit card debts would be classified as **current liabilities** because they are due every month. Yet, by making minimal payments and paying high interest each month, Murdock used this credit source long-term. Some credit card balances remain outstanding for years as they accumulate interest.

Earlier, we defined liabilities as creditors' claims on total assets and as existing debts and obligations. These claims, debts, and obligations must be settled or paid at some time **in the future** by the transfer of assets or services. The future date on which they are due or payable (maturity date) is a significant feature of liabilities. This "future date" feature gives rise to two basic classifications of liabilities: (1) current liabilities and (2) non-current liabilities. Our discussion in this chapter is divided into these two classifications.

The content and organization of Chapter 10 are as follows.

LIABILITIES

Current Liabilities	Non-Current Liabilities
• What is a current liability? • Notes payable • Sales taxes payable • Unearned revenues • Current maturities of long-term debt • Statement presentation and analysis	• Bond basics • Determining the market price of a bond • Accounting for bond issues • Accounting for bond redemptions • Accounting for long-term notes payable • Statement presentation and analysis

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Current Liabilities

Learning Objective 1

Explain a current liability, and identify the major types of current liabilities.

What Is a Current Liability?

You have learned that liabilities are defined as "creditors' claims on total assets" and as "existing debts and obligations." Companies must settle or pay these claims, debts, and obligations at some time in the future by transferring assets or services. The future date on which they are due or payable (the maturity date) is a significant feature of liabilities.

As explained in Chapter 4, a **current liability** is a debt that a company expects to pay within one year or the operating cycle, whichever is longer. Debts that do not meet this criterion are **non-current liabilities**.

Financial statement users want to know whether a company's obligations are current or non-current. A company that has more current liabilities than current assets often lacks liquidity, or short-term debt-paying ability. In addition, users want to know the types of liabilities a company has. If a company declares bankruptcy, a specific, predetermined order of payment to creditors exists. Thus, the amount and type of liabilities are of critical importance.

The different types of current liabilities include notes payable, accounts payable, unearned revenues, and accrued liabilities such as taxes, salaries and wages, and interest payable. In the sections that follow, we discuss common types of current liabilities.

Notes Payable

Learning Objective 2

Describe the accounting for notes payable.

Companies record obligations in the form of written notes as **notes payable**. Notes payable are often used instead of accounts payable because they give the lender formal proof of the obligation in case legal remedies are needed to collect the debt. Companies frequently issue notes payable to meet short-term financing needs. Notes payable usually require the borrower to pay interest.

Notes are issued for varying periods of time. **Those due for payment within one year of the statement of financial position date are usually classified as current liabilities.**

To illustrate the accounting for notes payable, assume that Hong Kong National Bank agrees to lend HK$100,000 on September 1, 2017, if C. W. Co. signs a HK$100,000, 12%, four-month note maturing on January 1. When a company issues an interest-bearing note, the amount of assets it receives upon issuance of the note generally equals the note's face value. C. W. Co. therefore will receive HK$100,000 cash and will make the following journal entry.

A	=	L	+	E
+100,000				
		+100,000		

Cash Flows
+100,000

Sept. 1	Cash	100,000	
	Notes Payable		100,000
	(To record issuance of 12%, 4-month note to Hong Kong National Bank)		

Interest accrues over the life of the note, and the company must periodically record that accrual. If C. W. Co. prepares financial statements annually, it makes an adjusting entry at December 31 to recognize interest expense and interest payable of HK$4,000 (HK$100,000 × 12% × 4/12). Illustration 10-1 shows the formula for computing interest and its application to C. W. Co.'s note.

Illustration 10-1
Formula for computing interest

Face Value of Note	×	Annual Interest Rate	×	Time in Terms of One Year	=	Interest
HK$100,000	×	12%	×	4/12	=	HK$4,000

C. W. Co. makes an adjusting entry as follows.

Dec. 31	Interest Expense	4,000	
	Interest Payable		4,000
	(To accrue interest for 4 months on Hong Kong National Bank note)		

A	=	L	+	E
				−4,000 Exp
		+4,000		

Cash Flows
no effect

In the December 31 financial statements, the current liabilities section of the statement of financial position will show notes payable HK$100,000 and interest payable HK$4,000. In addition, the company will report interest expense of HK$4,000 under "Other income and expense" in the income statement. If C. W. Co. prepared financial statements monthly, the adjusting entry at the end of each month would have been HK$1,000 (HK$100,000 × 12% × 1/12).

At maturity (January 1, 2018), C. W. Co. must pay the face value of the note (HK$100,000) plus HK$4,000 interest (HK$100,000 × 12% × 4/12). It records payment of the note and accrued interest as follows.

Jan. 1	Notes Payable	100,000	
	Interest Payable	4,000	
	Cash		104,000
	(To record payment of Hong Kong National Bank interest-bearing note and accrued interest at maturity)		

A	=	L	+	E
		−100,000		
		−4,000		
−104,000				

Cash Flows
−104,000

Sales Taxes Payable

Learning Objective 3
Explain the accounting for other current liabilities.

Many of the products we purchase at retail stores are subject to sales taxes.[1] Many governments also are now collecting sales taxes on purchases made on the Internet as well. Sales taxes are expressed as a percentage of the sales price. The selling company collects the tax from the customer when the sale occurs. Periodically (usually monthly), the retailer remits the collections to the government's department of revenue.

Under most government sales tax laws, the selling company must enter separately on the cash register the amount of the sale and the amount of the sales tax collected. The company then uses the cash register readings to credit Sales Revenue and Sales Taxes Payable. For example, if the March 25 cash register reading for Cooley Grocery shows sales of NT$10,000 and sales taxes of NT$600 (sales tax rate of 6%), the journal entry is as follows.

Mar. 25	Cash	10,600	
	Sales Revenue		10,000
	Sales Taxes Payable		600
	(To record daily sales and sales taxes)		

A	=	L	+	E
+10,600				
				+10,000 Rev
		+600		

Cash Flows
+10,600

When the company remits the taxes to the taxing agency, it debits Sales Taxes Payable and credits Cash. The company does not report sales taxes as an expense. It simply forwards to the government the amount paid by the customers. Thus, Cooley Grocery serves only as a **collection agent** for the taxing authority.

Sometimes companies do not enter sales taxes separately in the cash register. To determine the amount of sales in such cases, divide total receipts by 100% plus the sales tax percentage. For example, assume that Cooley Grocery enters total receipts of NT$10,600. The receipts from the sales are equal to the sales price (100%) plus the tax percentage (6% of sales), or 1.06 times the sales total. We can compute the sales amount as follows.

$$\text{NT\$10,600} \div 1.06 = \text{NT\$10,000}$$

[1] Instead of a sales tax, many countries use a **value-added tax (VAT)**. This tax is placed on a product or service whenever value is added at a stage of production and at final sale. A VAT is a cost to the end-user, normally an individual consumer, similar to a sales tax.

• HELPFUL HINT
For point-of-sale systems, the company receives sales information through the computer network.

Thus, we can find the sales tax amount of NT$600 by either (1) subtracting sales from total receipts (NT$10,600 − NT$10,000) or (2) multiplying sales by the sales tax rate (NT$10,000 × .06).

Unearned Revenues

An airline company, such as Qantas Airways (AUS), often receives cash when it sells tickets for future flights. A magazine publisher, such as Finance Asia (HKG), receives customers' payments when they order magazines. Season tickets for concerts, sporting events, and theater programs are also paid for in advance. How do companies account for unearned revenues that are received before goods are delivered or services are performed?

1. When a company receives the advance payment, it debits Cash and credits a current liability account identifying the source of the unearned revenue.
2. When the company recognizes revenue, it debits an unearned revenue account and credits a revenue account.

To illustrate, assume that the Busan IPark (KOR) sells 10,000 season football tickets at ₩50,000 each for its five-game home schedule. The club makes the following entry for the sale of season tickets (in thousands of ₩).

A	=	L	+	E
+500,000				
		+500,000		

Cash Flows
+500,000

Aug. 6	Cash	500,000	
	Unearned Ticket Revenue		500,000
	(To record sale of 10,000 season tickets)		

As each game is completed, Busan IPark records the recognition of revenue with the following entry (in thousands of ₩).

A	=	L	+	E
		−100,000		
				+100,000 Rev

Cash Flows
no effect

Sept. 7	Unearned Ticket Revenue	100,000	
	Ticket Revenue		100,000
	(To record football ticket revenue)		

The account Unearned Ticket Revenue represents unearned revenue, and Busan IPark reports it as a current liability. As the club recognizes revenue, it reclassifies the amount from unearned revenue to Ticket Revenue. Unearned revenue is substantial for some companies. In the airline industry, for example, tickets sold for future flights represent almost 50% of total current liabilities. At United Airlines (USA), unearned ticket revenue is its largest current liability, recently amounting to over $1 billion.

Illustration 10-2 shows specific unearned revenue and revenue accounts used in selected types of businesses.

Illustration 10-2
Unearned revenue and revenue accounts

Type of Business	Account Title: Unearned Revenue	Account Title: Revenue
Airline	Unearned Ticket Revenue	Ticket Revenue
Magazine publisher	Unearned Subscription Revenue	Subscription Revenue
Hotel	Unearned Rent Revenue	Rent Revenue

Current Maturities of Long-Term Debt

Companies often have a portion of long-term debt that comes due in the current year. That amount is considered a current liability. As an example, assume that Wendy Construction issues a five-year, interest-bearing €25,000 note on

January 1, 2017. This note specifies that each January 1, starting January 1, 2018, Wendy should pay €5,000 of the note. When the company prepares financial statements on December 31, 2017, it should report €5,000 as a current liability and €20,000 as a non-current liability. (The €5,000 amount is the portion of the note that is due to be paid within the next 12 months.) Companies often identify current maturities of long-term debt on the statement of financial position as **long-term debt due within one year**.

It is not necessary to prepare an adjusting entry to recognize the current maturity of long-term debt. At the statement of financial position date, all obligations due within one year are classified as current, and all other obligations as non-current.

> DO IT!

Current Liabilities

Action Plan

✔ Use the interest formula: Face value of note × Annual interest rate × Time in terms of one year.

✔ Divide total receipts by 100% plus the tax rate to determine sales revenue; then subtract sales revenue from the total receipts.

✔ Determine what fraction of the total unearned rent should be recognized this year.

You and several classmates are studying for the next accounting examination. They ask you to answer the following questions.

1. If cash is borrowed on a $50,000, 6-month, 12% note on September 1, how much interest expense would be incurred by December 31?
2. How is the sales tax amount determined when the cash register total includes sales taxes?
3. If $15,000 is collected in advance on November 1 for 3 months' rent, what amount of rent revenue is recognized by December 31?

Solution

1. $50,000 × 12% × 4/12 = $2,000
2. First, divide the total cash register receipts by 100% plus the sales tax percentage to find the sales revenue amount. Second, subtract the sales revenue amount from the total cash register receipts to determine the sales taxes.
3. $15,000 × 2/3 = $10,000

Related exercise material: **BE10-2, BE10-3, BE10-4, E10-1, E10-2, E10-3, E10-4, and DO IT! 10-1.**

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Statement Presentation and Analysis

PRESENTATION

As indicated in Chapter 4, current liabilities are presented after non-current liabilities on the statement of financial position. Each of the principal types of current liabilities is listed separately. In addition, companies disclose the terms of notes payable and other key information about the individual items in the notes to the financial statements.

Companies seldom list current liabilities in the order of liquidity. The reason is that varying maturity dates may exist for specific obligations such as notes payable. A more common method of presenting current liabilities is to list them by **order of magnitude**, with the largest ones first. Or, as a matter of custom, many companies show notes payable first and then accounts payable, regardless of amount. Then the remaining current liabilities are listed by magnitude. Illustration 10-3 (page 486) shows this form of presentation.

ANALYSIS

Use of current and non-current classifications makes it possible to analyze a company's liquidity. **Liquidity** refers to the ability to pay maturing obligations and

Illustration 10-3
Statement of financial position presentation of current liabilities (in thousands)

CROIX COMPANY
Statement of Financial Position
December 31, 2017
(partial, in thousands)

Current liabilities	
Short-term borrowings (notes payable)	€ 4,157
Accounts payable	3,990
Long-term debt due within one year	3,531
Accrued expenses	1,847
Accrued wages, salaries, and employee benefits	1,730
Customer advances	555
Deferred and current income taxes payable	259
Dividends payable	141
Total current liabilities	€16,210

• HELPFUL HINT
For other examples of current liabilities sections, refer to the TSMC and Nestlé statements of financial position in Appendices A and B.

meet unexpected needs for cash. The relationship of current assets to current liabilities is critical in analyzing liquidity. We can express this relationship as an amount of currency (working capital) and as a ratio (the current ratio).

The excess of current assets over current liabilities is **working capital**. Illustration 10-4 shows the formula for the computation of Croix Company's working capital, assuming current assets were €20,856 (euro amounts in thousands).

Illustration 10-4
Working capital formula and computation (in thousands)

Current Assets	−	Current Liabilities	=	Working Capital
€20,856	−	€16,210	=	€4,646

As an absolute euro amount, working capital offers limited informational value. For example, €1 million of working capital may be far more than needed for a small company but inadequate for a large corporation. Also, €1 million of working capital may be adequate for a company at one time but inadequate at another time.

The **current ratio** permits us to compare the liquidity of different-sized companies and of a single company at different times. The current ratio is calculated as current assets divided by current liabilities. Illustration 10-5 shows the formula for this ratio, along with its computation using Croix Company's current asset and current liability data (euro amounts in thousands).

Illustration 10-5
Current ratio formula and computation (in thousands)

Current Assets	÷	Current Liabilities	=	Current Ratio
€20,856	÷	€16,210	=	1.29:1

Historically, companies and analysts considered a current ratio of 2:1 to be the standard for a good credit rating. In recent years, however, many healthy companies have maintained ratios well below 2:1 by improving management of their current assets and liabilities. Croix Company's ratio of 1.29:1 is adequate but certainly below the standard of 2:1.

Non-Current Liabilities

Learning Objective 4

Explain why bonds are issued, and identify the types of bonds.

Non-current liabilities are obligations that a company expects to pay more than one year in the future. In this section, we explain the accounting for the principal types of obligations reported in the non-current liabilities section of the statement of financial position. These obligations often are in the form of bonds or long-term notes.

Bond Basics

Bonds are a form of interest-bearing notes payable. To obtain **large amounts of long-term capital**, corporate management usually must decide whether to issue ordinary shares (equity financing) or bonds. Bonds offer three advantages over ordinary shares, as shown in Illustration 10-6.

Illustration 10-6
Advantages of bond financing over ordinary shares

Bond Financing	Advantages
	1. **Shareholder control is not affected.** Bondholders do not have voting rights, so current owners (shareholders) retain full control of the company.
	2. **Tax savings result.** In some countries, bond interest is deductible for tax purposes; dividends on shares are not.
Income Statement / **EPS**	3. **Earnings per share may be higher.** Although bond interest expense reduces net income, earnings per share on ordinary shares often is higher under bond financing because no additional shares are issued.

As Illustration 10-6 shows, one reason to issue bonds is that they do not affect shareholder control. Because bondholders do not have voting rights, owners can raise capital with bonds and still maintain corporate control. In addition, bonds are attractive to corporations because the cost of bond interest is tax-deductible in some countries. As a result of this tax treatment, which share dividends do not offer, bonds may result in a lower cost of financing than equity financing.

To illustrate the third advantage, on earnings per share, assume that Microsystems AG is considering two plans for financing the construction of a new €5 million plant. Plan A involves issuance of 200,000 ordinary shares at the current market price of €25 per share. Plan B involves issuance of €5 million, 8% bonds at face value. Income before interest and taxes on the new plant will be €1.5 million. Income taxes are expected to be 30%. Microsystems currently has 100,000 ordinary shares outstanding. Illustration 10-7 shows the alternative effects on earnings per share.

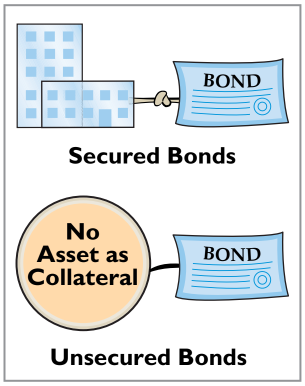
Illustration 10-7
Effects on earnings per share—equity vs. debt

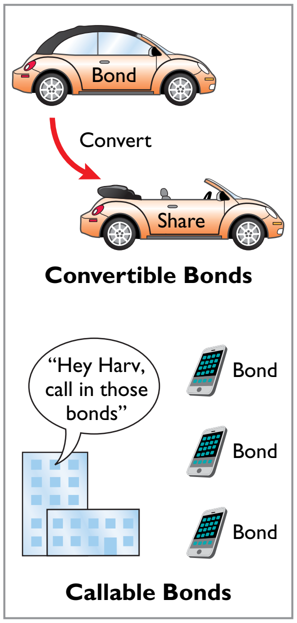
	Plan A Issue Shares	Plan B Issue Bonds
Income before interest and taxes	€1,500,000	€1,500,000
Interest (8% × €5,000,000)	—	400,000
Income before income taxes	1,500,000	1,100,000
Income tax expense (30%)	450,000	330,000
Net income	€1,050,000	€ 770,000
Outstanding shares	300,000	100,000
Earnings per share	**€3.50**	**€7.70**

Note that net income is €280,000 less (€1,050,000 − €770,000) with long-term debt financing (bonds). However, earnings per share is higher because there are 200,000 fewer ordinary shares outstanding.

One disadvantage in using bonds is that the company must **pay interest** on a periodic basis. In addition, the company must also **repay the principal** at the

• HELPFUL HINT
Besides corporations, governmental agencies and universities also issue bonds to raise capital.





due date. A company with fluctuating earnings and a relatively weak cash position may have great difficulty making interest payments when earnings are low.

A corporation may also obtain long-term financing from notes payable and leasing. However, notes payable and leasing are seldom sufficient to furnish the amount of funds needed for plant expansion and major projects like new buildings.

Bonds are sold in relatively small denominations (usually €1,000 multiples). As a result of their size and the variety of their features, bonds attract many investors.

TYPES OF BONDS

Bonds may have many different features. In the following sections, we describe the types of bonds commonly issued.

SECURED AND UNSECURED BONDS **Secured bonds** have specific assets of the issuer pledged as collateral for the bonds. A bond secured by real estate, for example, is called a **mortgage bond**. A bond secured by specific assets set aside to redeem (retire) the bonds is called a **sinking fund bond**.

Unsecured bonds, also called **debenture bonds**, are issued against the general credit of the borrower. Companies with good credit ratings use these bonds extensively. For example, at one time, DuPont (USA) reported over $2 billion of debenture bonds outstanding.

CONVERTIBLE AND CALLABLE BONDS Bonds that can be converted into ordinary shares at the bondholder's option are **convertible bonds**. The conversion feature generally is attractive to bond buyers. Bonds that the issuing company can redeem (buy back) at a stated currency amount (call price) prior to maturity are **callable bonds**. A call feature is included in nearly all corporate bond issues.

ISSUING PROCEDURES

Governmental laws grant corporations the power to issue bonds. Both the board of directors and shareholders usually must approve bond issues. **In authorizing the bond issue, the board of directors must stipulate the number of bonds to be authorized, total face value, and contractual interest rate.** The total bond authorization often exceeds the number of bonds the company originally issues. This gives the corporation the flexibility to issue more bonds, if needed, to meet future cash requirements.

The **face value** is the amount of principal the issuing company must pay at the maturity date. The **maturity date** is the date that the final payment is due to the investor from the issuing company. The **contractual interest rate**, often referred to as the **stated rate**, is the rate used to determine the amount of cash interest the issuing company pays and the investor receives. Usually the contractual rate is stated as an annual rate.

The terms of the bond issue are set forth in a legal document called a **bond indenture**. The indenture shows the terms and summarizes the rights of the bondholders and their trustees, and the obligations of the issuing company. The **trustee** (usually a financial institution) keeps records of each bondholder, maintains custody of unissued bonds, and holds conditional title to pledged property.

In addition, the issuing company arranges for the printing of **bond certificates**. The indenture and the certificate are separate documents. As shown in Illustration 10-8, a bond certificate provides the following information: name of the issuer, face value, contractual interest rate, and maturity date. An investment company that specializes in selling securities generally sells the bonds for the issuing company.

BOND TRADING

Bondholders have the opportunity to convert their holdings into cash at any time by selling the bonds at the current market price on national securities exchanges.

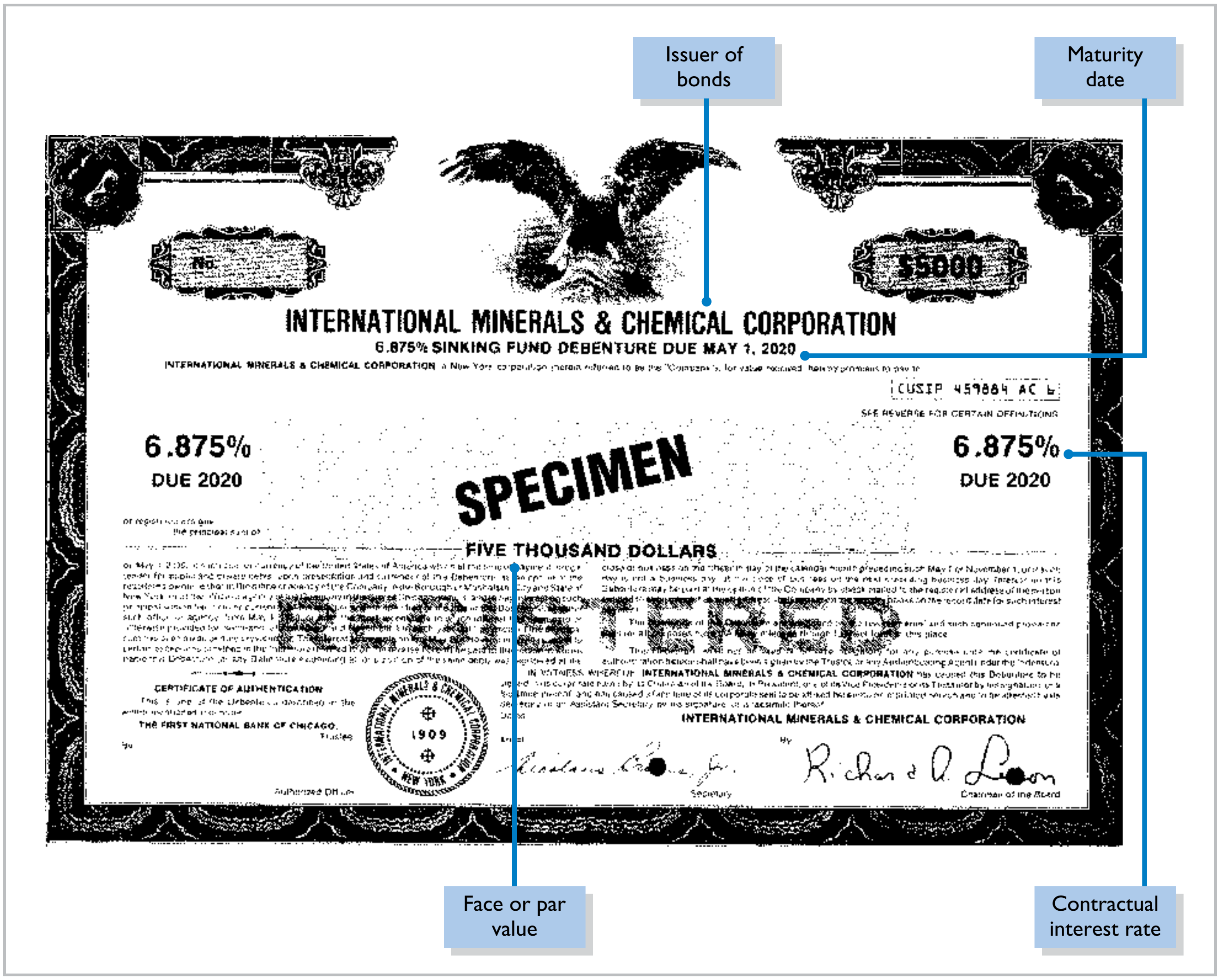


Illustration 10-8
Bond certificate

Bond prices are quoted as a percentage of the face value of the bond, which is usually $1,000. A $1,000 bond with a quoted price of 97 means that the selling price of the bond is 97% of face value, or $970. Newspapers and the financial press publish bond prices and trading activity daily as shown in Illustration 10-9.

Illustration 10-9
Market information for bonds

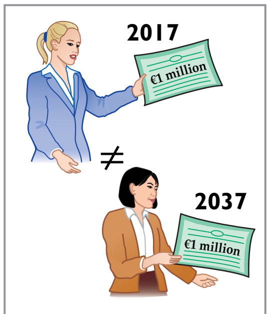
Bonds	Maturity	Close	Yield	Est. Volume (000)
Boeing Co. 5.125	Feb. 15, 2017	96.595	5.747	33,965

This bond listing indicates that Boeing Co. (USA) has outstanding 5.125%, $1,000 bonds that mature in 2017. They currently yield a 5.747% return. On this day, $33,965,000 of these bonds were traded. At the close of trading, the price was 96.595% of face value, or $965.95.

A corporation makes journal entries **only when it issues or buys back bonds**, or when bondholders convert bonds into ordinary shares. For example, Siemens (DEU) **does not journalize** transactions between its bondholders and other investors. If Tom Smith sells his Siemens bonds to Faith Jones, Siemens does not journalize the transaction.

• HELPFUL HINT
The price of a $1,000 bond trading at 95¼ is $952.50. The price of a $1,000 bond trading at 101⅞ is $1,018.75.

Determining the Market Price of a Bond



Same euros at different times are not equal.

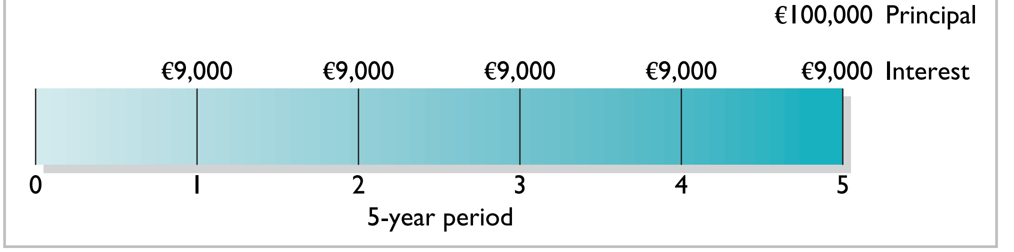
If you were an investor wanting to purchase a bond, how would you determine how much to pay? To be more specific, assume that Coronet AG issues a **zero-interest bond** (pays no interest) with a face value of €1,000,000 due in 20 years. For this bond, the only cash you receive is a million euros at the end of 20 years. Would you pay a million euros for this bond? We hope not! A million euros received 20 years from now is not the same as a million euros received today.

The term **time value of money** is used to indicate the relationship between time and money—that a euro received today is worth more than a euro promised at some time in the future. If you had €1 million today, you would invest it. From that investment, you would earn interest such that at the end of 20 years, you would have much more than €1 million. Thus, if someone is going to pay you €1 million 20 years from now, you would want to find its equivalent today, or its present value. In other words, you would want to determine the value today of the amount to be received in the future after taking into account current interest rates.

The current market price (present value) of a bond is the value at which it should sell in the marketplace. Market price therefore is a function of the three factors that determine present value: (1) the amounts to be received, (2) the length of time until the amounts are received, and (3) the market interest rate. The **market interest rate** is the rate investors demand for loaning funds.

To illustrate, assume that Acropolis SA on January 1, 2017, issues €100,000 of 9% bonds, due in five years, with interest payable annually at year-end. The purchaser of the bonds would receive the following two types of cash payments: (1) **principal** of €100,000 to be paid at maturity, and (2) five €9,000 **interest payments** (€100,000 × 9%) over the term of the bonds. Illustration 10-10 shows a time diagram depicting both cash flows.

Illustration 10-10
Time diagram depicting cash flows



The current market price of a bond is equal to the present value of all the future cash payments promised by the bond. Illustration 10-11 lists and totals the present values of these amounts, assuming the market rate of interest is 9%.

Illustration 10-11
Computing the market price of bonds

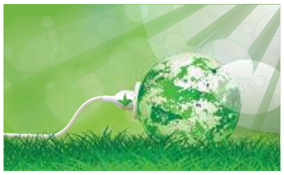
Present value of €100,000 received in 5 years	€ 64,993
Present value of €9,000 received annually for 5 years	35,007
Market price of bonds	**€100,000**

Tables are available to provide the present value numbers to be used, or these values can be determined mathematically or with financial calculators.[2] Appendix E, near the end of the textbook, provides further discussion of the concepts and the mechanics of the time value of money computations.

[2]For those knowledgeable in the use of present value tables, the computations in the example shown in Illustration 10-11 are €100,000 × .64993 = €64,993, and €9,000 × 3.88965 = €35,007 (rounded).

People, Planet, and Profit Insight How About Some Green Bonds?

Unilever (GBR and NLD)



CarpathianPrince

Unilever (GBR and NLD) recently began producing popular frozen treats such as Magnums and Cornettos, funded by green bonds. Green bonds are debt used to fund activities such as renewable-energy projects. In Unilever's case, the proceeds from the sale of green bonds are used to clean up the company's manufacturing operations and cut waste (such as related to energy consumption).

The use of green bonds has taken off as companies now have guidelines as to how to disclose and report on these green-bond proceeds. These standardized disclosures provide transparency as to how these bonds are used and their effect on overall profitability.

Investors are taking a strong interest in these bonds. Investing companies are installing socially responsible investing teams and have started to integrate sustainability into their investment processes. The disclosures of how companies are using the bond proceeds help investors to make better financial decisions.

Source: Ben Edwards, "Green Bonds Catch On." *Wall Street Journal* (April 3, 2014), p. C5.

Q Why might standardized disclosure help investors to better understand how proceeds from the sale or issuance of bonds are used? (See page 532.)

DO IT!

Bond Terminology

State whether each of the following statements is true or false. If false, indicate how to correct the statement.

________ 1. Mortgage bonds and sinking fund bonds are both examples of secured bonds.
________ 2. Unsecured bonds are also known as debenture bonds.
________ 3. The stated rate is the rate investors demand for loaning funds.
________ 4. The face value is the amount of principal the issuing company must pay at the maturity date.
________ 5. The bond issuer must make journal entries to record transfers of its bonds among investors.

Action Plan

✔ Review the types of bonds and the basic terms associated with bonds.

Solution

1. True. 2. True. 3. False. The stated rate is the contractual interest rate used to determine the amount of cash interest the borrower pays. 4. True. 5. False. The bond issuer makes journal entries only when it issues or buys back bonds, when it records interest, and when convertible bonds are converted to shares.

Related exercise material: **BE10-5, E10-6, E10-7, and DO IT! 10-2.**

✔ The Navigator

Accounting for Bond Issues

Learning Objective 5

Prepare the entries for the issuance of bonds and interest expense.

As indicated earlier, a corporation records bond transactions when it issues (sells) or redeems (buys back) bonds and when bondholders convert bonds into ordinary shares. If bondholders sell their bond investments to other investors, the issuing company receives no further money on the transaction, **nor does the issuing company journalize the transaction** (although it does keep records of the names of bondholders in some cases).

Bonds may be issued at face value, below face value (discount), or above face value (premium). Bond prices for both new issues and existing bonds are quoted as **a percentage of the face value of the bond**. **Face value is usually €1,000.** Thus, a €1,000 bond with a quoted price of 97 means that the selling price of the bond is 97% of face value, or €970.

ISSUING BONDS AT FACE VALUE

To illustrate the accounting for bonds issued at face value, assume that on January 1, 2017, Candlestick AG issues €100,000, five-year, 10% bonds at 100 (100% of face value). The entry to record the sale is as follows.

A = L + E
+100,000
+100,000
Cash Flows
+100,000

Jan. 1	Cash	100,000	
	Bonds Payable		100,000
	(To record sale of bonds at face value)		

Candlestick reports bonds payable in the non-current liabilities section of the statement of financial position because the maturity date is January 1, 2022 (more than one year away).

Over the term (life) of the bonds, companies make entries to record bond interest. Interest on bonds payable is computed in the same manner as interest on notes payable, as explained on page 482. Assume that interest is payable annually on January 1 on the Candlestick bonds. In that case, Candlestick accrues interest of €10,000 (€100,000 × 10%) on December 31. At December 31, Candlestick recognizes the €10,000 of interest expense incurred with the following entry.

A = L + E
−10,000 Exp
+10,000
Cash Flows
no effect

Dec. 31	Interest Expense	10,000	
	Interest Payable		10,000
	(To accrue bond interest)		

The company classifies interest payable as a current liability because it is scheduled for payment within the next year. When Candlestick pays the interest on January 1, 2018, it debits (decreases) Interest Payable and credits (decreases) Cash for €10,000.

Candlestick records the payment on January 1 as follows.

A = L + E
−10,000
−10,000
Cash Flows
−10,000

Jan. 1	Interest Payable	10,000	
	Cash		10,000
	(To record payment of bond interest)		

DISCOUNT OR PREMIUM ON BONDS

The Candlestick example assumed that the contractual (stated) interest rate and the market (effective) interest rate paid on the bonds were the same. Recall that the **contractual interest rate** is the rate applied to the face (par) value to arrive at the interest paid in a year. The **market interest rate** is the rate investors demand for loaning funds to the corporation. When the contractual interest rate and the market interest rate are the same, bonds sell **at face value (par value)**.

However, market interest rates change daily. The type of bond issued, the state of the economy, current industry conditions, and the company's performance all affect market interest rates. As a result, contractual and market interest rates often differ. To make bonds salable when the two rates differ, bonds sell below or above face value.

To illustrate, suppose that a company issues 10% bonds at a time when other bonds of similar risk are paying 12%. Investors will not be interested in buying the 10% bonds, so their value will fall below their face value. When a bond is sold for less than its face value, the difference between the face value of a bond and its selling price is called a **discount**. As a result of the decline in the bonds' selling price, the actual interest rate incurred by the company increases to the level of the current market interest rate.

Conversely, if the market rate of interest is **lower than** the contractual interest rate, investors will have to pay more than face value for the bonds. That is, if the market rate of interest is 8% but the contractual interest rate on the bonds is 10%, the price of the bonds will be bid up. When a bond is sold for more than its face value, the difference between the face value and its selling price is called a **premium**. Illustration 10-12 shows these relationships.

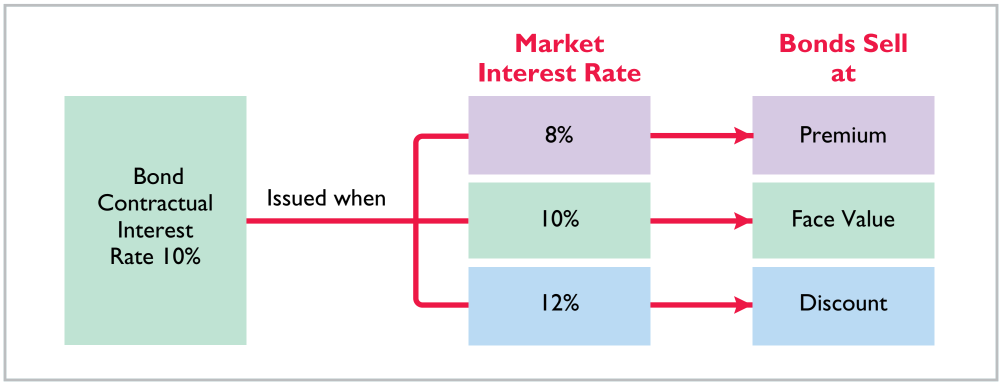


Illustration 10-12
Interest rates and bond prices

Issuance of bonds at an amount different from face value is quite common. By the time a company prints the bond certificates and markets the bonds, it will be a coincidence if the market rate and the contractual rate are the same. Thus, the issuance of bonds at a discount does not mean that the issuer's financial strength is suspect. Conversely, the sale of bonds at a premium does not indicate that the financial strength of the issuer is exceptional.

ISSUING BONDS AT A DISCOUNT

To illustrate issuance of bonds at a discount, assume that on January 1, 2017, Candlestick AG sells €100,000, five-year, 10% bonds for €98,000 (98% of face value). Interest is payable annually on January 1. The entry to record the issuance is as follows.

Jan. 1	Cash	98,000	
	Bonds Payable		98,000
	(To record sale of bonds at a discount)		

A	=	L	+	E
+98,000				
		+98,000		

Cash Flows
+98,000

Illustration 10-13 shows how the bonds payable of Candlestick AG would be presented on the statement of financial position if it was prepared on the day the bonds were issued.

Illustration 10-13
Statement presentation of bonds issued at a discount

CANDLESTICK AG Statement of Financial Position (partial)	
Non-current liabilities	
Bonds payable	€98,000

The €98,000 represents the **carrying (or book) value** of the bonds. On the date of issue, this amount equals the market price of the bonds.

The issuance of bonds below face value—at a discount—causes the total cost of borrowing to differ from the bond interest paid. That is, the issuing company must pay not only the contractual interest rate over the term of the bonds but also the face value (rather than the issuance price) at maturity. Therefore, the difference between the issuance price and face value of the bonds—the discount—is an **additional cost of borrowing**. The company records this additional cost as **interest expense** over the life of the bonds.

The total cost of borrowing €98,000 for Candlestick is therefore €52,000, computed as follows.

Illustration 10-14
Total cost of borrowing—bonds issued at a discount

Bonds Issued at a Discount	
Annual interest payments	
(€100,000 × 10% = €10,000; €10,000 × 5)	€ 50,000
Add: Bond discount (€100,000 − €98,000)	2,000
Total cost of borrowing	**€52,000**

Alternatively, we can compute the total cost of borrowing as follows.

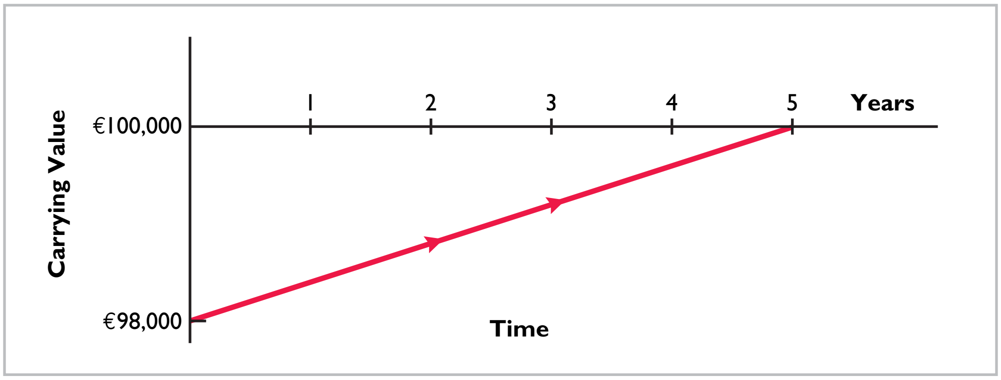
Illustration 10-15
Alternative computation of total cost of borrowing—bonds issued at a discount

Bonds Issued at a Discount	
Principal at maturity	€100,000
Annual interest payments (€10,000 × 5)	50,000
Cash to be paid to bondholders	150,000
Less: Cash received from bondholders	98,000
Total cost of borrowing	**€ 52,000**

To follow the expense recognition principle, companies allocate bond discount to expense in each period in which the bonds are outstanding. This is referred to as **amortizing the discount**. Amortization of the discount **increases** the amount of interest expense reported each period. That is, after the company amortizes the discount, the amount of interest expense it reports in a period will exceed the contractual amount. As shown in Illustration 10-14, for the bonds issued by Candlestick, total interest expense will exceed the contractual interest by €2,000 over the life of the bonds.

As the discount is amortized, its balance declines. As a consequence, the carrying value of the bonds will increase, until at maturity the carrying value of the bonds equals their face amount. This is shown in Illustration 10-16. Appendices 10A and 10B at the end of this chapter discuss procedures for amortizing bond discount.

Illustration 10-16
Amortization of bond discount



ISSUING BONDS AT A PREMIUM

To illustrate the issuance of bonds at a premium, we now assume the Candlestick AG bonds described above sell for €102,000 (102% of face value) rather than for €98,000. The entry to record the sale is as follows.

A = L + E
+102,000
+102,000
Cash Flows
+102,000

Jan. 1	Cash	102,000	
	Bonds Payable		102,000
	(To record sale of bonds at a premium)		

Candlestick adds the premium on bonds payable **to the bonds payable amount** on the statement of financial position, as shown in Illustration 10-17.

Illustration 10-17
Statement presentation of bonds issued at a premium

CANDLESTICK AG Statement of Financial Position (partial)	
Non-current liabilities	
Bonds payable	€102,000

The sale of bonds above face value causes the total cost of borrowing to be **less than the bond interest paid**. The reason: The borrower is not required to pay the bond premium at the maturity date of the bonds. Thus, the bond premium is considered to be **a reduction in the cost of borrowing**. Therefore, the company credits the bond premium to Interest Expense over the life of the bonds.

The total cost of borrowing €102,000 for Candlestick, AG is shown in Illustrations 10-18 and 10-19.

Illustration 10-18
Total cost of borrowing—bonds issued at a premium

Bonds Issued at a Premium	
Annual interest payments	
(€100,000 × 10% = €10,000; €10,000 × 5)	€ 50,000
Less: Bond premium (€102,000 − €100,000)	2,000
Total cost of borrowing	**€48,000**

Alternatively, we can compute the cost of borrowing as follows.

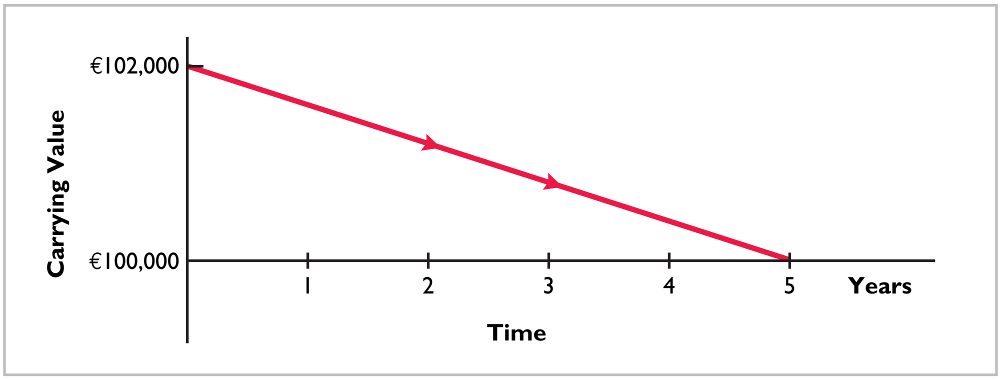
Illustration 10-19
Alternative computation of total cost of borrowing—bonds issued at a premium

Bonds Issued at a Premium	
Principal at maturity	€100,000
Annual interest payments (€10,000 × 5)	50,000
Cash to be paid to bondholders	150,000
Less: Cash received from bondholders	102,000
Total cost of borrowing	**€ 48,000**

Similar to bond discount, companies allocate bond premium to expense in each period in which the bonds are outstanding. This is referred to as **amortizing the premium**. Amortization of the premium **decreases** the amount of interest expense reported each period. That is, after the company amortizes the premium, the amount of interest expense it reports in a period will be less than the contractual amount. As shown in Illustration 10-18, for the bonds issued by Candlestick, contractual interest will exceed the interest expense by €2,000 over the life of the bonds.

As the premium is amortized, its balance declines. As a consequence, the carrying value of the bonds will decrease, until at maturity the carrying value of the bonds equals their face amount. This is shown in Illustration 10-20 (page 496). Appendices 10A and 10B at the end of this chapter discuss procedures for amortizing bond premium.

Illustration 10-20
Amortization of bond premium



DO IT!

Bond Issuance

Giant Ltd. issues ¥200,000,000 of bonds for ¥189,000,000. (a) Prepare the journal entry to record the issuance of the bonds, and (b) show how the bonds would be reported on the statement of financial position at the date of issuance.

Action Plan

✔ Record cash received and bonds payable.

✔ Bonds payable are usually reported as a non-current liability.

Solution

(a)

Cash	189,000,000	
Bonds Payable		189,000,000
(To record sale of bonds at a discount)		

(b)

Non-current liabilities	
Bonds payable	¥189,000,000

Related exercise material: **BE10-6, BE10-7, BE10-8, E10-8, E10-9, E10-10, and DO IT! 10-3.**

✔ The Navigator

Accounting for Bond Redemptions

Learning Objective 6

Describe the entries when bonds are redeemed.

An issuing corporation retires bonds either when it buys back (redeems) the bonds or when bondholders exchange convertible bonds for ordinary shares. We explain the entries for bond redemptions in the following sections. (The entries for convertible bonds are covered in advanced accounting courses.)

REDEEMING BONDS AT MATURITY

Regardless of the issue price of bonds, the book value of the bonds at maturity will equal their face value. Assuming that the company pays and records separately the interest for the last interest period, Candlestick AG records the redemption of its bonds at maturity as follows.

A = L + E

A	L	E
	−100,000	
−100,000		

Cash Flows
−100,000

Jan. 1	Bonds Payable	100,000	
	Cash		100,000
	(To record redemption of bonds at maturity)		

REDEEMING BONDS BEFORE MATURITY

Bonds also may be redeemed before maturity. A company may decide to redeem bonds before maturity to reduce interest cost and to remove debt from its statement of financial position. A company should redeem debt early only if it has sufficient cash resources.

When a company redeems bonds before maturity, it is necessary to (1) eliminate the carrying value of the bonds at the redemption date, (2) record the cash paid, and (3) recognize the gain or loss on redemption. The **carrying value** of the bonds is the face value of the bonds adjusted for bond discount or bond premium amortized up to the redemption date.

To illustrate, assume that Candlestick AG has sold its bonds at a premium. At the end of the fourth period, Candlestick redeems these bonds at 103 after paying the annual interest. Assume that the carrying value of the bonds at the redemption date is €100,476. Candlestick makes the following entry to record the redemption at the end of the fourth interest period (January 1, 2021) as follows.

• HELPFUL HINT
If a bond is redeemed prior to its maturity date and its carrying value exceeds its redemption price, this results in a gain.

Jan. 1	Bonds Payable	100,476	
	Loss on Bond Redemption	2,524	
	Cash		103,000
	(To record redemption of bonds at 103)		

A	=	L	+	E
		−100,476		
				−2,524 Exp
−103,000				

Cash Flows
−103,000

Note that the loss of €2,524 is the difference between the cash paid of €103,000 and the carrying value of the bonds of €100,476.

DO IT!

Bond Redemption

R & B Inc. issued £500,000, 10-year bonds at a discount. Prior to maturity, when the carrying value of the bonds is £496,000, the company redeems the bonds at 98. Prepare the entry to record the redemption of the bonds.

Action Plan

✔ Determine and eliminate the carrying value of the bonds.

✔ Record the cash paid.

✔ Compute and record the gain or loss (the difference between the first two items).

Solution

There is a gain on redemption: The cash paid, £490,000 (£500,000 × 98%), is less than the carrying value of £496,000. The entry is:

Bonds Payable	496,000	
Gain on Bond Redemption		6,000
Cash		490,000
(To record redemption of bonds at 98)		

Related exercise material: BE10-9, E10-11, E10-12, and DO IT! 10-4.

✔ The Navigator

Accounting for Long-Term Notes Payable

Learning Objective 7
Describe the accounting for long-term notes payable.

The use of notes payable in long-term debt financing is quite common. **Long-term notes payable** are similar to short-term interest-bearing notes payable except that the term of the notes exceeds one year.

A long-term note may be secured by a **mortgage** that pledges title to specific assets as security for a loan. Individuals widely use **mortgage notes payable** to purchase homes, and many small and some large companies use them to acquire plant assets. At one time, approximately 18% of McDonald's (USA) long-term debt related to mortgage notes on land, buildings, and improvements.

Like other long-term notes payable, the mortgage loan terms may stipulate either a **fixed** or an **adjustable** interest rate. The interest rate on a fixed-rate mortgage remains the same over the life of the mortgage. The interest rate on an adjustable-rate mortgage is adjusted periodically to reflect changes in the market rate of interest. Typically, the terms require the borrower to make equal installment payments over the term of the loan. Each payment consists of (1) interest on the unpaid balance of the loan and (2) a reduction of loan principal. While the total amount of the payment remains constant, the interest decreases each period, and the portion applied to the loan principal increases.

Companies initially record mortgage notes payable at face value. They subsequently make entries for each installment payment. To illustrate, assume that Mongkok Technology Ltd. issues a HK$500,000, 8%, 20-year mortgage note on December 31, 2017, to obtain needed financing for a new research laboratory. The terms provide for annual installment payments of HK$50,926. The installment payment schedule for the first four years is as follows.

Illustration 10-21
Mortgage installment payment schedule

Interest Period	(A) Cash Payment	(B) Interest Expense (D) × 8%	(C) Reduction of Principal (A) − (B)	(D) Principal Balance (D) − (C)
Issue date				HK$500,000
1	HK$50,926	HK$40,000	HK$10,926	489,074
2	50,926	39,126	11,800	477,274
3	50,926	38,182	12,744	464,530
4	50,926	37,162	13,764	450,766

Mongkok records the mortgage loan on December 31, 2017, as follows.

A = L + E
+500,000
+500,000
Cash Flows
+500,000

Dec. 31, 2017	Cash	500,000	
	Mortgage Payable		500,000
	(To record mortgage loan)		

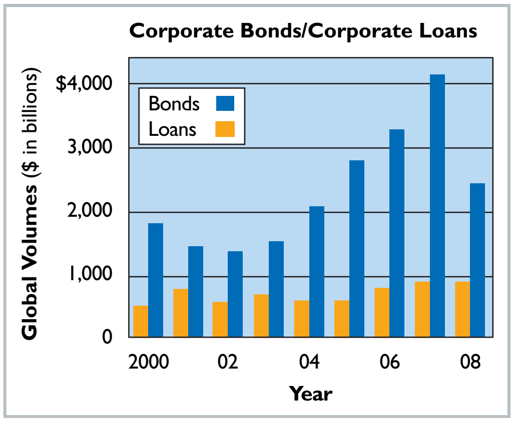
On December 31, 2018, Mongkok records the first installment payment as follows.

A = L + E
−40,000 Exp
−10,926
−50,926
Cash Flows
−50,926

Dec. 31, 2018	Interest Expense	40,000	
	Mortgage Payable	10,926	
	Cash		50,926
	(To record annual payment on mortgage)		

In the statement of financial position, the company reports the reduction in principal for the next year as a current liability, and it classifies the remaining unpaid principal balance as a non-current liability. At December 31, 2018, the total liability is HK$489,074. Of that amount, HK$11,800 is current, and HK$477,274 (HK$489,074 − HK$11,800) is non-current.

Accounting Across the Organization **Bonds versus Notes?**



Companies have a choice in the form of long-term borrowing they undertake—issue bonds or issue notes. Notes are generally issued to a single lender (usually through a loan from a bank). Bonds, on the other hand, allow the company to divide the borrowing into many small investing units, thereby enabling more than one investor to participate in the borrowing. As indicated in the graph to the left, U.S. companies are recently borrowing more from bond investors than from banks and other loan providers in a bid to lock in cheap, long-term funding.

Why this trend? For one thing, low interest rates and rising inflows into fixed-income funds have triggered record bond issuances as banks cut back lending. In addition, for some high-rated companies, it can be riskier to borrow from a bank than the bond markets. The reason: High-rated companies tended to rely on short-term financing to fund working capital but were left stranded when these markets froze up. Some are now financing themselves with longer-term bonds instead.

Source: A. Sakoui and N. Bullock, "Companies Choose Bonds for Cheap Funds," *Financial Times* (October 12, 2009).

Q Why might companies prefer bond financing instead of short-term financing? (See page 532.)

> DO IT!

Long-Term Note

Cole Research issues a ₩250,000,000, 6%, 20-year mortgage note to obtain needed financing for a new lab. The terms call for annual payments of ₩21,796,000 each. Prepare the entries to record the mortgage loan and the first installment payment.

Action Plan

✔ Record the issuance of the note as a cash receipt and a liability.

✔ Each installment payment consists of interest and payment of principal.

Solution

Cash	250,000,000	
Mortgage Payable		250,000,000
(To record mortgage loan)		
Interest Expense	15,000,000*	
Mortgage Payable	6,796,000	
Cash		21,796,000
(To record annual payment on mortgage)		

*Interest expense = ₩250,000,000 × 6%.

Related exercise material: **BE10-10, E10-13, and DO IT! 10-5.**

✔ The Navigator

Statement Presentation and Analysis

Learning Objective 8
Identify the methods for the presentation and analysis of non-current liabilities.

PRESENTATION

Companies report non-current liabilities in a separate section of the statement of financial position immediately before current liabilities, as shown in Illustration 10-22 (page 500). Alternatively, companies may present summary data in the statement of financial position, with detailed data (interest rates, maturity dates, conversion privileges, and assets pledged as collateral) shown in a supporting schedule.

Illustration 10-22
Statement of financial position presentation of non-current liabilities

• **Alternative Terminology** Another term sometimes used for non-current liabilities is *long-term liabilities*.

GUANGZHOU LTD. Statement of Financial Position (partial) (in thousands)	
Non-current liabilities	
Bonds payable 10% due in 2020	¥ 920,000
Mortgage payable, 11%, due in 2026 and secured by plant assets	500,000
Total non-current liabilities	¥1,420,000

Ethics Note

Some companies try to minimize the amount of debt reported on their statement of financial position by not reporting certain types of commitments as liabilities. This subject is of intense interest in the financial community.

Companies report the current maturities of long-term debt under current liabilities if they are to be paid within one year or the operating cycle, whichever is longer.

ANALYSIS

Long-term creditors and shareholders are interested in a company's long-run solvency. Of particular interest is the company's ability to pay interest as it comes due and to repay the face value of the debt at maturity. Here we look at two ratios that provide information about debt-paying ability and long-run solvency.

The **debt to assets ratio** measures the percentage of the total assets provided by creditors. As shown in the formula in Illustration 10-23, it is computed by dividing total liabilities (both current and non-current liabilities) by total assets. The higher the percentage of debt to assets, the greater the risk that the company may be unable to meet its maturing obligations.

Times interest earned indicates the company's ability to meet interest payments as they come due. It is computed by dividing the sum of net income, interest expense, and income tax expense by interest expense.

To illustrate these ratios, we will use data from LG's (KOR) recent annual report. The company had total liabilities of ₩22,839 billion, total assets of ₩35,528 billion, interest expense of ₩827 billion, income taxes of ₩354 billion, and net income of ₩223 billion. LG's debt to assets ratio and times interest earned are shown below.

Illustration 10-23
Debt to assets and times interest earned ratios, with computations (in billions)

Total Liabilities	÷	Total Assets	=	Debt to Assets Ratio
₩22,839	÷	₩35,528	=	64.3%
Net Income + Interest Expense + Income Tax Expense	÷	**Interest Expense**	=	**Times Interest Earned**
₩223 + ₩827 + ₩354	÷	₩827	=	1.70 times

LG has a relatively high debt to assets percentage of 64.3%. Its interest coverage of 1.70 times might be considered low.

Investor Insight "Covenant-Lite" Debt

© alfabravoalfaromeo/iStockphoto

In many corporate loans and bond issuances, the lending agreement specifies debt covenants. These covenants typically are specific financial measures, such as minimum levels of retained earnings, cash flows, times interest earned, or other measures that a company must maintain during the life of the loan. If the company violates a covenant, it is considered to have violated the loan agreement. The creditors can then demand immediate repayment, or they can renegotiate the loan's terms. Covenants protect lenders because they enable lenders to step in and try to get their money back before the borrower gets too deep into trouble.

During the 1990s, most traditional loans specified between three to six covenants or "triggers." In more recent years, when lots of cash was available, lenders began reducing or completely eliminating covenants from loan agreements in order to be more competitive with other lenders. When the economy declined, lenders lost big money when companies defaulted.

Source: Cynthia Koons, "Risky Business: Growth of 'Covenant-Lite' Debt," *Wall Street Journal* (June 18, 2007), p. C2.

Q How can financial ratios such as those covered in this chapter provide protection for creditors? (See page 532.)

> DO IT!

Analyzing Liabilities

Trout Company provides you with the following statement of financial position information as of December 31, 2017.

Non-current assets	€24,200	Equity	€10,700
Current assets	10,500	Non-current liabilities	16,000
Total assets	€34,700	Current liabilities	8,000
		Total equity and liabilities	€34,700

In addition, Trout reported net income for 2017 of €14,000, income tax expense of €2,800, and interest expense of €900.

Action Plan

✔ Use the formula for the debt to assets ratio: Total liabilities ÷ Total assets.

✔ Use the formula for times interest earned: (Net income + Interest expense + Income tax expense) ÷ Interest expense.

Instructions

(a) Compute the debt to assets ratio for Trout for 2017.
(b) Compute the times interest earned for Trout for 2017.

Solution

(a) Debt to assets ratio is 69.2% (€24,000/€34,700). (b) Times interest earned is 19.67 times [(€14,000 + €900 + €2,800)/€900].

Related exercise material: **BE10-12, E10-15, and DO IT! 10-6.**

✔ The Navigator

APPENDIX 10A Effective-Interest Method of Bond Amortization

Learning Objective *9

Apply the effective-interest method of amortizing bond discount and bond premium.

Financial liabilities, such as bonds, are to be accounted for at amortized cost. IFRS states that amortized cost is to be determined using the effective-interest method. Under the **effective-interest method of amortization**, the amortization of bond discount or bond premium results in periodic interest expense equal to a **constant percentage** of the carrying value of the bonds. The effective-interest method results in varying amounts of amortization and interest expense per period but **a constant percentage rate**.

The following steps are required under the effective-interest method.

1. Compute the **bond interest expense** by multiplying the carrying value of the bonds at the beginning of the interest period by the effective-interest rate.
2. Compute the **bond interest paid** (or accrued) by multiplying the face value of the bonds by the contractual interest rate.
3. Compute the **amortization amount** by determining the difference between the amounts computed in steps (1) and (2).

Illustration 10A-1 depicts these steps.

Illustration 10A-1
Computation of amortization—effective-interest method

$$\underbrace{\left(\begin{array}{c}\text{Carrying Value}\\ \text{of Bonds at}\\ \text{Beginning of}\\ \text{Period}\end{array} \times \begin{array}{c}\text{Effective-}\\ \text{Interest}\\ \text{Rate}\end{array}\right)}_{\substack{\text{(1)}\\ \text{Bond Interest Expense}}} - \underbrace{\left(\begin{array}{c}\text{Face}\\ \text{Amount of}\\ \text{Bonds}\end{array} \times \begin{array}{c}\text{Contractual}\\ \text{Interest}\\ \text{Rate}\end{array}\right)}_{\substack{\text{(2)}\\ \text{Bond Interest Paid}}} = \underbrace{\begin{array}{c}\text{Amortization}\\ \text{Amount}\end{array}}_{\text{(3)}}$$

Amortizing Bond Discount

In the Candlestick AG example (page 493), the company sold €100,000, five year, 10% bonds on January 1, 2017, for €98,000. This resulted in a €2,000 bond discount (€100,000 − €98,000). This discount results in an effective-interest rate of approximately 10.5348%. (The effective-interest rate can be computed using the techniques shown in Appendix E near the end of this textbook.)

Preparing a bond discount amortization schedule as shown in Illustration 10A-2 facilitates the recording of interest expense and the discount amortization. Note that interest expense as a percentage of carrying value remains constant at 10.5348%.

Candlestick AG.xls

CANDLESTICK AG
Bond Discount Amortization Schedule
Effective-Interest Method—Annual Interest Payments
10% Bonds Issued at 10.5348%

Interest Periods	(A) Interest to Be Paid (10% × €100,000)	(B) Interest Expense to Be Recorded (10.5348% × Preceding Bond Carrying Value)		(C) Discount Amortization (B) – (A)	(D) Unamortized Discount (D) – (C)	(E) Bond Carrying Value (€100,000 – D)
Issue date					€2,000	€ 98,000
1	€10,000	€10,324	(10.5348% × €98,000)	€ 324	1,676	98,324
2	10,000	10,358	(10.5348% × €98,324)	358	1,318	98,682
3	10,000	10,396	(10.5348% × €98,682)	396	922	99,078
4	10,000	10,438	(10.5348% × €99,078)	438	484	99,516
5	10,000	10,484	(10.5348% × €99,516)	484	–0–	100,000
	€50,000	€52,000		€2,000		

Column (A) remains constant because the face value of the bonds (€100,000) is multiplied by the annual contractual interest rate (10%) each period.
Column (B) is computed as the preceding bond carrying value times the annual effective-interest rate (10.5348%).
Column (C) indicates the discount amortization each period.
Column (D) decreases each period until it reaches zero at maturity.
Column (E) increases each period until it equals face value at maturity.

Illustration 10A-2
Bond discount amortization schedule

For the first interest period, the computations of bond interest expense and the bond discount amortization are as follows.

Bond interest expense (€98,000 × 10.5348%)	€10,324
Less: Bond interest paid (€100,000 × 10%)	10,000
Bond discount amortization	**€ 324**

Illustration 10A-3
Computation of bond discount amortization

As a result, Candlestick records the accrual of interest and amortization of bond discount on December 31 as follows.

Dec. 31	Interest Expense	10,324	
	Bonds Payable		324
	Interest Payable		10,000
	(To record accrued interest and amortization of bond discount)		

A = L + E
−10,324 Exp
+324
+10,000
Cash Flows
no effect

For the second interest period, bond interest expense will be €10,358 (€98,324 × 10.5348%), and the discount amortization will be €358. At December 31, Candlestick makes the following adjusting entry.

Dec. 31	Interest Expense	10,358	
	Bonds Payable		358
	Interest Payable		10,000
	(To record accrued interest and amortization of bond discount)		

A = L + E
−10,358 Exp
+358
+10,000
Cash Flows
no effect

Amortizing Bond Premium

Continuing our example, assume Candlestick AG sells the bonds described above for €102,000 rather than €98,000 (see page 494). This would result in a bond premium of €2,000 (€102,000 − €100,000). This premium results in an effective-interest rate of approximately 9.4794%. (The effective-interest rate can be solved for using the techniques shown in Appendix E near the end of this textbook.) Illustration 10A-4 shows the bond premium amortization schedule.

Illustration 10A-4
Bond premium amortization schedule

Candlestick AG.xls

CANDLESTICK AG
Bond Premium Amortization Schedule
Effective-Interest Method—Annual Interest Payments
10% Bonds Issued at 9.4794%

Interest Periods	(A) Interest to Be Paid (10% × €100,000)	(B) Interest Expense to Be Recorded (9.4794% × Preceding Bond Carrying Value)	(C) Premium Amortization (A) − (B)	(D) Unamortized Premium (D) − (C)	(E) Bond Carrying Value (€100,000 + D)
Issue date				€2,000	€102,000
1	€10,000	€ 9,669 (9.4794% × €102,000)	€ 331	1,669	101,669
2	10,000	9,638 (9.4794% × €101,669)	362	1,307	101,307
3	10,000	9,603 (9.4794% × €101,307)	397	910	100,910
4	10,000	9,566 (9.4794% × €100,910)	434	476	100,476
5	10,000	9,524 * (9.4794% × €100,476)	476*	–0–	100,000
	€50,000	€48,000	€2,000		

Column **(A)** remains constant because the face value of the bonds (€100,000) is multiplied by the contractual interest rate (10%) each period.
Column **(B)** is computed as the carrying value of the bonds times the annual effective-interest rate (9.4794%).
Column **(C)** indicates the premium amortization each period.
Column **(D)** decreases each period until it reaches zero at maturity.
Column **(E)** decreases each period until it equals face value at maturity.

*Rounded to eliminate remaining discount resulting from rounding the effective rate.

For the first interest period, the computations of bond interest expense and the bond premium amortization are as follows.

Illustration 10A-5
Computation of bond premium amortization

Bond interest paid (€100,000 × 10%)	€10,000
Less: Bond interest expense (€102,000 × 9.4794%)	9,669
Bond premium amortization	**€ 331**

The entry Candlestick makes on December 31 is as follows.

A = L + E
−9,669 Exp
−331
+10,000
Cash Flows
no effect

Dec. 31	Interest Expense	9,669	
	Bonds Payable	331	
	Interest Payable		10,000
	(To record accrued interest and amortization of bond premium)		

For the second interest period, interest expense will be €9,638, and the premium amortization will be €362. Note that the amount of periodic interest expense decreases over the life of the bond when companies apply the effective-interest method to bonds issued at a premium. The reason is that a constant percentage is applied to a decreasing bond carrying value to compute interest expense. The carrying value is decreasing because of the amortization of the premium.

> DO IT!

Effective-Interest Amortization

Gardner SA issues €1,750,000, 10-year, 12% bonds on January 1, 2017, at €1,968,090, to yield 10%. The bonds pay annual interest on January 1. Gardner uses the effective-interest method of amortization.

Action Plan

✔ Compute interest expense by multiplying bond carrying value at the beginning of the period by the effective-interest rate.

✔ Compute credit to cash (or interest payable) by multiplying the face value of the bonds by the contractual interest rate.

✔ Compute bond premium or discount amortization, which is the difference between interest expense and cash paid.

✔ Interest expense decreases when the effective-interest method is used for bonds issued at a premium. The reason is that a constant percentage is applied to a decreasing carrying value to compute interest expense.

Instructions

(a) Prepare the journal entry to record the issuance of the bonds.
(b) Prepare the adjusting entry to record the accrual of interest on December 31, 2018.

Solution

(a)	2017			
	Jan. 1	Cash	1,968,090	
		Bonds Payable		1,968,090
		(To record issuance of bonds at a premium)		
(b)	2018			
	Dec. 31	Interest Expense	196,809*	
		Bonds Payable	13,191**	
		Cash		210,000
		(To record accrual of annual interest and amortization of bond premium)		

*(€1,968,090 × 10%)
**(€210,000 − €196,809)

✔ The Navigator

APPENDIX 10B Straight-Line Amortization

Amortizing Bond Discount

Learning Objective *10
Apply the straight-line method of amortizing bond discount and bond premium.

The effective-interest method presented in Appendix 10A is the method required by IFRS to determine amortized cost. Under U.S. GAAP, companies are allowed to use an alternative approach, straight-line amortization, when the results do not differ materially from the effective-interest method. Under the **straight-line method of amortization**, the amortization of bond discount or bond premium results in periodic interest expense of the same amount in each interest period. In other words, the straight-line method results in a constant amount of amortization and interest expense per period. The amount is determined using the formula in Illustration 10B-1 on the next page.

Illustration 10B-1
Formula for straight-line method of bond discount amortization

Bond Discount	÷	Number of Interest Periods	=	**Bond Discount Amortization**

In the Candlestick AG example (page 493), the company sold €100,000, five-year, 10% bonds on January 1, 2017, for €98,000. This resulted in a €2,000 bond discount (€100,000 − €98,000). The bond discount amortization is €400 (€2,000 ÷ 5) for each of the five amortization periods. Candlestick records the first accrual of bond interest and the amortization of bond discount on December 31 as follows.

A = L + E
−10,400 Exp
+400
+10,000
Cash Flows
no effect

Dec. 31	Interest Expense	10,400	
	Bonds Payable		400
	Interest Payable		10,000
	(To record accrued bond interest and amortization of bond discount)		

Over the term of the bonds, the balance in Bonds Payable will decrease annually by the same amount until it has a zero balance at the maturity date of the bonds. Thus, the carrying value of the bonds at maturity will be equal to the face value of the bonds.

Preparing a bond discount amortization schedule, as shown in Illustration 10B-2, is useful to determine interest expense, discount amortization, and the carrying value of the bond. As indicated, the interest expense recorded each period is €10,400. Also note that the carrying value of the bond increases €400 each period until it reaches its face value of €100,000 at the end of period 5.

Illustration 10B-2
Bond discount amortization schedule

Candlestick AG.xls

CANDLESTICK AG
Bond Discount Amortization Schedule
Straight-Line Method—Annual Interest Payments
€100,000 of 10%, 5-Year Bonds

Interest Periods	(A) Interest to Be Paid (10% × €100,000)	(B) Interest Expense to Be Recorded (A) + (C)	(C) Discount Amortization (€2,000 ÷ 5)	(D) Unamortized Discount (D) − (C)	(E) Bond Carrying Value (€100,000 − D)
Issue date				€2,000	€ 98,000
1	€10,000	€10,400	€ 400	1,600	98,400
2	10,000	10,400	400	1,200	98,800
3	10,000	10,400	400	800	99,200
4	10,000	10,400	400	400	99,600
5	10,000	10,400	400	0	100,000
	€50,000	€52,000	€2,000		

Column **(A)** remains constant because the face value of the bonds (€100,000) is multiplied by the annual contractual interest rate (10%) each period.
Column **(B)** is computed as the interest paid (Column A) plus the discount amortization (Column C).
Column **(C)** indicates the discount amortization each period.
Column **(D)** decreases each period by the same amount until it reaches zero at maturity.
Column **(E)** increases each period by the amount of discount amortization until it equals the face value at maturity.

Amortizing Bond Premium

The amortization of bond premium parallels that of bond discount. Illustration 10B-3 presents the formula for determining bond premium amortization under the straight-line method.

Bond Premium	÷	Number of Interest Periods	=	Bond Premium Amortization

Illustration 10B-3
Formula for straight-line method of bond premium amortization

Continuing our example, assume Candlestick AG sells the bonds described previously for €102,000, rather than €98,000 (see page 494). This results in a bond premium of €2,000 (€102,000 − €100,000). The premium amortization for each interest period is €400 (€2,000 ÷ 5). Candlestick records the first accrual of interest on December 31 as follows.

Dec. 31	Interest Expense	9,600	
	Bonds Payable	400	
	Interest Payable		10,000
	(To record accrued bond interest and amortization of bond premium)		

A	=	L	+	E
				−9,600 Exp
		−400		
		+10,000		

Cash Flows
no effect

Over the term of the bonds, the balance in Bonds Payable will decrease annually by the same amount until it has a zero balance at maturity.

A bond premium amortization schedule, as shown in Illustration 10B-4, is useful to determine interest expense, premium amortization, and the carrying value of the bond. As indicated, the interest expense Candlestick records each period is €9,600. Note that the carrying value of the bond decreases €400 each period until it reaches its face value of €100,000 at the end of period 5.

Illustration 10B-4
Bond premium amortization schedule

Candlestick AG.xls

CANDLESTICK AG
Bond Premium Amortization Schedule
Straight-Line Method—Annual Interest Payments
€100,000 of 10%, 5-Year Bonds

Interest Periods	(A) Interest to Be Paid (10% × €100,000)	(B) Interest Expense to Be Recorded (A) – (C)	(C) Premium Amortization (€2,000 ÷ 5)	(D) Unamortized Premium (D) – (C)	(E) Bond Carrying Value (€100,000 + D)
Issue date				€2,000	€102,000
1	€10,000	€ 9,600	€ 400	1,600	101,600
2	10,000	9,600	400	1,200	101,200
3	10,000	9,600	400	800	100,800
4	10,000	9,600	400	400	100,400
5	10,000	9,600	400	0	100,000
	€50,000	€48,000	€2,000		

Column (A) remains constant because the face value of the bonds (€100,000) is multiplied by the annual contractual interest rate (10%) each period.
Column (B) is computed as the interest paid (Column A) less the premium amortization (Column C).
Column (C) indicates the premium amortization each period.
Column (D) decreases each period by the same amount until it reaches zero at maturity.
Column (E) decreases each period by the amount of premium amortization until it equals the face value at maturity.

DO IT!

Straight-Line Amortization

Glenda SA issues €1,750,000, 10-year, 12% bonds on January 1, 2017, for €1,968,090 to yield 10%. The bonds pay annual interest on January 1. Glenda uses the straight-line method of amortization.

Action Plan

✔ Compute credit to cash (or interest payable) by multiplying the face value of the bonds by the contractual interest rate.

✔ Compute bond premium or discount amortization by dividing bond premium or discount by the total number of periods.

✔ Understand that amortization of premium reduces the total cost of borrowing.

Instructions

(a) Prepare the journal entry to record the issuance of the bonds.
(b) Prepare the adjusting entry to record the accrual of interest on December 31, 2017.

Solution

(a) 2017			
Jan. 1	Cash	1,968,090	
	Bonds Payable		1,968,090
(b) 2018			
Dec. 31	Interest Expense	188,191**	
	Bonds Payable	21,809*	
	Cash		210,000

*€218,090 ÷ 10
**€210,000 − €21,809

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APPENDIX 10C Employee-Related Liabilities

Learning Objective *11
Identify types of employee-related liabilities.

Companies report as a current liability the amounts owed to employees for salaries or wages at the end of an accounting period. In addition, they often also report as current liabilities the following items related to employee compensation.

1. Payroll deductions.
2. Bonuses.

Payroll Deductions

The most common types of payroll deductions are taxes, insurance premiums, employee savings, and union dues. **To the extent that a company has not remitted the amounts deducted to the proper authority at the end of the accounting period, it should recognize them as current liabilities.**

SOCIAL SECURITY TAXES

Most governments provide a level of social benefits (for retirement, unemployment, income, disability, and medical benefits) to individuals and families. The benefits are generally funded from taxes assessed on both the employer and the employees. These taxes are often referred to as **Social Security taxes** or **Social Welfare taxes**. Funds for these payments generally come from taxes levied on both the employer and the employee. Employers collect the employee's share of this tax by deducting it from the employee's gross pay, and remit it to the government along with their share. The government often taxes both the employer and the employee at the same rate. **Companies should report the amount of unremitted employee and employer Social Security tax on gross wages paid as a current liability.**

INCOME TAX WITHHOLDING

Income tax laws generally require employers to withhold from each employee's pay the applicable income tax due on those wages. The employer computes the amount of income tax to withhold according to a government-prescribed formula or withholding tax table. That amount depends on the length of the pay period and each employee's taxable wages, marital status, and claimed dependents. Illustration 10C-1 summarizes payroll deductions and liabilities.

Illustration 10C-1
Summary of payroll liabilities

Item	Who Pays	
Income tax withholding Social Security taxes—employee share Union dues	Employee	Employer reports these amounts as liabilities until remitted.
Social Security taxes—employer share	Employer	

PAYROLL DEDUCTIONS EXAMPLE

Assume a weekly payroll of $10,000 entirely subject to Social Security taxes (8%), with income tax withholding of $1,320 and union dues of $88 deducted. The company records the wages and salaries paid and the **employee payroll deductions** as follows.

Salaries and Wages Expense	10,000	
Withholding Taxes Payable		1,320
Social Security Taxes Payable		800
Union Dues Payable		88
Cash		7,792

A	=	L	+	E
				−10,000
		+1,320		
		+800		
		+88		
−7,792				

Cash Flows
−7,792

It records the **employer payroll taxes** as follows.

Payroll Tax Expense	800	
Social Security Taxes Payable		800

A	=	L	+	E
				−800
		+800		

Cash Flows
no effect

The employer must remit to the government its share of Social Security tax along with the amount of Social Security tax deducted from each employee's gross compensation. It should record all unremitted employer Social Security taxes as payroll tax expense and payroll tax payable.[3]

Companies classify the payroll and payroll tax liability accounts as current liabilities because these amounts must be paid to employees or remitted to taxing authorities in the near term. Taxing authorities impose substantial fines and penalties on employers if the withholding and payroll taxes are not computed correctly and paid on time. A more complete discussion of payroll accounting is provided in Appendix I.

Profit-Sharing and Bonus Plans

Many companies give a **bonus** to certain or all employees in addition to their regular salaries or wages. Frequently, the bonus amount depends on the company's yearly profit. A company may consider **bonus payments to employees** as additional salaries and wages and should include them as a deduction in determining the net income for the year.

To illustrate the entries for an employee bonus, assume that Palmer Inc. shows income for the year 2017 of $100,000. It will pay out bonuses of $10,700 in January 2018. Palmer makes an adjusting entry dated December 31, 2017, to record the bonuses as follows.

Salaries and Wages Expense	10,700	
Salaries and Wages Payable		10,700

In January 2018, when Palmer pays the bonus, it makes this journal entry:

Salaries and Wages Payable	10,700	
Cash		10,700

[3]This abbreviated and somewhat simplified discussion of payroll costs and deductions is not indicative of the volume of records and clerical work that may be involved in maintaining a sound and accurate payroll system.

Palmer should show the expense account in the income statement as an operating expense. **The liability, Salaries and Wages Payable, is usually payable within a short period of time. Companies should include it as a current liability in the statement of financial position.** An obligation under a profit-sharing or bonus plan must be accounted for as an expense and not a distribution of profit since it results from employee service and not a transaction with owners.

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Explain a current liability, and identify the major types of current liabilities.** A current liability is a debt that a company expects to pay within one year or the operating cycle, whichever is longer. The major types of current liabilities are notes payable, accounts payable, sales taxes payable, unearned revenues, and accrued liabilities such as taxes, salaries and wages, and interest payable.

2 **Describe the accounting for notes payable.** When a promissory note is interest-bearing, the amount of assets received upon the issuance of the note is generally equal to the face value of the note. Interest expense accrues over the life of the note. At maturity, the amount paid equals the face value of the note plus accrued interest.

3 **Explain the accounting for other current liabilities.** Companies record sales taxes payable at the time the related sales occur. The company serves as a collection agent for the taxing authority. Sales taxes are not an expense to the company. Companies initially record unearned revenues in an Unearned Revenue account. As a company recognizes revenue, a transfer from unearned revenue to revenue occurs. Companies report the current maturities of long-term debt as a current liability in the statement of financial position.

4 **Explain why bonds are issued, and identify the types of bonds.** Companies may sell bonds to investors to raise long-term capital. Bonds offer the following advantages over equity financing: (a) shareholder control is not affected, (b) tax savings result, and (c) earnings per share may be higher. The following types of bonds may be issued: secured and unsecured, and convertible and callable bonds.

5 **Prepare the entries for the issuance of bonds and interest expense.** When companies issue bonds, they debit Cash for the cash proceeds and credit Bonds Payable for the face value of the bonds. Interest on bonds payable is computed in the same manner as interest on notes payable.

6 **Describe the entries when bonds are redeemed.** When bondholders redeem bonds at maturity, the issuing company credits Cash and debits Bonds Payable for the face value of the bonds. When bonds are redeemed before maturity, the issuing company (a) eliminates the carrying value of the bonds at the redemption date, (b) records the cash paid, and (c) recognizes the gain or loss on redemption.

7 **Describe the accounting for long-term notes payable.** Each payment consists of (1) interest on the unpaid balance of the loan and (2) a reduction of the loan principal. The interest decreases each period, while the reduction applied to the loan principal increases.

8 **Identify the methods for the presentation and analysis of non-current liabilities.** Companies should report the nature and amount of each long-term debt in the statement of financial position or in the notes accompanying the financial statements. Shareholders and long-term creditors are interested in a company's long-run solvency. Debt to assets and times interest earned are two ratios that provide information about debt-paying ability and long-run solvency.

*9 **Apply the effective-interest method of amortizing bond discount and bond premium.** The effective-interest method results in varying amounts of amortization and interest expense per period but a constant percentage rate of interest.

*10 **Apply the straight-line method of amortizing bond discount and bond premium.** The straight-line method of amortization results in a constant amount of amortization and interest expense per period.

*11 **Identify types of employee-related liabilities.** Companies report as a current liability the amounts owed related to employee compensation. These employee-related liabilities are (1) payroll deductions and (2) bonuses.

GLOSSARY REVIEW

Bond certificate A legal document that indicates the name of the issuer, the face value of the bonds, the contractual interest rate, and the maturity date of the bonds. (p. 488).

Bond indenture A legal document that sets forth the terms of the bond issue. (p. 488).

Bonds A form of interest-bearing notes payable. (p. 487).

Callable bonds Bonds that are subject to redemption at a stated currency amount prior to maturity at the option of the issuer. (p. 488).

Contractual interest rate Rate used to determine the amount of cash interest the borrower pays and the investor receives. (p. 488).

Convertible bonds Bonds that permit bondholders to convert them into ordinary shares at the bondholders' option. (p. 488).

Current liabilities Obligations that a company expects to pay within one year or the operating cycle, whichever is longer. (p. 482).

Current ratio A measure of a company's liquidity; computed as current assets divided by current liabilities. (p. 486).

Debenture bonds Bonds issued against the general credit of the borrower. Also called unsecured bonds. (p. 488).

Debt to assets ratio A solvency measure that indicates the percentage of total assets provided by creditors; computed as total liabilities divided by total assets. (p. 500).

Discount (on a bond) The difference between the face value of a bond and its selling price, when the bond is sold for less than its face value. (p. 492).

***Effective-interest method of amortization** A method of amortizing bond discount or bond premium that results in periodic interest expense equal to a constant percentage of the carrying value of the bonds. (p. 502).

Face value Amount of principal the issuer must pay at the maturity date of the bond. (p. 488).

Market interest rate The rate investors demand for loaning funds to the corporation. (p. 490).

Maturity date The date on which the final payment on the bond is due from the bond issuer to the investor. (p. 488).

Mortgage bond A bond secured by real estate. (p. 488).

Mortgage notes payable A long-term note secured by a mortgage that pledges title to specific assets as security for a loan. (p. 497).

Non-current liabilities Obligations expected to be paid more than one year in the future. (p. 486).

Notes payable Obligations in the form of written notes. (p. 482).

Premium (on a bond) The difference between the selling price and the face value of a bond, when the bond is sold for more than its face value. (p. 493).

Secured bonds Bonds that have specific assets of the issuer pledged as collateral. (p. 488).

Sinking fund bonds Bonds secured by specific assets set aside to redeem them. (p. 488).

***Straight-line method of amortization** A method of amortizing bond discount or bond premium that results in allocating the same amount to interest expense in each interest period. (p. 505).

Times interest earned A solvency measure that indicates a company's ability to meet interest payments; computed by dividing the sum of net income, interest expense, and income tax expense by interest expense. (p. 500).

Time value of money The relationship between time and money. A dollar received today is worth more than a dollar promised at some time in the future. (p. 490).

Unsecured bonds Bonds issued against the general credit of the borrower. Also called debenture bonds. (p. 488).

Working capital A measure of a company's liquidity; computed as current assets minus current liabilities. (p. 486).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** The time period for classifying a liability as current is one year or the operating cycle, whichever is:
(a) longer.
(b) shorter.
(c) probable.
(d) possible.

(LO 1) **2.** To be classified as a current liability, a debt must be expected to be paid within:
(a) one year.
(b) the operating cycle.
(c) 2 years.
(d) (a) or (b), whichever is longer.

(LO 2) **3.** Maggie Sharrer SA borrows R$88,500 on September 1, 2017, from Sandwich Bank by signing an R$88,500, 12%, one-year note. What is the accrued interest at December 31, 2017?
(a) R$2,655.
(b) R$3,540.
(c) R$4,425.
(d) R$10,620.

(LO 3) **4.** Becky Sherrick SE has total proceeds from sales of €4,515. If the proceeds include sales taxes of 5%, the amount to be credited to Sales Revenue is:
(a) €4,000.
(b) €4,300.
(c) €4,289.25.
(d) No correct answer given.

5. Sensible Insurance collected a premium of £18,000 for a 1-year insurance policy on April 1. What amount should Sensible report as a current liability for Unearned Service Revenue at December 31? (LO 3)
(a) £0.
(b) £4,500.
(c) £13,500.
(d) £18,000.

6. The term used for bonds that are unsecured is: (LO 4)
(a) callable bonds.
(b) indenture bonds.
(c) debenture bonds.
(d) convertible bonds.

7. Karson Ltd. issues 10-year bonds with a maturity value of £200,000. If the bonds are issued at a premium, this indicates that: (LO 5)
(a) the contractual interest rate exceeds the market interest rate.
(b) the market interest rate exceeds the contractual interest rate.
(c) the contractual interest rate and the market interest rate are the same.
(d) no relationship exists between the two rates.

8. Gester Ltd. redeems its HK$1,000,000 face value bonds at 105 on January 1, following the payment of (LO 6)

annual interest. The carrying value of the bonds at the redemption date is HK$1,037,450. The entry to record the redemption will include a:
(a) credit of HK$37,450 to Loss on Bond Redemption.
(b) debit of HK$1,037,450 to Bonds Payable.
(c) credit of HK$12,550 to Gain on Bond Redemption.
(d) debit of HK$50,000 to Bonds Payable.

(LO 7) **9.** Andrews Ltd. issues a €497,000, 10%, 3-year mortgage note on January 1. The note will be paid in three annual installments of €200,000, each payable at the end of the year. What is the amount of interest expense that should be recognized by Andrews in the second year?
(a) €16,567. (c) €34,670.
(b) €49,700. (d) €346,700.

(LO 7) **10.** Howard Ltd. issued a 20-year mortgage note payable on January 1, 2017. At December 31, 2017, the unpaid principal balance will be reported as:
(a) a current liability.
(b) a non-current liability.
(c) part current and part non-current liability.
(d) interest payable.

(LO 8) **11.** For 2017, Kim Ltd. reported net income of ₩300,000. Interest expense was ₩40,000 and income taxes were ₩100,000. The times interest earned was:
(a) 3 times. (c) 7.5 times.
(b) 4.4 times. (d) 11 times.

(LO 9) ***12.** On January 1, Besalius plc issued £1,000,000, 9% bonds for £938,554. The market rate of interest for these bonds is 10%. Interest is payable annually on December 31. Besalius uses the effective-interest method of amortizing bond discount. At the end of the first year, Besalius should report unamortized bond discount of:
(a) £54,900. (c) £51,610.
(b) £57,591. (d) £51,000.

(LO 9) ***13.** On January 1, Dias SA issued R$1,000,000, 10%, 5-year bonds with interest payable annually on December 31. The bonds sold for R$1,072,096. The market rate of interest for these bonds was 12%. On the first interest date, using the effective-interest method, the debit entry to Interest Expense is for:
(a) R$120,000. (c) R$128,652.
(b) R$125,581. (d) R$140,000.

(LO 10) ***14.** On January 1, 2017, Hurley Ltd. issued NT$5,000,000, 5-year, 12% bonds at 96 with interest payable annually on December 31. The entry on December 31, 2018, to record payment of bond interest and the amortization of bond discount using the straight-line method will include a:
(a) debit to Interest Expense NT$300,000.
(b) debit to Interest Expense NT$600,000.
(c) credit to Bonds Payable NT$40,000.
(d) credit to Bonds Payable NT$20,000.

(LO 10) ***15.** For the bonds issued in Question 14 above, what is the carrying value of the bonds at the end of the third interest period?
(a) NT$4,920,000. (c) NT$4,860,000.
(b) NT$4,880,000. (d) NT$4,640,000.

Solutions

1. (a) The time period for classifying a liability as current is one year or the operating cycle, whichever is longer, not (b) shorter, (c) probable, or (d) possible.

2. (d) To be classified as a current liability, a debt must be expected to be paid within one year or the operating cycle. Choices (a) and (b) are both correct, but (d) is the better answer. Choice (c) is incorrect.

3. (b) Accrued interest at 12/31/17 is computed as the face value (R$88,500) times the interest rate (12%) times the portion of the year the debt was outstanding (4 months out of 12), or R$3,540 (R$88,500 × 12% × $\frac{4}{12}$), not (a) R$2,655, (c) R$4,425, or (d) R$10,620.

4. (b) Dividing the total proceeds (€4,515) by one plus the sales tax rate (1.05) will result in the amount of sales to be credited to the Sales Revenue account of €4,300 (€4,515 ÷ 1.05). The other choices are therefore incorrect.

5. (b) The monthly premium is £1,500 or £18,000 divided by 12. Because Sensible has recognized 9 months of insurance revenue (April 1–December 31), 3 months' insurance premium is still unearned. The amount that Sensible should report as Unearned Service Revenue is therefore £4,500 (3 months × £1,500), not (a) £0, (c) £13,500, or (d) £18,000.

6. (c) Debenture bonds are not secured by any collateral. The other choices are incorrect because (a) callable bonds can be paid off or redeemed by the issuer before they reach their maturity date, (b) indenture bonds do not exist, and (d) convertible bonds permit bondholders to convert them into ordinary shares at the bondholders' option.

7. (a) When bonds are issued at a premium, this indicates that the contractual interest rate is higher than the market interest rate. The other choices are incorrect because (b) when the market interest rate exceeds the contractual interest rate, bonds are sold at a discount; (c) when the contractual interest rate and the market interest rate are the same, bonds will be issued at par; and (d) the relationship between the market rate of interest and the contractual rate of interest determines whether bonds are issued at par, a discount, or a premium.

8. (b) The entry to record the redemption of bonds will include a debit to Bonds Payable of HK$1,037,450, a credit to Cash of HK$1,050,000 (HK$1,000,000 × 1.05) and a debit to Loss on Bond Redemption of HK$12,550 (HK$1,050,000 − HK$1,037,450). The other choices are therefore incorrect.

9. (c) In the first year, Andrews will recognize €49,700 of interest expense (€497,000 × 10%). After the first payment is made, the amount remaining on the note will be €346,700 [€497,000 principal − (€200,000 payment − €49,700 interest)]. The remaining balance (€346,700) is multiplied by the interest rate (10%) to compute the interest expense to be recognized for the second year, €34,670 (€346,700 × 10%), not (a) €16,567, (b) €49,700, or (d) €346,700.

10. (c) Howard Ltd. reports the reduction in principal for the next year as a current liability, and it classifies the remaining unpaid principal balance as a non-current liability. The other choices are therefore incorrect.

11. (d) Times interest earned = Net income + Interest expense + Income tax expense (₩300,000 + ₩40,000 + ₩100,000 = ₩440,000) divided by Interest expense (₩40,000), which equals 11 times, not (a) 3, (b) 4.4, or (c) 7.5 times.

***12. (b)** The beginning balance of unamortized discount is £61,446 (£1,000,000 − £938,554). The discount amortization is £3,855, the difference between the cash interest payment of £90,000 (£1,000,000 × 9%) and the interest expense recorded of £93,855 (£938,554 × 10%). This discount amortization (£3,855) is then subtracted from the beginning balance of unamortized discount (£61,446), to arrive at a balance of £57,591 at the end of the first year, not (a) £54,900, (c) £51,610, or (d) £51,000.

***13. (c)** The debit to Interest Expense = R$1,072,096 (initial carrying value of bond) × 12% (market rate) = R$128,652, not (a) R$120,000, (b) R$125,581, or (d) R$140,000.

***14. (c)** [NT$5,000,000 − (96% × NT$5,000,000)] = NT$200,000; NT$200,000 ÷ 5 = NT$40,000 of discount to amortize annually. As a result, the entry would involve a credit to Bonds Payable of NT$40,000. The other choices are therefore incorrect.

***15. (a)** The carrying value of bonds increases by the amount of the periodic discount amortization. Discount amortization using the straight-line method is NT$40,000 each period. Total discount amortization for three periods is NT$120,000 (NT$40,000 × 3 periods) which is added to the initial carrying value (NT$4,800,000) to arrive at NT$4,920,000, the carrying value at the end of the third interest period, not (b) NT$4,880,000, (c) NT$4,860,000, or (d) NT$4,640,000.

PRACTICE EXERCISES

1. On June 1, JetSet plc borrows £150,000 from First Bank on a 6-month, £150,000, 8% note.

Prepare entries for interest-bearing notes.

(LO 2)

Instructions

(a) Prepare the entry on June 1.
(b) Prepare the adjusting entry on June 30.
(c) Prepare the entry at maturity (December 1), assuming monthly adjusting entries have been made through November 30.
(d) What was the total financing cost (interest expense)?

Solution

1. (a) June 1	Cash	150,000	
	Notes Payable		150,000
(b) June 30	Interest Expense	1,000	
	Interest Payable (£150,000 × 8% × 1/12)		1,000
(c) Dec. 1	Notes Payable	150,000	
	Interest Payable (£150,000 × 8% × 6/12)	6,000	
	Cash		156,000
(d) £6,000			

2. Global Airlines Ltd. issued NT$900,000 of 8%, 10-year bonds on January 1, 2017, at face value. Interest is payable annually on January 1.

Prepare entries for bonds issued at face value.

(LO 5)

Instructions

Prepare the journal entries to record the following events.

(a) The issuance of the bonds.
(b) The accrual of interest on December 31.
(c) The payment of interest on January 1, 2018.
(d) The redemption of bonds at maturity, assuming interest for the last interest period has been paid and recorded.

Solution

2.	January 1, 2017		
(a)	Cash	900,000	
	Bonds Payable		900,000
	December 31, 2017		
(b)	Interest Expense	72,000	
	Interest Payable (NT$900,000 × 8%)		72,000
	January 1, 2018		
(c)	Interest Payable	72,000	
	Cash		72,000
	January 1, 2027		
(d)	Bonds Payable	900,000	
	Cash		900,000

Prepare entries to record mortgage note and installment payments.

(LO 7)

3. Trawler SA borrowed €500,000 on December 31, 2017, by issuing a €500,000, 7% mortgage note payable. The terms call for annual installment payments of €80,000 on December 31.

Instructions

(a) Prepare the journal entries to record the mortgage loan and the first two installment payments.

(b) Indicate the amount of mortgage note payable to be reported as a current liability and as a non-current liability at December 31, 2018.

Solution

3.	December 31, 2017		
(a)	Cash	500,000	
	Mortgage Payable		500,000
	December 31, 2018		
	Interest Expense (€500,000 × 7%)	35,000	
	Mortgage Payable	45,000	
	Cash		80,000
	December 31, 2019		
	Interest Expense [(€500,000 − €45,000) × 7%]	31,850	
	Mortgage Payable	48,150	
	Cash		80,000
(b)	Current: €48,150		
	Non-current: €406,850 (€500,000 − €45,000 − €48,150)		

PRACTICE PROBLEM

Prepare entries to record issuance of bonds and long-term notes, interest accrued, and bond redemption.

(LO 5, 6)

Lee Software Ltd. has successfully developed a new spreadsheet program. To produce and market the program, the company needs additional financing. On January 1, 2017, Lee borrowed money as follows.

1. Lee issued NT$1 million, 10%, 10-year bonds at face value. Interest is payable annually on January 1.
2. Lee also issued a NT$400,000, 6%, 15-year mortgage payable. The terms provide for annual installment payments of NT$41,185 on December 31.

Instructions

1. For the 10-year, 10% bonds:
   (a) Journalize the issuance of the bonds on January 1, 2017.
   (b) Prepare the journal entries for interest expense in 2017.
   (c) Prepare the entry for the redemption of the bonds at 101 on January 1, 2020, after paying the interest due on this date.

2. For the mortgage payable:
   (a) Prepare the entry for the issuance of the note on January 1, 2017.
   (b) Prepare a payment schedule for the first four installment payments.
   (c) Indicate the current and non-current amounts for the mortgage payable at December 31, 2017.

Solution

1. (a) 2017

Jan. 1	Cash	1,000,000	
	Bonds Payable		1,000,000
	(To record issuance of bonds)		

(b) 2017

Dec. 31	Interest Expense	100,000	
	Interest Payable		100,000
	(To record accrual of annual bond interest)		

(c) 2020

Jan. 1	Bonds Payable	1,000,000	
	Loss on Bond Redemption	10,000*	
	Cash		1,010,000
	(To record redemption of bonds at 101)		

*(NT$1,010,000 − NT$1,000,000)

2. (a) 2017

Jan. 1	Cash	400,000	
	Mortgage Payable		400,000
	(To record issuance of mortgage payable)		

(b)

Annual Interest Period	Cash Payment	Interest Expense	Reduction of Principal	Principal Balance
Issue date				NT$400,000
1	NT$41,185	NT$24,000	NT$17,185	382,815
2	41,185	22,969	18,216	364,599
3	41,185	21,876	19,309	345,290
4	41,185	20,717	20,468	324,822

(c) Current liability: NT$18,216
Non-current liability: NT$364,599

WileyPLUS Brief Exercises, DO IT! Review, Exercises, and Problems, and many additional resources are available for practice in WileyPLUS.

NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendices to the chapter.

QUESTIONS

1. Brenda Gable believes a current liability is a debt that can be expected to be paid in one year. Is Brenda correct? Explain.
2. Delhi Ltd. obtains Rs300,000 in cash by signing a 9%, 6-month, Rs300,000 note payable to First Bank on July 1. Delhi's fiscal year ends on September 30. What information should be reported for the note payable in the annual financial statements?
3. (a) Your roommate says, "Sales taxes are reported as an expense in the income statement." Do you agree? Explain.
   (b) Planet Hollywood has cash proceeds from sales of £7,400. This amount includes £400 of sales taxes. Give the entry to record the proceeds.
4. Rotterdam University sold 10,000 season football tickets at €90 each for its five-game home schedule. What entries should be made (a) when the tickets were sold, and (b) after each game?
5. What is liquidity? What are two measures of liquidity?
6. (a) What are non-current liabilities? Give three examples. (b) What is a bond?
7. (a) As a source of long-term financing, what are the major advantages of bonds over ordinary shares? (b) What are the major disadvantages in using bonds for long-term financing?
8. Contrast the following types of bonds: (a) secured and unsecured, and (b) convertible and callable.

9. The following terms are important in issuing bonds: (a) face value, (b) contractual interest rate, (c) bond indenture, and (d) bond certificate. Explain each of these terms.
10. Describe the two major obligations incurred by a company when bonds are issued.
11. Assume that Bedazzled Ltd. sold bonds with a face value of €100,000 for €104,000. Was the market interest rate equal to, less than, or greater than the bonds' contractual interest rate? Explain.
12. If a 6%, 10-year, R$800,000 bond is issued at face value and interest is paid annually, what is the amount of the interest payment at the end of the first period?
13. If the Bonds Payable account has a balance of HK$8,400,000 and the amount of the unamortized bond discount is HK$600,000, what is the face value of the bonds?
14. Which accounts are debited and which are credited if a bond issue originally sold at a premium is redeemed before maturity at 97 immediately following the payment of interest?
15. Roy Toth, a friend of yours, has recently purchased a home for €125,000, paying €25,000 down and the remainder financed by a 6.5%, 20-year mortgage, payable at €745.57 per month. At the end of the first month, Roy receives a statement from the bank indicating that only €203.90 of principal was paid during the month. At this rate, he calculates that it will take over 40 years to pay off the mortgage. Is he right? Discuss.
16. In general, what are the requirements for the financial statement presentation of non-current liabilities?

*17. Ginny Bellis is discussing the advantages of the effective-interest method of bond amortization with her accounting staff. What do you think Ginny is saying?

*18. Redbone AG issues CHF500,000 of 8%, 5-year bonds on January 1, 2014, at 104. If Redbone uses the effective-interest method in amortizing the premium, will the annual interest expense increase or decrease over the life of the bonds? Explain.

*19. Explain the straight-line method of amortizing discount and premium on bonds payable.

*20. Fleming Ltd. issues £400,000 of 7%, 5-year bonds on January 1, 2017, at 105. Assuming that the straight-line method is used to amortize the premium, what is the total amount of interest expense for 2017?

*21. Identify two taxes commonly withheld by the employer from an employee's gross pay.

BRIEF EXERCISES

Identify whether obligations are current liabilities. (LO 1)

BE10-1 Cardinal SpA has the following obligations at December 31: (a) a note payable for €100,000 due in 2 years, (b) a 10-year mortgage payable of €300,000 payable in ten €30,000 annual payments, (c) interest payable of €12,000 on the mortgage, and (d) accounts payable of €60,000. For each obligation, indicate whether it should be classified as a current liability. (Assume an operating cycle of less than one year.)

Prepare entries for an interest-bearing note payable. (LO 2)

BE10-2 Becky Ltd. borrows £60,000 on July 1 from the bank by signing a £60,000, 10%, one-year note payable.

(a) Prepare the journal entry to record the proceeds of the note.
(b) Prepare the journal entry to record accrued interest at December 31, assuming adjusting entries are made only at the end of the year.

Compute and record sales taxes payable. (LO 3)

BE10-3 Goodwin Auto Supply does not segregate sales and sales taxes at the time of sale. The register total for March 16 is £12,826. All sales are subject to a 6% sales tax. Compute sales taxes payable, and make the entry to record sales taxes payable and sales revenue.

Prepare entries for unearned revenues. (LO 3)

BE10-4 Hamburg University sells 4,000 season basketball tickets at €180 each for its 10-game home schedule. Give the entry to record (a) the sale of the season tickets and (b) the revenue recognized for playing the first home game.

Compare bond versus share financing. (LO 4)

BE10-5 Shaffer Ltd. is considering two alternatives to finance its construction of a new €2 million plant.

(a) Issuance of 200,000 ordinary shares at the market price of €10 per share.
(b) Issuance of €2 million, 6% bonds at face value.

Complete the following table, and indicate which alternative is preferable.

	Issue Shares	Issue Bonds
Income before interest and taxes	€900,000	€900,000
Interest expense from bonds	______	______
Income before income taxes		
Income tax expense (30%)	______	______
Net income	€ ______	€ ______
Outstanding shares	______	500,000
Earnings per share	€ ______	€ ______

BE10-6 Meera Ltd. issued 4,000, 8%, 5-year, £1,000 bonds dated January 1, 2017, at 100. Interest is paid each January 1.

Prepare entries for bonds issued at face value.

(LO 5)

(a) Prepare the journal entry to record the sale of these bonds on January 1, 2017.
(b) Prepare the adjusting journal entry on December 31, 2017, to record interest expense.
(c) Prepare the journal entry on January 1, 2018, to record interest paid.

BE10-7 Nasreen Company issues €2 million, 10-year, 8% bonds at 97, with interest payable each January 1.

Prepare entries for bonds sold at a discount and a premium.

(LO 5)

(a) Prepare the journal entry to record the sale of these bonds on January 1, 2017.
(b) Assuming instead that the above bonds sold for 104, prepare the journal entry to record the sale of these bonds on January 1, 2017.

BE10-8 Frankum SpA has issued three different bonds during 2017. Interest is payable annually on each of these bonds.

Prepare entries for bonds issued.

(LO 5)

1. On January 1, 2017, 1,000, 8%, 5-year, €1,000 bonds dated January 1, 2017, were issued at face value.
2. On July 1, €900,000, 9%, 5-year bonds dated July 1, 2017, were issued at 102.
3. On September 1, €400,000, 7%, 5-year bonds dated September 1, 2017, were issued at 98.

Prepare the journal entry to record each bond transaction at the date of issuance.

BE10-9 The statement of financial position for Miley Consulting reports the following information on July 1, 2017.

Prepare entry for redemption of bonds.

(LO 6)

Non-current liabilities	
Bonds payable	£940,000

Miley decides to redeem these bonds at 101 (face value of bonds £1,000,000) after paying annual interest. Prepare the journal entry to record the redemption on July 1, 2017.

BE10-10 Hanschu plc issues an £800,000, 10%, 10-year mortgage note on December 31, 2017, to obtain financing for a new building. The terms provide for annual installment payments of £130,196. Prepare the entry to record the mortgage loan on December 31, 2017, and the first installment payment on December 31, 2018.

Prepare entries for long-term notes payable.

(LO 7)

BE10-11 Presented below are non-current liability items for Suarez AG at December 31, 2017. Prepare the non-current liabilities section of the statement of financial position for Suarez.

Prepare statement presentation of non-current liabilities.

(LO 8)

Bonds payable, due 2019	CHF500,000
Lease liability	72,000
Notes payable, due 2022	80,000

BE10-12 Suppose the 2017 adidas financial statements contain the following selected data (in millions)

Analyze solvency.

(LO 3, 8)

Current assets	€4,485	Interest expense	€169
Total assets	8,875	Income taxes	113
Current liabilities	2,836	Net income	245
Total liabilities	5,099		
Cash	775		

Compute the following values and provide a brief interpretation of each.

(a) Working capital. (c) Debt to assets ratio.
(b) Current ratio. (d) Times interest earned.

***BE10-13** Presented below is the partial bond discount amortization schedule for Gomez SA. Gomez uses the effective-interest method of amortization.

Use effective-interest method of bond amortization.

(LO 9)

Interest Periods	Interest to Be Paid	Interest Expense to Be Recorded	Discount Amortization	Unamortized Discount	Bond Carrying Value
Issue date				€38,609	€961,391
1	€45,000	€48,070	€3,070	35,539	964,461
2	45,000	48,223	3,223	32,316	967,684

(a) Prepare the journal entry to record the payment of interest and the discount amortization at the end of period 1.
(b) Explain why interest expense is greater than interest paid.
(c) Explain why interest expense will increase each period.

Prepare entries for bonds issued at a discount.
(LO 10)

***BE10-14** Zhu Ltd. issues HK$5 million, 10-year, 9% bonds at 96, with interest payable annually on January 1. The straight-line method is used to amortize bond discount.

(a) Prepare the journal entry to record the sale of these bonds on January 1, 2017.
(b) Prepare the adjusting journal entry to record interest expense and bond discount amortization on December 31, 2017.

Prepare entries for bonds issued at a premium.
(LO 10)

***BE10-15** Golden plc issues £4 million, 5-year, 10% bonds at 102, with interest payable annually January 1. The straight-line method is used to amortize bond premium.

(a) Prepare the journal entry to record the sale of these bonds on January 1, 2017.
(b) Prepare the adjusting journal entry to record interest expense and bond premium amortization on December 31, 2017.

Prepare entry to record payroll.
(LO 11)

***BE10-16** Lexington AG's weekly payroll of €24,000 included Social Security taxes withheld of €1,920, income taxes withheld of €2,990, and insurance premiums withheld of €250. Prepare the journal entry to record Lexington's payroll.

Prepare entries to record profit-sharing bonus.
(LO 11)

***BE10-17** Mayaguez Ltd. provides its officers with bonuses based on net income. For 2017, the bonuses total £350,000 and are paid on February 15, 2018. Prepare Mayaguez's December 31, 2017, adjusting entry and the February 15, 2018, entry.

> DO IT! REVIEW

Answer questions about current liabilities.
(LO 2, 3)

DO IT! 10-1 You and several classmates are studying for the next accounting examination. They ask you to answer the following questions:

1. If cash is borrowed on a NT$2,100,000, 9-month, 7% note on August 1, how much interest expense would be incurred by December 31?
2. The cash register total including sales taxes is NT$1,260,000 and the sales tax rate is 5%. What is the sales taxes payable?
3. If NT$1,080,000 is collected in advance on December 1 for 6-month magazine subscriptions, what amount of subscription revenue is recognized by December 31?

Evaluate statements about bonds.
(LO 4)

DO IT! 10-2 State whether each of the following statements is true or false. If false, indicate how to correct the statement.

______ 1. Mortgage bonds and sinking fund bonds are both examples of debenture bonds.
______ 2. Convertible bonds are also known as callable bonds.
______ 3. The market rate is the rate investors demand for loaning funds.
______ 4. Annual interest paid on bonds is equal to the face value times the stated rate.
______ 5. The present value of a bond is the value at which it should sell in the market.

Prepare journal entry for bond issuance and show statement of financial position presentation.
(LO 5)

DO IT! 10-3 Jeon Enterprises, Ltd. issues ₩300,000,000 of bonds for ₩306,000,000. (a) Prepare the journal entry to record the issuance of the bonds, and (b) show how the bonds would be reported on the statement of financial position at the date of issuance.

Prepare entry for bond redemption.
(LO 6)

DO IT! 10-4 Jeske Industries, SA issued €400,000 of 10-year bonds at a discount. Prior to maturity, when the carrying value of the bonds was €390,000, the company redeemed the bonds at 99. Prepare the entry to record the redemption of the bonds.

Prepare entries for mortgage note and installment payment on note.
(LO 7)

DO IT! 10-5 Mattsen Orchard issues a R$700,000, 6%, 15-year mortgage note to obtain needed financing for a new lab. The terms call for annual payments of R$72,074 each. Prepare the entries to record the mortgage loan and the first installment payment.

Analyze liabilities.
(LO 8)

DO IT! 10-6 Grouper Company provides you with the following statement of financial position information as of December 31, 2017.

Non-current assets	$26,500	Equity	$12,000
Current assets	11,500	Non-current liabilities	14,000
Total assets	$38,000	Current liabilities	12,000
		Total equity and liabilities	$38,000

In addition, Grouper reported net income for 2017 of $16,000, income tax expense of $3,200, and interest expense of $1,300.

(a) Compute the debt to assets ratio for Grouper for 2017.
(b) Compute times interest earned for Grouper for 2017.

EXERCISES

Prepare entries for interest-bearing notes.
(LO 2)

E10-1 Padillio SpA had the following transactions involving notes payable.

July 1, 2017	Borrows €60,000 from Fourth National Bank by signing a 9-month, 8% note.
Nov. 1, 2017	Borrows €42,000 from Livingston Bank by signing a 3-month, 7% note.
Dec. 31, 2017	Prepares adjusting entries.
Feb. 1, 2018	Pays principal and interest to Livingston Bank.
Apr. 1, 2018	Pays principal and interest to Fourth National Bank.

Instructions
Prepare journal entries for each of the transactions.

Prepare entries for interest-bearing notes.
(LO 2)

E10-2 On June 1, Yoon Ltd. borrows €70,000 from First Bank on a 6-month, €70,000, 9% note.

Instructions
(a) Prepare the entry on June 1.
(b) Prepare the adjusting entry on June 30.
(c) Prepare the entry at maturity (December 1), assuming monthly adjusting entries have been made through November 30.
(d) What was the total financing cost (interest expense)?

Journalize sales and related taxes.
(LO 3)

E10-3 In performing accounting services for small businesses, you encounter the following situations pertaining to cash sales.

1. Kemer A.Ş. enters sales and sales taxes separately on its cash register. On April 10, the register totals are sales ₺30,000 and sales taxes ₺1,800.
2. Bodrum A.Ş. does not segregate sales and sales taxes. Its register total for April 15 is ₺20,330, which includes a 7% sales tax.

Instructions
Prepare the entry to record the sales transactions and related taxes for each client.

Journalize unearned subscription revenue.
(LO 3)

E10-4 Nevin Ltd. publishes a monthly sports magazine, *Fishing Preview*. Subscriptions to the magazine cost £18 per year. During November 2017, Nevin sells 12,000 subscriptions beginning with the December issue. Nevin prepares financial statements quarterly and recognizes subscription revenue at the end of the quarter. The company uses the accounts Unearned Subscription Revenue and Subscription Revenue.

Instructions
(a) Prepare the entry in November for the receipt of the subscriptions.
(b) Prepare the adjusting entry at December 31, 2017, to record sales revenue recognized in December 2017.
(c) Prepare the adjusting entry at March 31, 2018, to record sales revenue recognized in the first quarter of 2018.

Calculate current ratio and working capital before and after paying accounts payable.
(LO 3)

E10-5 The following financial data were reported by 3M Company (USA) for 2012 and 2013 (dollars in millions).

3M COMPANY
Statements of Financial Position (partial)

	2013	2012
Current assets		
Other current assets	$ 2,035	$ 2,849
Inventories	3,864	3,837
Accounts receivable, net	4,253	4,061
Cash and cash equivalents	2,581	2,883
Total current assets	$12,733	$13,630
Current liabilities	$ 7,498	$ 6,200

Instructions
(a) Calculate the current ratio and working capital for 3M for 2012 and 2013.
(b) Suppose that at the end of 2013, 3M management used $200 million cash to pay off $200 million of accounts payable. How would its current ratio and working capital have changed?

Evaluate statements about bonds.
(LO 4)

E10-6 Liane Hansen has prepared the following list of statements about bonds.

1. Bonds are a form of interest-bearing notes payable.
2. When seeking long-term financing, an advantage of issuing bonds over issuing ordinary shares is that shareholder control is not affected.
3. When seeking long-term financing, an advantage of issuing ordinary shares over issuing bonds is that tax savings result.
4. Secured bonds have specific assets of the issuer pledged as collateral for the bonds.
5. Secured bonds are also known as debenture bonds.
6. A conversion feature may be added to bonds to make them more attractive to bond buyers.
7. The rate used to determine the amount of cash interest the borrower pays is called the stated rate.
8. Bond prices are usually quoted as a percentage of the face value of the bond.
9. The present value of a bond is the value at which it should sell in the marketplace.

Instructions
Identify each statement as true or false. If false, indicate how to correct the statement.

Compare two alternatives of financing—issuance of ordinary shares vs. issuance of bonds.
(LO 4)

E10-7 Global Car Rental is considering two alternatives for the financing of a purchase of a fleet of cars. These two alternatives are:

1. Issue 60,000 ordinary shares at ¥40 per share. (Cash dividends have not been paid nor is the payment of any contemplated.)
2. Issue 7%, 10-year bonds at face value for ¥2,400,000.

It is estimated that the company will earn ¥800,000 before interest and taxes as a result of this purchase. The company has an estimated tax rate of 30% and has 90,000 ordinary shares outstanding prior to the new financing.

Instructions
Determine the effect on net income and earnings per share for these two methods of financing.

Prepare entries for issuance of bonds, and payment and accrual of bond interest.
(LO 5)

E10-8 On January 1, 2017, Klosterman Ltd. issued £500,000, 10%, 10-year bonds at face value. Interest is payable annually on January 1.

Instructions
Prepare journal entries to record the following.

(a) The issuance of the bonds.
(b) The accrual of interest on December 31, 2017.
(c) The payment of interest on January 1, 2018.

E10-9 On January 1, 2017, Forrester SA issued R$400,000, 8%, 5-year bonds at face value. Interest is payable annually on January 1.

Prepare entries for bonds issued at face value.

(LO 5)

Instructions

Prepare journal entries to record the following.

(a) The issuance of the bonds.
(b) The accrual of interest on December 31, 2017.
(c) The payment of interest on January 1, 2018.

E10-10 Pueblo Company issued €500,000 of 5-year, 8% bonds at 97 on January 1, 2017. The bonds pay interest annually.

Prepare entries to record issuance of bonds at discount and premium.

(LO 5)

Instructions

(a) (1) Prepare the journal entry to record the issuance of the bonds.
    (2) Compute the total cost of borrowing for these bonds.
(b) Repeat the requirements from part (a), assuming the bonds were issued at 105.

E10-11 The following section is taken from Ohlman Ltd.'s. statement of financial position at December 31, 2016.

Prepare entries for bond interest and redemption.

(LO 5, 6)

Non-current liabilities	
Bonds payable, 7%, due January 1, 2021	HK$16,000,000
Current liabilities	
Interest payable	1,120,000

Bond interest is payable annually on January 1. The bonds are callable on any interest date.

Instructions

(a) Journalize the payment of the bond interest on January 1, 2017.
(b) Assume that on January 1, 2017, after paying interest, Ohlman calls bonds having a face value of HK$6,000,000. The call price is 103. Record the redemption of the bonds.
(c) Prepare the entry to record the accrual of interest on December 31, 2017.

E10-12 Presented below are two independent situations.

Prepare entries for redemption of bonds.

(LO 6)

1. Longbine plc redeemed £130,000 face value, 12% bonds on June 30, 2017, at 102. The carrying value of the bonds at the redemption date was £117,500. The bonds pay annual interest, and the interest payment due on June 30, 2017, has been made and recorded.
2. Tastove Ltd. redeemed £150,000 face value, 12.5% bonds on June 30, 2017, at 98. The carrying value of the bonds at the redemption date was £151,000. The bonds pay annual interest, and the interest payment due on June 30, 2017, has been made and recorded.

Instructions

Prepare the appropriate journal entry for the redemption of the bonds in each situation.

E10-13 Jernigan Co. receives €240,000 when it issues a €240,000, 6%, mortgage note payable to finance the construction of a building at December 31, 2017. The terms provide for annual installment payments of €33,264 on December 31.

Prepare entries to record mortgage note and payments.

(LO 7)

Instructions

Prepare the journal entries to record the mortgage loan and the first two payments.

E10-14 The adjusted trial balance for Zhang Ltd. at the end of the current year contained the following accounts.

Prepare non-current liabilities section.

(LO 8)

Interest Payable	HK$ 9,000
Lease Liability	59,500
Bonds Payable, due 2022	204,000

Instructions

Prepare the non-current liabilities section of the statement of financial position.

E10-15 Suppose Lin Ltd.'s 2017 financial statements contain the following selected data (in millions).

Calculate liquidity and solvency ratios; discuss impact of unrecorded obligations on liquidity and solvency.

(LO 3, 8)

Current assets	NT$ 3,416.3	Interest expense	NT$ 473.2
Total assets	30,224.9	Income taxes	1,936.0
Current liabilities	2,988.7	Net income	4,551.0
Total liabilities	16,191.0		

Instructions

(a) Compute the following values and provide a brief interpretation of each.
 (1) Working capital. (3) Debt to assets ratio.
 (2) Current ratio. (4) Times interest earned.

(b) Suppose the notes to Lin's financial statements show that subsequent to 2017, the company will have future minimum lease payments under operating leases of NT$10,717.5 million. If these assets had been purchased with debt, assets and liabilities would rise by approximately NT$8,800 million. Recompute the debt to assets ratio after adjusting for this. Discuss your result.

Prepare entries for issuance of bonds, payment of interest, and amortization of discount using effective-interest method.
(LO 9)

***E10-16** Lorance SpA issued €400,000, 7%, 20-year bonds on January 1, 2017, for €360,727. This price resulted in an effective-interest rate of 8% on the bonds. Interest is payable annually on January 1. Lorance uses the effective-interest method to amortize bond premium or discount.

Instructions

Prepare the journal entries to record the following. (Round to the nearest euro.)

(a) The issuance of the bonds.
(b) The accrual of interest and the discount amortization on December 31, 2017.
(c) The payment of interest on January 1, 2018.

Prepare entries of issuance of bonds, payment of interest, and amortization of discount using effective-interest method.
(LO 9)

***E10-17** LRNA Ltd. issued £380,000, 7%, 10-year bonds on January 1, 2017, for £407,968. This price resulted in an effective-interest rate of 6% on the bonds. Interest is payable annually on January 1. LRNA uses the effective-interest method to amortize bond premium or discount.

Instructions

Prepare the journal entries to record the following. (Round to the nearest pound.)

(a) The issuance of the bonds.
(b) The accrual of interest and the premium amortization on December 31, 2017.
(c) The payment of interest on January 1, 2018.

Prepare entries to record issuance of bonds, payment of interest, amortization of premium, and redemption at maturity.
(LO 5, 10)

***E10-18** Adcock A/S issued €600,000, 9%, 20-year bonds on January 1, 2017, at 103. Interest is payable annually on January 1. Adcock uses straight-line amortization for bond premium or discount.

Instructions

Prepare the journal entries to record the following.

(a) The issuance of the bonds.
(b) The accrual of interest and the premium amortization on December 31, 2017.
(c) The payment of interest on January 1, 2018.
(d) The redemption of the bonds at maturity, assuming interest for the last interest period has been paid and recorded.

Prepare entries to record issuance of bonds, payment of interest, amortization of discount, and redemption at maturity.
(LO 5, 10)

***E10-19** Gridley Ltd. issued £800,000, 11%, 10-year bonds on December 31, 2016, for £730,000. Interest is payable annually on December 31. Gridley uses the straight-line method to amortize bond premium or discount.

Instructions

Prepare the journal entries to record the following.

(a) The issuance of the bonds.
(b) The payment of interest and the discount amortization on December 31, 2017.
(c) The redemption of the bonds at maturity, assuming interest for the last interest period has been paid and recorded.

Record payroll-related deductions.
(LO 11)

***E10-20** Dan Noll's gross earnings for the week were $1,780, his income tax withholding was $303, and his social security tax total was $136.

Instructions

(a) What was Noll's net pay for the week?
(b) Journalize the entry for the recording of his pay in the general journal. (*Note:* Use Salaries and Wages Payable; not Cash.)
(c) Record the issuing of the check for Noll's pay in the general journal.

PROBLEMS: SET A

P10-1A On January 1, 2017, the ledger of Shumway Ltd. contains the following liability accounts.

Prepare current liability entries, adjusting entries, and current liabilities section.

(LO 1, 2, 3)

Accounts Payable	£52,000
Sales Taxes Payable	5,800
Unearned Service Revenue	13,000

During January, the following selected transactions occurred.

Jan. 5 Sold merchandise for cash totaling £22,470, which includes 7% sales taxes.
12 Performed services for customers who had made advance payments of £10,000. (Credit Service Revenue.)
14 Paid revenue department for sales taxes collected in December 2016 (£5,800).
20 Sold 700 units of a new product on credit at £52 per unit, plus 7% sales tax.
21 Borrowed £14,000 from DeKalb Bank on a 3-month, 6%, £14,000 note.
25 Sold merchandise for cash totaling £12,947, which includes 7% sales taxes.

Instructions

(a) Journalize the January transactions.
(b) Journalize the adjusting entries at January 31 for the outstanding notes payable. (*Hint:* Use one-third of a month for the DeKalb Bank note.)
(c) Prepare the current liabilities section of the statement of financial position at January 31, 2017. Assume no change in accounts payable.

(c) Current liability total £73,888

P10-2A The following are selected transactions of Graves ASA. Graves prepares financial statements quarterly.

Journalize and post note transactions; show statement of financial position presentation.

(LO 2)

Jan. 2 Purchased merchandise on account from Ally Company, €30,000, terms 2/10, n/30. (Graves uses the perpetual inventory system.)
Feb. 1 Issued a 6%, 2-month, €30,000 note to Ally in payment of account.
Mar. 31 Accrued interest for 2 months on Ally note.
Apr. 1 Paid face value and interest on Ally note.
July 1 Purchased equipment from Clark Equipment paying €8,000 in cash and signing a 7%, 3-month, €40,000 note.
Sept. 30 Accrued interest for 3 months on Clark note.
Oct. 1 Paid face value and interest on Clark note.
Dec. 1 Borrowed €15,000 from the Jonas Bank by issuing a 3-month, 6% note with a face value of €15,000.
Dec. 31 Recognized interest expense for 1 month on Jonas Bank note.

Instructions

(a) Prepare journal entries for the listed transactions and events.
(b) Post to the accounts Notes Payable, Interest Payable, and Interest Expense.
(c) Show the statement of financial position presentation of notes and interest payable at December 31.
(d) What is total interest expense for the year?

(d) €1,075

P10-3A On May 1, 2017, Herron Industries AG issued CHF600,000, 9%, 5-year bonds at face value. The bonds were dated May 1, 2017, and pay interest annually on May 1. Financial statements are prepared annually on December 31.

Prepare entries to record issuance of bonds, interest accrual, and bond redemption.

(LO 5, 6, 8)

Instructions

(a) Prepare the journal entry to record the issuance of the bonds.
(b) Prepare the adjusting entry to record the accrual of interest on December 31, 2017.
(c) Show the statement of financial position presentation on December 31, 2017.
(d) Prepare the journal entry to record payment of interest on May 1, 2018.
(e) Prepare the adjusting entry to record the accrual of interest on December 31, 2018.
(f) Assume that on January 1, 2019, Herron pays the accrued bond interest and calls the bonds at 102. Record the payment of interest and redemption of the bonds.

(d) Int. exp. CHF18,000

(f) Loss CHF12,000

Prepare entries to record issuance of bonds, interest accrual, and bond redemption.
(LO 5, 6, 8)

P10-4A Kershaw Electric Ltd. sold £6,000,000, 10%, 15-year bonds on January 1, 2017. The bonds were dated January 1, 2017, and paid interest on January 1. The bonds were sold at 98.

Instructions

(a) Prepare the journal entry to record the issuance of the bonds on January 1, 2017.
(b) At December 31, 2017, the amount of amortized bond discount is £8,000. Show the statement of financial position presentation of the bond liability at December 31, 2017.
(c) On January 1, 2019, when the carrying value of the bonds was £5,896,000, the company redeemed the bonds at 102. Record the redemption of the bonds assuming that interest for the period has already been paid.

(c) Loss £224,000

Prepare installment payments schedule and journal entries for a mortgage note payable.
(LO 7, 8)

P10-5A Talkington Electronics issues a R$400,000, 8%, 10-year mortgage note on December 31, 2016. The proceeds from the note are to be used in financing a new research laboratory. The terms of the note provide for annual installment payments, exclusive of real estate taxes and insurance, of R$59,612. Payments are due on December 31.

Instructions

(a) Prepare an installment payments schedule for the first 4 years.
(b) Prepare the entries for (1) the loan and (2) the first installment payment.
(c) Show how the total mortgage liability should be reported on the statement of financial position at December 31, 2017.

(b) December 31 debit Mortgage Payable R$27,612
(c) Current liability—2017 R$29,821

Prepare journal entries to record issuance of bonds, payment of interest, and amortization of bond discount using effective-interest method.
(LO 5, 9)

***P10-6A** On January 1, 2017, Lock Industries Ltd. issued £1,800,000 face value, 5%, 10-year bonds at £1,667,518. This price resulted in an effective-interest rate of 6% on the bonds. Lock uses the effective-interest method to amortize bond premium or discount. The bonds pay annual interest January 1.

Instructions

(Round all computations to the nearest pound.)

(a) Prepare the journal entry to record the issuance of the bonds on January 1, 2017.
(b) Prepare an amortization table through December 31, 2019 (3 interest periods) for this bond issue.
(c) Prepare the journal entry to record the accrual of interest and the amortization of the discount on December 31, 2017.
(d) Prepare the journal entry to record the payment of interest on January 1, 2018.
(e) Prepare the journal entry to record the accrual of interest and the amortization of the discount on December 31, 2018.

(c) Interest Expense £100,051

Prepare journal entries to record issuance of bonds, payment of interest, and effective-interest amortization, and statement of financial position presentation.
(LO 5, 9)

***P10-7A** On January 1, 2017, Jade SA issued €2,000,000 face value, 7%, 10-year bonds at €2,147,202. This price resulted in a 6% effective-interest rate on the bonds. Jade uses the effective-interest method to amortize bond premium or discount. The bonds pay annual interest on each January 1.

Instructions

(a) Prepare the journal entries to record the following transactions.
  (1) The issuance of the bonds on January 1, 2017.
  (2) Accrual of interest and amortization of the premium on December 31, 2017.
  (3) The payment of interest on January 1, 2018.
  (4) Accrual of interest and amortization of the premium on December 31, 2018.
(b) Show the proper non-current liabilities statement of financial position presentation for the bond liability at December 31, 2018.
(c) Provide the answers to the following questions in narrative form.
  (1) What amount of interest expense is reported for 2018?
  (2) Would the bond interest expense reported in 2018 be the same as, greater than, or less than the amount that would be reported if the straight-line method of amortization were used?

(a) (4) Interest Expense €128,162

Prepare entries to record issuance of bonds, interest accrual, and straight-line amortization for 2 years.
(LO 5, 10)

***P10-8A** Paris Electric sold €3,000,000, 10%, 10-year bonds on January 1, 2017. The bonds were dated January 1 and pay interest annually on January 1. Paris Electric uses the straight-line method to amortize bond premium or discount. The bonds were sold at 104.

Instructions

(a) Prepare the journal entry to record the issuance of the bonds on January 1, 2017.
(b) Prepare a bond premium amortization schedule for the first 4 interest periods.
(c) Prepare the journal entries for interest and the amortization of the premium in 2017 and 2018.
(d) Show the statement of financial position presentation of the bond liability at December 31, 2018.

(b) Amortization €12,000
(d) Bonds payable €3,096,000

***P10-9A** Saberhagen Ltd. sold Rs3,500,000, 8%, 10-year bonds on January 1, 2017. The bonds were dated January 1, 2017, and pay interest annually on January 1. Saberhagen Company uses the straight-line method to amortize bond premium or discount.

Prepare entries to record issuance of bonds, interest, and straight-line amortization of bond premium and discount.

(LO 5, 10)

Instructions

(a) Prepare all the necessary journal entries to record the issuance of the bonds and bond interest expense for 2017, assuming that the bonds sold at 104.
(b) Prepare journal entries as in part (a) assuming that the bonds sold at 98.
(c) Show the statement of financial position presentation for the bonds at December 31, 2017, for both the requirements in (a) and (b).

(a) Amortization Rs14,000
(b) Amortization Rs7,000
(c) Bonds payable Rs3,626,000
Bonds payable Rs3,437,000

***P10-10A** The following is taken from the Colaw SA statement of financial position.

Prepare entries to record interest payments, straight-line premium amortization, and redemption of bonds.

(LO 6, 10)

COLAW SA
Statement of Financial Position (partial)
December 31, 2017

Non-current liabilities	
Bonds payable (face value €3,000,000),	
7% due January 1, 2028	€3,200,000
Current liabilities	
Interest payable (for 12 months from	
January 1 to December 31)	210,000

Interest is payable annually on January 1. The bonds are callable on any annual interest date. Colaw uses straight-line amortization for any bond premium or discount. From December 31, 2017, the bonds will be outstanding for an additional 10 years (120 months).

Instructions

(a) Journalize the payment of bond interest on January 1, 2018.
(b) Prepare the entry to amortize bond premium and to accrue the interest due on December 31, 2018.
(c) Assume that on January 1, 2019, after paying interest, Colaw calls bonds having a face value of €1,200,000. The call price is 101. Record the redemption of the bonds.
(d) Prepare the adjusting entry at December 31, 2019, to amortize bond premium and to accrue interest on the remaining bonds.

(b) Amortization €20,000
(c) Gain €60,000
(d) Amortization €12,000

PROBLEMS: SET B

P10-1B On January 1, 2017, the ledger of Zaur Ltd. contains the following liability accounts.

Prepare current liability entries, adjusting entries, and current liabilities section.

(LO 1, 2, 3)

Accounts Payable	¥42,500
Sales Taxes Payable	5,800
Unearned Service Revenue	15,000

During January, the following selected transactions occurred.

Jan.	1	Borrowed ¥15,000 in cash from Platteville Bank on a 4-month, 6%, ¥15,000 note.
	5	Sold merchandise for cash totaling ¥9,828, which includes 8% sales taxes.
	12	Performed services for customers who had made advance payments of ¥9,400. (Credit Service Revenue.)
	14	Paid government treasurer's department for sales taxes collected in December 2016, ¥5,800.
	20	Sold 700 units of a new product on credit at ¥44 per unit, plus 8% sales tax.
	25	Sold merchandise for cash totaling ¥16,308, which includes 8% sales taxes.

Instructions
(a) Journalize the January transactions.
(b) Journalize the adjusting entries at January 31 for the outstanding notes payable.
(c) Prepare the current liabilities section of the statement of financial position at January 31, 2017. Assume no change in accounts payable.

(c) Current liability total ¥67,575

Prepare entries to record issuance of bonds, interest accrual, and bond redemption.
(LO 5, 6, 8)

P10-2B On June 1, 2017, Weller SA issued €1,200,000, 8%, 5-year bonds at face value. The bonds were dated June 1, 2017, and pay interest annually on June 1. Financial statements are prepared annually on December 31.

Instructions
(a) Prepare the journal entry to record the issuance of the bonds.
(b) Prepare the adjusting entry to record the accrual of interest on December 31, 2017.
(c) Show the statement of financial position presentation on December 31, 2017.
(d) Prepare the journal entry to record payment of interest on June 1, 2018.
(e) Prepare the adjusting entry to record the accrual of interest on December 31, 2018.
(f) Assume that on January 1, 2019, Weller pays the accrued interest and calls the bonds at 102. Record the payment of interest and redemption of the bonds.

(d) Int. Exp. €40,000
(f) Loss €24,000

Prepare entries to record issuance of bonds, interest accrual, and bond redemption.
(LO 5, 6, 8)

P10-3B Shonrock Co. sold R$800,000, 9%, 10-year bonds on January 1, 2017. The bonds were dated January 1, 2017, and paid interest on January 1. The bonds were sold at 105.

Instructions
(a) Prepare the journal entry to record the issuance of the bonds on January 1, 2017.
(b) At December 31, 2017, the amount of amortized bond premium is R$4,000. Show the statement of financial position presentation of the bond liability at December 31, 2017.
(c) On January 1, 2019, when the carrying value of the bonds was R$832,000, the company redeemed the bonds at 106. Record the redemption of the bonds, assuming that interest for the period has already been paid.

(c) Loss R$16,000

Prepare installment payments schedule and journal entries for a mortgage note payable.
(LO 7, 8)

P10-4B Crosetti's Electronics issues an £800,000, 8%, 10-year mortgage note on December 31, 2016, to help finance a plant expansion program. The terms of the note provide for annual installment payments, exclusive of real estate taxes and insurance, of £119,224. Payments are due on December 31.

Instructions
(a) Prepare an installment payments schedule for the first 4 years.
(b) Prepare the entries for (1) the loan and (2) the first installment payment.
(c) Show how the total mortgage liability should be reported on the statement of financial position at December 31, 2017.

(b) Debit Mortgage Payable £55,224
(c) Current liability—2017; £59,642

Prepare entries to record issuance of bonds, payment of interest, and amortization of bond discount using effective-interest method.
(LO 5, 9)

***P10-5B** On January 1, 2017, Witherspoon Satellites issued £4,500,000, 9%, 10-year bonds at £4,219,600. This price resulted in an effective-interest rate of 10% on the bonds. Witherspoon uses the effective-interest method to amortize bond premium or discount. The bonds pay annual interest January 1.

Instructions
(Round all computations to the nearest pound.)
(a) Prepare the journal entry to record the issuance of the bonds on January 1, 2017.
(b) Prepare an amortization table through December 31, 2018 (2 interest periods) for this bond issue.
(c) Prepare the journal entry to record the accrual of interest and the amortization of the discount on December 31, 2017.
(d) Prepare the journal entry to record the payment of interest on January 1, 2018.
(e) Prepare the journal entry to record the accrual of interest and the amortization of the discount on December 31, 2018.

(c) Amortization £16,960
(e) Amortization £18,656

Prepare entries to record issuance of bonds, payment of interest, and amortization of premium using effective-interest method.
(LO 5, 9)

***P10-6B** On January 1, 2017, Ashlock Chemical AG issued €4,000,000, 10%, 10-year bonds at €4,543,627. This price resulted in an 8% effective-interest rate on the bonds. Ashlock uses the effective-interest method to amortize bond premium or discount. The bonds pay annual interest on each January 1.

Instructions
(Round all computations to the nearest euro.)
(a) Prepare the journal entries to record the following transactions.
    (1) The issuance of the bonds on January 1, 2017.

(2) Accrual of interest and amortization of the premium on December 31, 2017.
(3) The payment of interest on January 1, 2018.
(4) Accrual of interest and amortization of the premium on December 31, 2018.
(b) Show the proper non-current liabilities statement of financial position presentation for the bond liability at December 31, 2018.
(c) Provide the answers to the following questions in narrative form.
(1) What amount of interest expense is reported for 2018?
(2) Would the bond interest expense reported in 2018 be the same as, greater than, or less than the amount that would be reported if the straight-line method of amortization were used?

(a) (2) Amortization €36,510
(a) (4) Amortization €39,431
(b) Bond carrying value €4,467,686

***P10-7B** Wu Ltd. sold ¥6,000,000, 8%, 20-year bonds on January 1, 2017. The bonds were dated January 1 and pay interest annually on January 1. Wu uses the straight-line method to amortize bond premium or discount. The bonds were sold at 96.

Prepare entries to record issuance of bonds, interest accrual, and straight-line amortization for 2 years.

(LO 5, 10)

Instructions
(a) Prepare the journal entry to record the issuance of the bonds on January 1, 2017.
(b) Prepare a bond discount amortization schedule for the first 4 interest periods.
(c) Prepare the journal entries for interest and the amortization of the discount in 2017 and 2018.
(d) Show the statement of financial position presentation of the bond liability at December 31, 2018.

(b) Amortization ¥12,000
(d) Bonds payable ¥5,784,000

***P10-8B** Rosewell Ltd. sold £4,000,000, 7%, 10-year bonds on January 1, 2017. The bonds were dated January 1, 2017, and pay interest annually on January 1. Rosewell uses the straight-line method to amortize bond premium or discount.

Prepare entries to record issuance of bonds, interest, and straight-line amortization of bond premium and discount.

(LO 5, 10)

Instructions
(a) Prepare all the necessary journal entries to record the issuance of the bonds and bond interest expense for 2017, assuming that the bonds sold at 103.
(b) Prepare journal entries as in part (a), assuming that the bonds sold at 96.
(c) Show the statement of financial position presentation for the bond liability at December 31, 2017, for both parts (a) and (b).

(a) Amortization £12,000
(b) Amortization £16,000
(c) Bonds payable £4,108,000

***P10-9B** The following is taken from the Sinjh ASA statement of financial position.

Prepare entries to record interest payments, straight-line discount amortization, and redemption of bonds.

(LO 5, 6, 10)

SINJH ASA
Statement of Financial Position
December 31, 2016

Non-current liabilities	
Bonds payable (face value €2,400,000), 9%, due January 1, 2027	€2,310,000
Current liabilities	
Interest payable (for 12 months from January 1 to December 31)	216,000

Interest is payable annually on January 1. The bonds are callable on any annual interest date. Sinjh uses straight-line amortization for any bond premium or discount. From December 31, 2016, the bonds will be outstanding for an additional 10 years (120 months).

Instructions
(Round all computations to the nearest euro).
(a) Journalize the payment of bond interest on January 1, 2017.
(b) Prepare the entry to amortize bond discount and to accrue the interest due on December 31, 2018.
(c) Assume that on January 1, 2018, after paying interest, Sinjh calls bonds having a face value of €800,000. The call price is 102. Record the redemption of the bonds.
(d) Prepare the adjusting entry at December 31, 2018, to amortize bond discount and to accrue interest on the remaining bonds.

(b) Amortization €9,000
(c) Loss €43,000
(d) Amortization €6,000

COMPREHENSIVE PROBLEMS

CP10-1 James Ltd.'s statement of financial position at December 31, 2016, is presented below.

JAMES LTD.
Statement of Financial Position
December 31, 2016

Equipment	£ 43,000	Share capital—ordinary	£ 20,000
Prepaid insurance	5,600	Retained earnings	18,600
Inventory	25,750	Bonds payable	50,000
Cash	30,500	Accounts payable	13,750
	£104,850	Interest payable	2,500
			£104,850

During 2017, the following transactions occurred.

1. James paid £2,500 interest on the bonds on January 1, 2017.
2. James purchased £241,100 of inventory on account.
3. James sold for £450,000 cash inventory which cost £250,000. James also collected £31,500 sales taxes.
4. James paid £230,000 on accounts payable.
5. James paid £2,500 interest on the bonds on July 1, 2017.
6. The prepaid insurance (£5,600) expired on July 31.
7. On August 1, James paid £12,000 for insurance coverage from August 1, 2017, through July 31, 2018.
8. James paid £24,000 sales taxes to the government.
9. Paid other operating expenses, £91,000.
10. Redeemed the bonds on December 31, 2017, by paying £47,000 plus £2,500 interest.
11. Issued £90,000 of 8% bonds on December 31, 2017, at 104. The bonds pay interest every December 31.

Adjustment data:

1. Recorded the insurance expired from item 7.
2. The equipment was acquired on December 31, 2016, and will be depreciated on a straight-line basis over 5 years with a £3,000 residual value.
3. The income tax rate is 30%. (*Hint:* Prepare the income statement up to income before taxes and multiply by 30% to compute the amount.)

Instructions

(You may want to set up T-accounts to determine ending balances.)

(a) Prepare journal entries for the transactions listed above and adjusting entries.

(b) Totals £652,070
(c) N.I. £61,880

(b) Prepare an adjusted trial balance at December 31, 2017.
(c) Prepare an income statement and a retained earnings statement for the year ending December 31, 2017, and a classified statement of financial position as of December 31, 2017.

CP10-2 Eastland AG and Westside AG are competing businesses. Both began operations 6 years ago and are quite similar in most respects. The current statements of financial position data for the two companies are shown below.

	Eastland AG	Westside AG
Plant and equipment	CHF255,300	CHF257,300
Accumulated depreciation—plant and equipment	(112,650)	(189,850)
Inventory	463,900	515,200
Accounts receivable	304,700	302,500
Allowance for doubtful accounts	(13,600)	–0–
Cash	63,300	48,400
Total assets	CHF960,950	CHF933,550

	Eastland AG	Westside AG
Equity	CHF442,750	CHF420,050
Non-current liabilities	78,000	82,000
Current liabilities	440,200	431,500
Total equity and liabilities	CHF960,950	CHF933,550

You have been engaged as a consultant to conduct a review of the two companies. Your goal is to determine which of them is in the stronger financial position.

Your review of their financial statements quickly reveals that the two companies have not followed the same accounting practices. The differences and your conclusions regarding them are summarized below.

1. Eastland has used the allowance method of accounting for bad debts. A review shows that the amount of its write-offs each year has been quite close to the allowances that have been provided. It therefore seems reasonable to have confidence in its current estimate of bad debts.

   Westside has used the direct write-off method for bad debts, and it has been somewhat slow to write off its uncollectible accounts. Based upon an aging analysis and review of its accounts receivable, it is estimated that CHF18,000 of its existing accounts will probably prove to be uncollectible.
2. Eastland estimated a useful life of 12 years and a residual value of CHF30,000 for its plant and equipment. It has been depreciating them on a straight-line basis.

   Westside has the same type of plant and equipment. However, it estimated a useful life of 10 years and a residual value of CHF10,000. It has been depreciating its plant and equipment using the double-declining-balance method.

   Based upon engineering studies of these types of plant and equipment, you conclude that Westside's estimates and method for calculating depreciation are the more appropriate.
3. Among its current liabilities, Eastland has included the portions of non-current liabilities that become due within the next year. Westside has not done so.

   You find that CHF16,000 of Westside's CHF82,000 of non-current liabilities are due to be repaid in the current year.

Instructions

(a) Revise the statements of financial position presented above so that the data are comparable and reflect the current financial position for each of the two companies.

(b) Prepare a brief report to your client stating your conclusions.

(a) Total assets:
Eastland CHF885,225
Westside CHF915,550

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–9.)

MC10 Recall that Matcha Creations sells fine European mixers that it purchases from Kzinski Supply Co. Kzinski warrants the mixers to be free of defects in material and workmanship for a period of one year from the date of original purchase. If the mixer has such a defect, Kzinski will repair or replace the mixer free of charge for parts and labor.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP10-1 The financial statements of TSMC appear in Appendix A. The notes to consolidated financial statements appear in the 2013 annual report, which can be found in the Investors section of the company's website, *www.tsmc.com*.

Instructions

Refer to TSMC's financial statements and answer the following questions about liabilities.

(a) What were TSMC's total current liabilities at December 31, 2013? What was the increase/decrease in TSMC's total current liabilities from the prior year?
(b) What were the components of total current liabilities on December 31, 2013?
(c) What was TSMC's total non-current liabilities at December 31, 2013? What was the increase/decrease in total non-current liabilities from the prior year? What were the components of total non-current liabilities on December 31, 2013?

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP10-2 Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C.

Instructions

(a) At the end of the most recent fiscal year reported, what was Nestlé's largest current liability account? What were its total current liabilities? What was Petra Foods' largest current liability account? What were its total current liabilities?
(b) Based on information contained in those financial statements, compute the following for each company for the most recent fiscal year reported.
    (1) Working capital.
    (2) Current ratio.
(c) What conclusions concerning the relative liquidity of these companies can be drawn from these data?
(d) Based on the information contained in those financial statements, compute the following ratios for each company for the most recent fiscal year reported.
    (1) Debt to assets ratio.
    (2) Times interest earned.
(e) What conclusions concerning the companies' long-run solvency can be drawn from these ratios?

Real-World Focus

BYP10-3 ***Purpose:*** Bond or debt securities pay a stated rate of interest. This rate of interest is dependent on the risk associated with the investment. Fitch Ratings provides ratings for companies that issue debt securities.

Address: **www.fitchratings.com**, or go to **www.wiley.com/college/weygandt**

Instructions

Answer the following questions.

(a) In what year did Fitch introduce its bond rating scale? (See **Our Organization**.)
(b) What letter values are assigned to debt investments that are considered "investment grade" and "speculative grade"? (See **Ratings Definitions**.)
(c) Search the Internet to identify two other major credit rating agencies.

Critical Thinking

Decision-Making Across the Organization

***BYP10-4** On January 1, 2015, Fleming Ltd. issued £2,400,000 of 5-year, 8% bonds at 95; the bonds pay interest annually on January 1. By January 1, 2017, the market rate of interest for bonds of risk similar to those of Fleming had risen. As a result, the market value of these bonds was £2,000,000 on January 1, 2017—below their carrying value. Debra Fleming, president of the company, suggests repurchasing all of these bonds in the open market at the £2,000,000 price. To do so, the company will have to issue £2,000,000 (face value) of new 10-year, 11% bonds at par. The president asks you, as controller, "What is the feasibility of my proposed repurchase plan?"

Instructions

With the class divided into groups, answer the following.

(a) What is the carrying value of the outstanding Fleming 5-year bonds on January 1, 2017? (Assume straight-line amortization.)

(b) Prepare the journal entry to redeem the 5-year bonds on January 1, 2017. Prepare the journal entry to issue the new 10-year bonds.

(c) Prepare a short memo to the president in response to her request for advice. List the economic factors that you believe should be considered for her repurchase proposal.

Communication Activity

BYP10-5 Ron Seiser, president of Seiser AG, is considering the issuance of bonds to finance an expansion of his business. He has asked you to (1) discuss the advantages of bonds over equity financing, (2) indicate the types of bonds he might issue, and (3) explain the issuing procedures used in bond transactions.

Instructions

Write a memo to the president, answering his request.

Ethics Case

BYP10-6 Dylan Horn is the president, founder, and majority owner of Wesley Medical Ltd., an emerging medical technology products company. Wesley is in dire need of additional capital to keep operating and to bring several promising products to final development, testing, and production. Dylan, as owner of 51% of the outstanding shares, manages the company's operations. He places heavy emphasis on research and development and on long-term growth. The other principal shareholder is Mary Sommers who, as a non-employee investor, owns 40% of the shares. Mary would like to deemphasize the R&D functions and emphasize the marketing function, to maximize short-run sales and profits from existing products. She believes this strategy would raise the market price of Wesley's shares.

All of Dylan's personal capital and borrowing power is tied up in his 51% share ownership. He knows that any offering of additional shares will dilute his controlling interest because he won't be able to participate in such an issuance. But, Mary has money and would likely buy enough shares to gain control of Wesley. She then would dictate the company's future direction, even if it meant replacing Dylan as president and CEO.

The company already has considerable debt. Raising additional debt will be costly, will adversely affect Wesley's credit rating, and will increase the company's reported losses due to the growth in interest expense. Mary and the other minority shareholders express opposition to the assumption of additional debt, fearing the company will be pushed to the brink of bankruptcy. Wanting to maintain his control and to preserve the direction of "his" company, Dylan is doing everything to avoid a share issuance. He is contemplating a large issuance of bonds, even if it means the bonds are issued with a high effective-interest rate.

Instructions

(a) Who are the stakeholders in this situation?
(b) What are the ethical issues in this case?
(c) What would you do if you were Dylan?

Answers to Insight and Accounting Across the Organization Questions

p. 491 How About Some Green Bonds? Q: Why might standardized disclosure help investors to better understand how proceeds from the sale or issuance of bonds are used? **A:** By requiring transparency as to how a bond's proceeds are to be used and how they will affect a company's sustainable profitability, investors will make better financial decisions.

p. 499 Bonds versus Notes? Q: Why might companies prefer bond financing instead of short-term financing? **A:** In some cases, it is difficult to get loans from banks. In addition, low interest rates have encouraged companies to go more long-term and fix their rates. Recently, short-term loans suddenly froze, leading to liquidity problems for certain companies.

p. 501 "Covenant-Lite" Debt Q: How can financial ratios such as those covered in this chapter provide protection for creditors? **A:** Financial ratios such as the current ratio, debt to assets ratio, and times interest earned provide indications of a company's liquidity and solvency. By specifying minimum levels of liquidity and solvency, as measured by these ratios, a creditor creates triggers that enable it to step in before a company's financial situation becomes too dire.

A Look at U.S. GAAP

Learning Objective 12
Compare the accounting for liabilities under IFRS and U.S. GAAP.

IFRS and GAAP have similar definitions of liabilities. IFRSs related to reporting and recognition of liabilities are found in *IAS 1 (revised)* ("Presentation of Financial Statements") and *IAS 37* ("Provisions, Contingent Liabilities, and Contingent Assets"). The general recording procedures for payroll are similar although differences occur depending on the types of benefits that are provided in different countries. For example, companies in other countries often have different forms of pensions, unemployment benefits, welfare payments, and so on. The accounting for various forms of compensation plans under IFRS is found in *IAS 19* ("Employee Benefits") and *IFRS 2* ("Share-based Payments"). *IAS 19* addresses the accounting for a wide range of compensation elements, including wages, bonuses, post-employment benefits, and compensated absences. Both of these standards were recently amended, resulting in significant convergence between IFRS and GAAP.

Key Points

Similarities

- The basic definition of a liability under GAAP and IFRS is very similar. Liabilities may be legally enforceable via a contract or law but need not be; that is, they can arise due to normal business practice or customs.
- Both GAAP and IFRS classify liabilities as current or non-current on the face of the statement of financial position. IFRS specifically states, however, that industries where a *presentation* based on liquidity would be considered to **provide more** useful information (such as financial institutions) can use that format instead.
- The basic calculation for bond valuation is the same under GAAP and IFRS. In addition, the accounting for bond liability transactions is essentially the same between GAAP and IFRS.

Differences

- Under IFRS, companies sometimes show liabilities before assets. Also, they will sometimes show non-current liabilities before current liabilities. Neither of these presentations is used under GAAP.
- Under IFRS, companies sometimes will net current liabilities against current assets to show working capital on the face of the statement of financial position. This practice is not used under GAAP.
- IFRS requires use of the effective-interest method for amortization of bond discounts and premiums. GAAP allows use of the straight-line method where the difference is not material.
- GAAP often uses a separate discount or premium account to account for bonds payable. IFRS records discounts or premiums as direct increases or decreases to Bonds Payable. To illustrate, if a $100,000 bond was issued at 97, under GAAP a company would record:

Cash	97,000	
Discount on Bonds Payable	3,000	
Bonds Payable		100,000

Under IFRS, a company would record:

Cash	97,000	
Bonds Payable		97,000

- The accounting for convertible bonds differs between IFRS and GAAP. GAAP requires that the proceeds from the issuance of convertible debt be shown solely as debt. Unlike GAAP, IFRS splits the proceeds from the convertible bond between an equity component and a debt component. The equity conversion rights are reported in equity.

  To illustrate, assume that Harris Corp. issues convertible 7% bonds with a face value of $1,000,000 and receives $1,000,000. Comparable bonds without a conversion feature would have required a 9% rate of interest. To determine how much of the proceeds would be allocated to debt and how much to equity, the promised payments of the bond obligation would be discounted at the market rate of 9%. Suppose that this results in a present value of $850,000. The entry to record the issuance under GAAP would be:

Cash	1,000,000	
Bonds Payable		1,000,000

Under IFRS, the entry would be:

Cash	1,000,000	
Bonds Payable		850,000
Share Premium—Conversion Equity		150,000

- IFRS reserves the use of the term **contingent liability** to refer only to possible obligations that are **not** recognized in the financial statements but may be disclosed if certain criteria are met. Under GAAP, contingent liabilities are recorded in the financial statements if they are both probable and can be reasonably estimated. If only one of these criteria is met, then the item is disclosed in the notes.
- IFRS uses the term **provisions** to refer to liabilities of uncertain timing or amount. Examples of provisions would be provisions for warranties, employee vacation pay, or anticipated losses. Under GAAP, these are considered recordable **contingent liabilities**.

Looking to the Future

The FASB and IASB are currently involved in two projects, each of which has implications for the accounting for liabilities. One project is investigating approaches to differentiate between debt and equity instruments. The other project, the elements phase of the conceptual framework project, will evaluate the definitions of the fundamental building blocks of accounting. The results of these projects could change the classification of many debt and equity securities.

GAAP Practice

GAAP Self-Test Questions

1. Which of the following is **false**?
   (a) Under GAAP, current liabilities are presented before non-current liabilities.
   (b) Under GAAP, an item is a current liability if it will be paid within the next 12 months or the operating cycle, whichever is longer.
   (c) Under GAAP, current liabilities are shown in order of magnitude.
   (d) Under GAAP, a liability is only recognized if it is a present obligation.

2. The accounting for bonds payable is:
   (a) essentially the same under IFRS and GAAP.
   (b) different in that GAAP requires use of the straight-line method for amortization of bond premium and discount.
   (c) the same except that market prices may be different because the present value calculations are different between IFRS and GAAP.
   (d) not covered by IFRS.

3. Stevens Corporation issued 5% convertible bonds with a total face value of $3,000,000 for $3,000,000. If the bonds had not had a conversion feature, they would have sold for $2,600,000. Under GAAP, the entry to record the transaction would require a credit to:
   (a) Bonds Payable for $3,000,000.
   (b) Bonds Payable for $400,000.
   (c) Share Premium—Conversion Equity for $400,000.
   (d) Discount on Bonds Payable for $400,000.

4. Which of the following is **true** regarding accounting for amortization of bond discount and premium?
   (a) Both IFRS and GAAP must use the effective-interest method.
   (b) GAAP must use the effective-interest method, but IFRS may use either the effective-interest method or the straight-line method.
   (c) IFRS is required to use the effective-interest method.
   (d) GAAP is required to use the straight-line method.

5. The joint projects of the FASB and IASB could potentially:
   (a) change the definition of liabilities.
   (b) change the definition of equity.
   (c) change the definition of assets.
   (d) All of the above.

GAAP Exercises

GAAP10-1 Briefly describe some of the similarities and differences between GAAP and IFRS with respect to the accounting for liabilities.

GAAP10-2 Ratzlaff Company issues $2 million, 10-year, 8% bonds at 97, with interest payable on January 1.

Instructions

(a) Prepare the journal entry to record the sale of these bonds on January 1, 2017, using GAAP.
(b) Assuming instead that the above bonds sold for 104, prepare the journal entry to record the sale of these bonds on January 1, 2017, using GAAP.

GAAP10-3 Archer Company issued £4,000,000 par value, 7% convertible bonds at 99 for cash. The net present value of the debt without the conversion feature is £3,800,000. Prepare the journal entry to record the issuance of the convertible bonds (a) under GAAP and (b) under IFRS.

GAAP Financial Statement Analysis: Apple Inc.

GAAP10-4 The financial statements of Apple are presented on Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions

Use the company's financial statements and notes to the financial statements to answer the following questions.

(a) What were Apple's total current liabilities at September 28, 2013? What was the increase/decrease in Apple's total current liabilities from the prior year?
(b) How much were the accounts payable at September 28, 2013?
(c) What were the components of total current liabilities on September 28, 2013?

Answers to GAAP Self-Test Questions

1. c **2.** a **3.** a **4.** c **5.** d

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✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER 11 Corporations: Organization, Share Transactions, Dividends, and Retained Earnings

FEATURE STORY To the Victor Go the Spoils

You never know where a humble start might take you. One of the most recognized brands in the world began in 1924 when Adolf "Adi" Dassler became committed to the idea of providing high-quality, sport-specific shoes to athletes. He and his brother stitched together canvas and whatever else he could find in post-World War I Germany to create his shoes. They were so dedicated to their company that they sometimes ran their equipment with electricity generated by riding an exercise bicycle.

Just like today, success in the early years of the Dassler Brothers Shoe Company hinged on affiliations with famous athletes. So it was very fortunate for the brothers that in the 1936 Olympics, their shoes were worn by the famous African-American runner Jesse Owens. After World War II, as a result of a family quarrel, Adi's brother left and formed his own shoe company, Puma (DEU). Adi renamed his company using a combination of his nickname "Adi" and the first part of his last name, Dassler, to create the now famous name adidas (DEU). In the 1990s, adidas became a publicly traded company for the first time when its shares began to trade on both German and French exchanges.

By becoming a public company, adidas increased its ability to raise funds. It would need these funds in order to compete in the increasingly competitive world of sports apparel. Within two years of going public, adidas AG acquired the Salomon Group (FRA). This acquisition brought in the brands Salomon, TaylorMade, Mavic, and Bonfire. Less than 10 years later, adidas acquired Reebok (GBR). The combination of Reebok and adidas created a company with a global footprint large enough to compete with Nike (USA).

The shoe market is fickle, with new styles becoming popular almost daily and vast international markets still lying untapped. Whether one of these two giants does eventually take control of the pedi-planet remains to be seen. Meanwhile, the shareholders of each company sit anxiously in the stands as this Olympic-size drama unfolds. ■

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- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 570–576
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Identify the major characteristics of a corporation.
2. Record the issuance of ordinary shares.
3. Explain the accounting for treasury shares.
4. Differentiate preference shares from ordinary shares.
5. Prepare the entries for cash dividends and share dividends.
6. Identify the items reported in a retained earnings statement.
7. Prepare and analyze a comprehensive equity section.

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PREVIEW OF CHAPTER 11

Corporations like adidas (DEU) have substantial resources at their disposal. In fact, the corporation is the dominant form of business organization in the world in terms of sales, earnings, and number of employees. In this chapter, we will explain the essential features of a corporation and the accounting for a corporation's share capital transactions.

The content and organization of Chapter 11 are as follows.

CORPORATIONS: ORGANIZATION, SHARE TRANSACTIONS, DIVIDENDS, AND RETAINED EARNINGS

The Corporate Form of Organization	Accounting for Share Transactions	Dividends	Retained Earnings	Statement Presentation and Analysis
• Characteristics • Formation • Shareholder rights • Share issue considerations • Corporate capital	• Ordinary shares • Treasury shares • Preference shares	• Cash dividends • Share dividends • Share splits	• Retained earnings restrictions • Prior period adjustments • Retained earnings statement	• Presentation • Analysis

✔ The Navigator

The Corporate Form of Organization

Learning Objective 1
Identify the major characteristics of a corporation.

Many years ago, a noted scholar defined a corporation as "an artificial being, invisible, intangible, and existing only in contemplation of law." This definition is the foundation for the prevailing legal interpretation in many countries that a **corporation** is an **entity separate and distinct from its owners**.

A corporation is created by law, and its continued existence depends upon the statutes of the jurisdiction in which it is incorporated. As a legal entity, a corporation has most of the rights and privileges of a person. The major exceptions relate to privileges that only a living person can exercise, such as the right to vote or to hold public office. A corporation is subject to the same duties and responsibilities as a person. For example, it must abide by the laws, and it must pay taxes.

Two common ways to classify corporations are by **purpose** and by **ownership**. A corporation may be organized for the purpose of making a profit, or it may be not-for-profit. For-profit corporations include such well-known companies as Compass Group (GBR), Hyundai Motors (KOR), LUKOIL (RUS), and Google (USA). Not-for-profit corporations are organized for charitable, medical, or educational purposes. Examples are the Salvation Army (USA), the International Committee of the Red Cross (CHE), and the Bill & Melinda Gates Foundation (USA).

Classification by ownership differentiates publicly held and privately held corporations. A **publicly held corporation** may have thousands of shareholders. Its shares are regularly traded on a national securities exchange such as the São Paùlo Stock Exchange (BRA). Examples are Toyota (JPN), Siemens (DEU), Sinopec (CHN), and General Electric (USA).

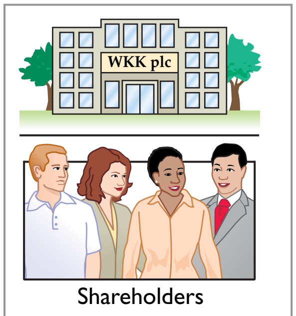
• Alternative Terminology
Privately held corporations are also referred to as *closely held corporations.*

In contrast, a **privately held corporation** usually has only a few shareholders, and does not offer its shares for sale to the general public. Privately held companies are generally much smaller than publicly held companies, although some notable exceptions exist. Cargill Inc. (USA), a private corporation that trades in grain and other commodities, is one of the largest companies in the world.

Characteristics of a Corporation

A number of characteristics distinguish corporations from proprietorships and partnerships. We explain the most important of these characteristics below.

SEPARATE LEGAL EXISTENCE

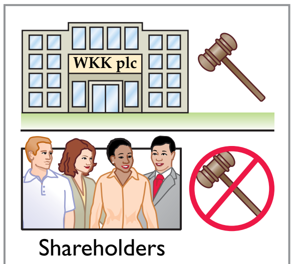


Legal existence separate from owners

In most countries, an entity is separate and distinct from its owners. The corporation acts under its own name rather than in the name of its shareholders. Volvo (SWE) may buy, own, and sell property. It may borrow money, and it may enter into legally binding contracts in its own name. It may also sue or be sued, and it pays its own taxes.

In a partnership, the acts of the owners (partners) bind the partnership. In contrast, the acts of its owners (shareholders) do not bind the corporation unless such owners are **agents** of the corporation. For example, if you owned shares of Volvo, you would not have the right to purchase inventory for the company unless you were designated as an agent of the corporation.

LIMITED LIABILITY OF SHAREHOLDERS

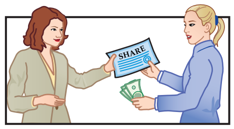


Limited liability of shareholders

Since a corporation is a separate legal entity, in most countries creditors have recourse only to corporate assets to satisfy their claims. The liability of shareholders is normally limited to their investment in the corporation. Creditors have no legal claim on the personal assets of the owners unless fraud has occurred. Even in the event of bankruptcy, shareholders' losses are generally limited to their capital investment in the corporation.

TRANSFERABLE OWNERSHIP RIGHTS

Ordinary shares give ownership in a corporation. These shares are transferable units. Shareholders may dispose of part or all of their interest in a corporation simply by selling their shares. The transfer of an ownership interest in a partnership requires the consent of each owner. In contrast, the transfer of shares is entirely at the discretion of the shareholder. It does not require the approval of either the corporation or other shareholders.

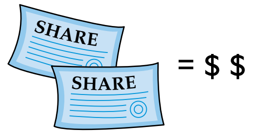


Transferable ownership rights

The transfer of ownership rights between shareholders normally has no effect on the daily operating activities of the corporation. Nor does it affect the corporation's assets, liabilities, and total equity. The transfer of these ownership rights is a transaction between individual owners. The company does not participate in the transfer of these ownership rights after the original sale of the ordinary shares.

ABILITY TO ACQUIRE CAPITAL

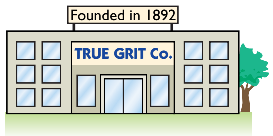
It is relatively easy for a corporation to obtain capital through the issuance of shares. Investors buy shares in a corporation to earn money over time as the share price grows. Investors also like to invest in shares because they have limited liability and shares are readily transferable. Also, individuals can become shareholders by investing relatively small amounts of money. In sum, the ability of a successful corporation to obtain capital is virtually unlimited.



Ability to acquire capital

CONTINUOUS LIFE

The life of a corporation is stated in its charter. The life may be perpetual, or it may be limited to a specific number of years. If it is limited, the company can extend the life through renewal of the charter. Since a corporation is a separate legal entity, its continuance as a going concern is not affected by the withdrawal, death, or incapacity of a shareholder, employee, or officer. As a result, a successful company can have a continuous and perpetual life.



Continuous life

CORPORATION MANAGEMENT

Shareholders legally own the corporation. However, they manage the corporation indirectly through a board of directors they elect. The board, in turn, formulates the operating policies for the company. The board also selects officers, such as a president and one or more vice presidents, to execute policy and to perform daily management functions.

Illustration 11-1 (page 540) presents a typical organization chart showing the delegation of responsibility. The chief executive officer (CEO) has overall responsibility for managing the business. As the organization chart shows, the CEO delegates responsibility to other officers. The chief accounting officer is the **controller**. The controller's responsibilities include (1) maintaining the accounting records, (2) maintaining an adequate system of internal control, and (3) preparing financial statements, tax returns, and internal reports. The **treasurer** has custody of the corporation's funds and is responsible for maintaining the company's cash position.

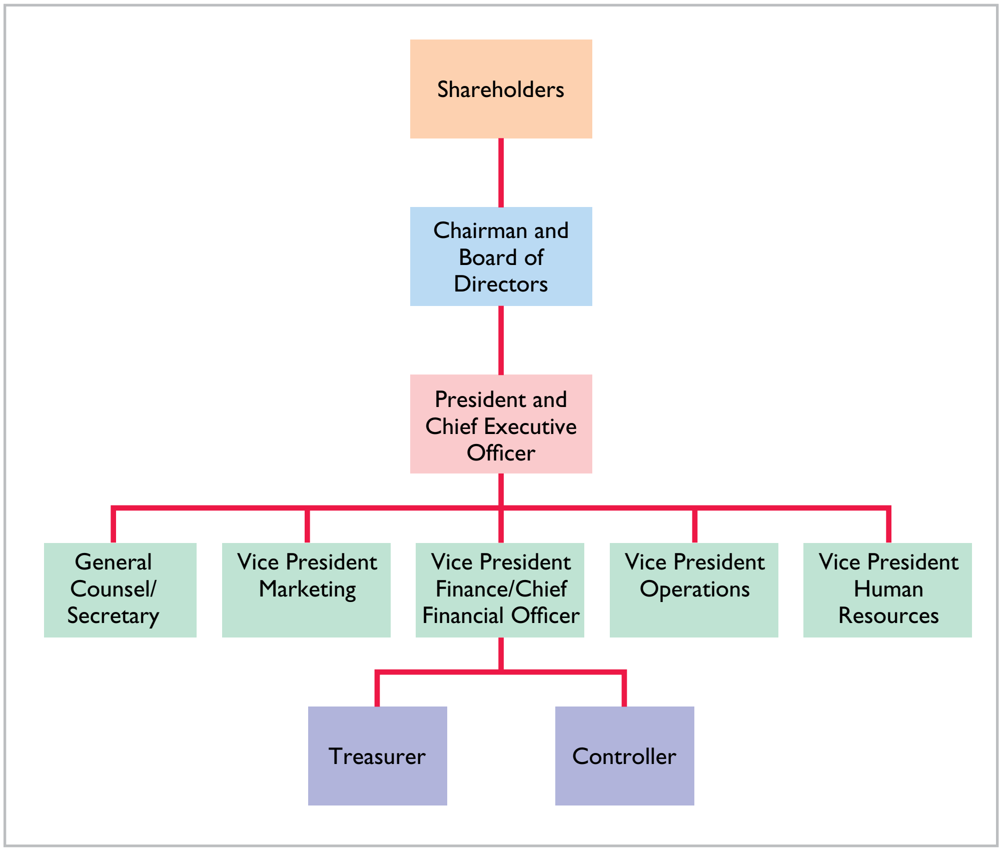
The organizational structure of a corporation enables a company to hire professional managers to run the business. On the other hand, the separation of ownership and management often reduces an owner's ability to actively manage the company.

> **Ethics Note**
>
> Managers who are not owners are often compensated based on the performance of the firm. They thus may be tempted to exaggerate firm performance by inflating income figures.

GOVERNMENT REGULATIONS

A corporation is subject to governmental regulations. Laws prescribe the requirements for issuing shares, the distributions of earnings permitted to shareholders, and the effects of retiring shares. Securities laws govern the sale of shares to the general public. Also, most publicly held corporations are required to make extensive disclosure of their financial affairs to securities regulators through quarterly

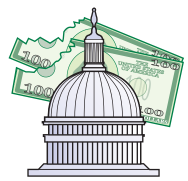
Illustration 11-1
Corporation organization chart



and annual reports. In addition, when a corporation lists its shares on organized securities exchanges, it must comply with the reporting requirements of these exchanges. Government regulations are designed to protect the owners of the corporation.

ADDITIONAL TAXES

In most countries, owners of proprietorships and partnerships report their share of earnings on their personal income tax returns. The individual owner then pays taxes on this amount. Corporations, on the other hand, must pay government taxes **as a separate legal entity**. These taxes can be substantial.


Additional taxes

In addition, shareholders must pay taxes on cash dividends (pro rata distributions of net income). Thus, many argue that the government taxes corporate income **twice (double taxation)**—once at the corporate level, and again at the individual level.

In summary, Illustration 11-2 shows the advantages and disadvantages of a corporation compared to a proprietorship and a partnership.

Illustration 11-2
Advantages and disadvantages of a corporation

Advantages	Disadvantages
Separate legal existence	Corporation management—separation of ownership and management
Limited liability of shareholders	Government regulations
Transferable ownership rights	Additional taxes
Ability to acquire capital	
Continuous life	
Corporation management—professional managers	

Forming a Corporation

The steps for forming a corporation vary somewhat across countries. The initial step in forming a corporation is to file an application with the appropriate governmental agency in the jurisdiction in which incorporation is desired. The application describes the name and purpose of the corporation, the types and number of shares that are authorized to be issued, the names of the individuals that formed the company, and the number of shares that these individuals agreed to purchase. Regardless of the number of jurisdictions in which a corporation has operating divisions, it is typically incorporated in only one state or country.

It is to the company's advantage to incorporate in a state or country whose laws are favorable to the corporate form of business organization. For example, Gulf Oil (USA) changed its state of incorporation to Delaware to thwart possible unfriendly takeovers. There, certain defensive tactics against takeovers can be approved by the board of directors alone, without a vote by shareholders.

After the government approves the application, it grants a **charter**. The charter may be an approved copy of the application form, or it may be a separate document containing the same basic data. Upon receipt of its charter, the corporation establishes **by-laws**. The by-laws establish the internal rules and procedures for conducting the affairs of the corporation. Corporations engaged in commerce outside their state or country must also obtain a **license** from each of those governments in which they do business. The license subjects the corporation's operating activities to the general corporation laws of that state or country.

• Alternative Terminology
The charter is often referred to as the *articles of incorporation.*

Costs incurred in the formation of a corporation are called **organization costs**. These costs include legal and government fees, and promotional expenditures involved in the organization of the business. **Corporations expense organization costs as incurred.** Determining the amount and timing of future benefits is so difficult that it is standard procedure to take a conservative approach of expensing these costs immediately.

Ownership Rights of Shareholders

When chartered, the corporation may begin selling ownership rights in the form of shares. When a corporation has only one class of shares, it is **ordinary shares**. Each ordinary share gives the shareholder the ownership rights pictured in Illustration 11-3 (page 542). The articles of incorporation or the by-laws state the ownership rights of a share.

Proof of share ownership is evidenced by a form known as a **share certificate**. As Illustration 11-4 shows (page 542), the face of the certificate shows the name of the corporation, the shareholder's name, the class and special features of the share, the number of shares owned, and the signatures of authorized corporate officials. Prenumbered certificates facilitate accountability. They may be issued for any quantity of shares.

Share Issue Considerations

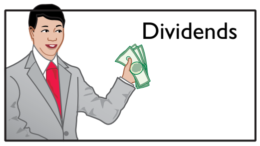
In considering the issuance of shares, a corporation must resolve a number of basic questions: How many shares should it authorize for sale? How should it issue the shares? At what price should it issue the shares? What value should the corporation assign to the shares? These questions are addressed in the following sections.

Illustration 11-3
Ownership rights of shareholders

Shareholders have the right to:

1. Vote in election of board of directors at annual meeting and vote on actions that require shareholder approval.

2. Share the corporate earnings through receipt of dividends.



3. Keep the same percentage ownership when new shares are issued (**preemptive right**[1]).

4. Share in assets upon liquidation in proportion to their holdings. This is called a **residual claim** because owners are paid with assets that remain after all other claims have been paid.

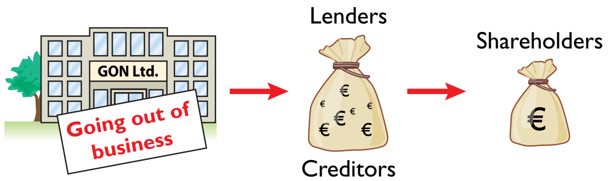
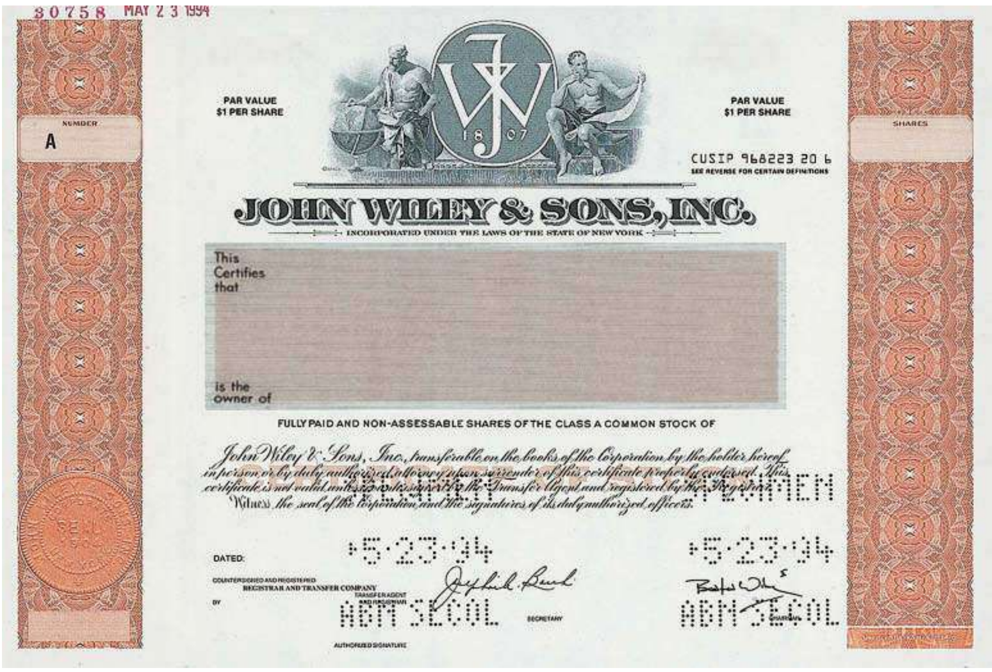


Illustration 11-4
A share certificate



¹A number of companies have eliminated the preemptive right because they believe it makes an unnecessary and cumbersome demand on management. For example, by shareholder approval, IBM (USA) has dropped its preemptive right for shareholders.

AUTHORIZED SHARES

The charter indicates the amount of shares that a corporation is **authorized** to sell. The total amount of **authorized shares** at the time of incorporation normally anticipates both initial and subsequent capital needs. As a result, the number of shares authorized generally exceeds the number initially sold. If it sells all authorized shares, a corporation must obtain consent of the jurisdiction to amend its charter before it can issue additional shares.

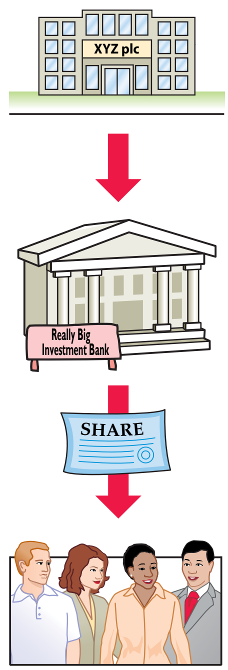
The authorization of ordinary shares does not result in a formal accounting entry. The reason is that the event has no immediate effect on either corporate assets or equity. However, the number of authorized shares is often reported in the equity section. It is then simple to determine the number of unissued shares that the corporation can issue without amending the charter: subtract the total shares issued from the total authorized. For example, if Quanta Computer (TWN) was authorized to sell 100,000 ordinary shares and issued 80,000 shares, 20,000 shares would remain unissued.

ISSUANCE OF SHARES

A corporation can issue ordinary shares **directly** to investors. Alternatively, it can issue the shares **indirectly** through an investment banking firm that specializes in bringing securities to the attention of prospective investors. Direct issue is typical in closely held companies. Indirect issue is customary for a publicly held corporation.

In an indirect issue, the investment banking firm may agree to **underwrite** the entire share issue. In this arrangement, the investment banker buys the shares from the corporation at a stipulated price and resells them to investors. The corporation thus avoids any risk of being unable to sell the shares. Also, it obtains immediate use of the cash received from the underwriter. The investment banking firm, in turn, assumes the risk of reselling the shares, in return for an underwriting fee.[2] For example, Google (USA) (the world's number-one Internet search engine) used underwriters when it issued a highly successful initial public offering, raising $1.67 billion. The underwriters charged a 3% underwriting fee (approximately $50 million) on Google's share offering.

How does a corporation set the price for a new issue of shares? Among the factors to be considered are (1) the company's anticipated future earnings, (2) its expected dividend rate per share, (3) its current financial position, (4) the current state of the economy, and (5) the current state of the securities market. The calculation can be complex and is properly the subject of a finance course.



Indirect issuance

MARKET PRICE OF SHARES

The shares of publicly held companies are traded on organized exchanges. The interaction between buyers and sellers determines the prices per share. In general, the prices set by the marketplace tend to follow the trend of a company's earnings and dividends. But, factors beyond a company's control, such as an oil embargo, changes in interest rates, or the outcome of a presidential election, may cause day-to-day fluctuations in market prices.

The trading of ordinary shares on securities exchanges involves the transfer of **already issued shares** from an existing shareholder to another investor. These transactions have **no impact** on a corporation's equity.

[2]Alternatively, the investment banking firm may agree only to enter into a **best-efforts contract** with the corporation. In such cases, the banker agrees to sell as many shares as possible at a specified price. The corporation bears the risk of unsold shares. Under a best-efforts arrangement, the banking firm is paid a fee or commission for its services.

Investor Insight **How to Read Share Quotes** **adidas (DEU)**

© pidjoe/iStockphoto

Organized exchanges trade the shares of publicly held companies at prices per share established by the interaction between buyers and sellers. For each listed security, the financial press reports the high and low prices of the shares during the year, the total volume of shares traded on a given day, the high and low prices for the day, and the closing market price, with the net change for the day. adidas (DEU) is listed on a number of exchanges. Here is a listing for adidas (prices are in euros).

	52 Weeks						
Company	High	Low	Volume	High	Low	Close	Net Change
adidas	57.62	42.41	1,080,000	52.50	50.77	50.79	−1.081

These numbers indicate the following. The high and low market prices for the previous 52 weeks were €57.62 and €42.41. The trading volume for the day was 1,080,000 shares. The high, low, and closing prices for that date were €52.50, €50.77, and €50.79, respectively. The net change for the day was a decrease of €1.081 per share.

Q For shares traded on organized exchanges, how are the prices per share established? What factors might influence the price of shares in the marketplace? (See page 593.)

PAR AND NO-PAR VALUE SHARES

Par value shares (sometimes **nominal**) are ordinary shares to which the charter has assigned a value per share. Years ago, par value determined the **legal capital** per share that a company must retain in the business for the protection of corporate creditors; that amount was not available for withdrawal by shareholders. Thus, in the past, most governments required the corporation to sell its shares at par or above.

However, par value was often immaterial relative to the value of the company's shares—even at the time of issue. Thus, its usefulness as a protective device to creditors was questionable. For example, Loews Corporation's (USA) par value is $0.01 per share, yet a new issue in 2014 would have sold at a **market price** in the $44 per share range. Thus, par has no relationship with market price. In the vast majority of cases, it is an immaterial amount. As a consequence, today many governments do not require a par value. Instead, they use other means to protect creditors.

No-par value shares are ordinary shares to which the charter has not assigned a value. No-par value shares are fairly common today. For example, Nike (USA) and Anheuser-Busch InBev (BEL) both have no-par shares. In many countries, the board of directors assigns a **stated value** to no-par shares.

> DO IT!

Corporate Organization

Indicate whether each of the following statements is true or false. If false, indicate how to correct the statement.

______ 1. Similar to partners in a partnership, shareholders of a corporation have unlimited liability.

______ 2. It is relatively easy for a corporation to obtain capital through the issuance of shares.

______ 3. The separation of ownership and management is an advantage of the corporate form of business.

______ 4. The journal entry to record the authorization of ordinary shares includes a credit to the appropriate share capital account.

Action Plan

✔ Review the characteristics of a corporation and understand which are advantages and which are disadvantages.

✔ Understand that corporations raise capital through the issuance of shares, which can be par or no-par.

Solution

1. False. The liability of shareholders is normally limited to their investment in the corporation. 2. True. 3. False. The separation of ownership and management is a disadvantage of the corporate form of business. 4. False. The authorization of ordinary shares does not result in a formal accounting entry.

Related exercise material: **BE11-1, E11-1, E11-2, and DO IT! 11-1.**

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Corporate Capital

Equity is identified by various names: **stockholders' equity**, **shareholders' equity**, or **corporate capital**. The equity section of a corporation's statement of financial position consists of two parts: (1) share capital and (2) retained earnings (earned capital).

The distinction between **share capital** and **retained earnings** is important from both a legal and a financial point of view. Legally, corporations can make distributions of earnings (declare dividends) out of retained earnings in most countries. However, they often cannot declare dividends out of share capital. Management, shareholders, and others often look to retained earnings for the continued existence and growth of the corporation.

SHARE CAPITAL

Share capital is the total amount of cash and other assets paid in to the corporation by shareholders in exchange for shares. As noted earlier, when a corporation has only one class of shares, they are **ordinary shares**.

RETAINED EARNINGS

Retained earnings is net income that a corporation retains for future use. Net income is recorded in Retained Earnings by a closing entry that debits Income Summary and credits Retained Earnings. For example, assuming that net income for Delta Robotics in its first year of operations is HK$1,300,000, the closing entry is:

Income Summary	1,300,000	
Retained Earnings		1,300,000
(To close Income Summary and transfer net income to Retained Earnings)		

A	=	L	+	E
				−1,300,000 Inc
				+1,300,000 RE

Cash Flows
no effect

If Delta Robotics has a balance of HK$8,000,000 in Share Capital—Ordinary at the end of its first year, its equity section is as follows.

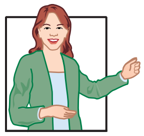
Illustration 11-5
Equity section

DELTA ROBOTICS
Statement of Financial Position (partial)

Equity		
Share capital—ordinary	HK$8,000,000	
Retained earnings	1,300,000	
Total equity		HK$9,300,000

Illustration 11-6 compares the equity accounts reported on a statement of financial position for a proprietorship and a corporation.

Illustration 11-6
Comparison of equity accounts



Proprietorship

Owner's Capital	
	Normal bal.

Corporation

Share Capital—Ordinary	
	Normal bal.

Retained Earnings	
	Normal bal.

People, Planet, and Profit Insight **The Impact of Corporate Social Responsibility**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A recent survey conducted by Institutional Shareholder Services, a U.S. proxy advisory firm, shows that 83% of investors now believe environmental and social factors can have a significant impact on shareholder value over the long term. This belief is clearly visible in the rising level of support for shareholder proposals requesting action related to social and environmental issues.

The following table shows that the number of corporate social responsibility (CSR)-related shareholder proposals rose from 150 in 2000 to 191 in 2010. Moreover, those proposals garnered average voting support of 18.4% of votes cast versus just 7.5% a decade earlier.

Trends in Shareholder Proposals on Corporate Responsibility

	2000	2005	2010
Number of proposals voted	150	155	191
Average voting support	7.5%	9.9%	18.4%
Percent proposals receiving > 10% support	16.7%	31.2%	52.1%

Source: Investor Responsibility Research Center, Ernst & Young, *Seven Questions CEOs and Boards Should Ask About: "Triple Bottom Line" Reporting.*

Q Why are CSR-related shareholder proposals increasing? (See page 593.)

> DO IT!

Corporate Capital

At the end of its first year of operation, Doral AG has €750,000 of ordinary shares and net income of €122,000. Prepare (a) the closing entry for net income and (b) the equity section at year-end.

Action Plan

✔ Record net income in Retained Earnings by a closing entry in which Income Summary is debited and Retained Earnings is credited.

✔ In the equity section, show (1) share capital—ordinary and (2) retained earnings.

Solution

(a) Income Summary	122,000	
Retained Earnings		122,000
(To close Income Summary and transfer net income to Retained Earnings)		
(b) Equity		
Share capital—ordinary	€750,000	
Retained earnings	122,000	
Total equity		€872,000

Related exercise material: DO IT! 11-2.

✔ The Navigator

Accounting for Share Transactions

Accounting for Ordinary Share Issues

Learning Objective 2
Record the issuance of ordinary shares.

Let's now look at how to account for issues of ordinary shares. The primary objective in accounting for the issuance of ordinary shares is to identify the specific sources of capital.

ISSUING PAR VALUE ORDINARY SHARES FOR CASH

As discussed earlier, par value does not indicate a share's market price. Therefore, the cash proceeds from issuing par value shares may be equal to, greater than, or less than par value. When the company records issuance of ordinary shares for cash, it credits the par value of the shares to Share Capital—Ordinary. It records in a separate account the portion of the proceeds that is above or below par value.

To illustrate, assume that Hydro-Slide SA issues 1,000 shares of €1 par value ordinary shares at par for cash. The entry to record this transaction is:

Cash	1,000	
Share Capital—Ordinary		1,000
(To record issuance of 1,000 €1 par ordinary shares at par)		

A = L + E
+1,000
+1,000 OS
Cash Flows
+1,000

Now assume that Hydro-Slide issues an additional 1,000 shares of the €1 par value ordinary shares for cash at €5 per share. The amount received above the par value, in this case €4 (€5 − €1), is credited to Share Premium—Ordinary. The entry is:

Cash	5,000	
Share Capital—Ordinary		1,000
Share Premium—Ordinary		4,000
(To record issuance of 1,000 €1 par ordinary shares)		

A = L + E
+5,000
+1,000 OS
+4,000 OS
Cash Flows
+5,000

The total capital from these two transactions is €6,000, and the legal capital is €2,000. Assuming Hydro-Slide has retained earnings of €27,000, Illustration 11-7 (page 548) shows the company's equity section.

Illustration 11-7
Share premium

HYDRO-SLIDE SA Statement of Financial Position (partial)	
Equity	
Share capital—ordinary	€ 2,000
Share premium—ordinary	**4,000**
	6,000
Retained earnings	27,000
Total equity	€33,000

When a corporation issues shares for less than par value, it debits the account Share Premium—Ordinary if a credit balance exists in this account. If a credit balance does not exist, then the corporation debits to Retained Earnings the amount less than par. This situation occurs only rarely. Most jurisdictions do not permit the sale of ordinary shares below par value because shareholders may be held personally liable for the difference between the price paid upon original sale and par value.

ISSUING NO-PAR ORDINARY SHARES FOR CASH

When no-par ordinary shares have a stated value, the entries are similar to those illustrated for par value shares. The corporation credits the stated value to Share Capital—Ordinary. Also, when the selling price of no-par shares exceeds stated value, the corporation credits the excess to Share Premium—Ordinary.

For example, assume that instead of €1 par value shares, Hydro-Slide SA has €5 stated value no-par shares and the company issues 5,000 shares at €8 per share for cash. The entry is:

A	=	L	+	E
+40,000				
				+25,000 OS
				+15,000 OS

Cash Flows
+40,000

Cash	40,000	
Share Capital—Ordinary		25,000
Share Premium—Ordinary		15,000
(To record issuance of 5,000 €5 stated value no-par shares)		

Hydro-Slide reports Share Premium—Ordinary below Share Capital—Ordinary in the equity section.

What happens when no-par shares do not have a stated value? In that case, the corporation credits the entire proceeds to Share Capital—Ordinary. Thus, if Hydro-Slide does not assign a stated value to its no-par shares, it records the issuance of the 5,000 shares at €8 per share for cash as follows.

A	=	L	+	E
+40,000				
				+40,000 OS

Cash Flows
+40,000

Cash	40,000	
Share Capital—Ordinary		40,000
(To record issuance of 5,000 no-par shares)		

ISSUING ORDINARY SHARES FOR SERVICES OR NON-CASH ASSETS

Corporations also may issue shares for services (compensation to attorneys or consultants) or for non-cash assets (land, buildings, and equipment). In such cases, what cost should be recognized in the exchange transaction? To comply with the **historical cost principle**, in a non-cash transaction **cost is the cash equivalent price**. Thus, **cost is either the fair value of the consideration given up or the fair value of the consideration received**, whichever is more clearly determinable.

To illustrate, assume that attorneys have helped Jordan Company incorporate. They have billed the company €5,000 for their services. They agree to accept 4,000 shares of €1 par value ordinary shares in payment of their bill. At the time of the exchange, there is no established market price for the shares. In this case, the fair value of the consideration received, €5,000, is more clearly evident. Accordingly, Jordan makes the following entry.

Organization Expense	5,000	
Share Capital—Ordinary		4,000
Share Premium—Ordinary		1,000
(To record issuance of 4,000 €1 par value shares to attorneys)		

A	=	L	+	E
				−5,000 Exp
				+4,000 OS
				+1,000 OS

Cash Flows
no effect

As explained on page 541, organization costs are expensed as incurred.

In contrast, assume that Athletic Research AG is an existing publicly held corporation. Its €5 par value shares are actively traded at €8 per share. The company issues 10,000 shares to acquire land recently advertised for sale at €90,000. The most clearly evident value in this non-cash transaction is the market price of the consideration given, €80,000. The company records the transaction as follows.

Land	80,000	
Share Capital—Ordinary		50,000
Share Premium—Ordinary		30,000
(To record issuance of 10,000 €5 par value shares for land)		

A	=	L	+	E
+80,000				
				+50,000 OS
				+30,000 OS

Cash Flows
no effect

As illustrated in these examples, **the par value of the shares is never a factor in determining the cost of the assets received**. This is also true of the stated value of no-par shares.

ANATOMY OF A FRAUD

The president, chief operating officer, and chief financial officer of SafeNet (USA), a software encryption company, were each awarded employee share options by the company's board of directors as part of their compensation package. Share options enable an employee to buy a company's shares sometime in the future at the price that existed when the share option was awarded. For example, suppose that you received share options today, when the share price of your company was $30. Three years later, if the share price rose to $100, you could "exercise" your options and buy the shares for $30 per share, thereby making $70 per share. After being awarded their share options, the three employees changed the award dates in the company's records to dates in the past, when the company's shares were trading at historical lows. For instance, using the previous example, they would choose a past date when the shares were selling for $10 per share, rather than the $30 price on the actual award date. This would increase the profit from exercising the options to $90 per share.

Total take: $1.7 million

THE MISSING CONTROL

Independent internal verification. The company's board of directors should have ensured that the awards were properly administered. For example, the date on the minutes from the board meeting could be compared to the dates that were recorded for the awards. In addition, the dates should again be confirmed upon exercise.

> DO IT!

Issuance of Shares

Hefei Ltd. begins operations on March 1 by issuing 1,000,000 ¥10 par value ordinary shares for cash at ¥12 per share. On March 15, it issues 50,000 ordinary shares to attorneys in settlement of their bill of ¥600,000 for organization costs. Journalize the issuance of the shares, assuming the shares are not publicly traded.

Action Plan

✔ In issuing shares for cash, credit Share Capital—Ordinary for par value per share.

✔ Credit any additional proceeds in excess of par to Share Premium—Ordinary.

✔ When shares are issued for services, use the cash equivalent price.

✔ For the cash equivalent price, use either the fair value of what is given up or the fair value of what is received, whichever is more clearly determinable.

Solution

Mar. 1	Cash	12,000,000	
	Share Capital—Ordinary		10,000,000
	Share Premium—Ordinary		2,000,000
	(To record issuance of 1,000,000 shares at ¥12 per share)		
Mar. 15	Organization Expense	600,000	
	Share Capital—Ordinary		500,000
	Share Premium—Ordinary		100,000
	(To record issuance of 50,000 shares for attorneys' fees)		

Related exercise material: **BE11-2, BE11-3, BE11-4, E11-3, E11-4, and DO IT! 11-3.**

✔ The Navigator

Accounting for Treasury Shares

Learning Objective 3

Explain the accounting for treasury shares.

Treasury shares are a corporation's own shares that it has issued and subsequently reacquired from shareholders but not retired. A corporation may acquire treasury shares for various reasons:

1. To reissue the shares to officers and employees under bonus and share compensation plans.
2. To signal to the securities market that management believes the shares are underpriced, in the hope of enhancing its market price.
3. To have additional shares available for use in the acquisition of other companies.
4. To reduce the number of shares outstanding and thereby increase earnings per share.

• HELPFUL HINT
Treasury shares do not have dividend rights or voting rights.

Another infrequent reason for purchasing shares is that management may want to eliminate hostile shareholders by buying them out.

Many corporations have treasury shares. In fact, over 50% of IFRS companies have treasury shares.[3] As examples, adidas (DEU) and Lenovo (CHN) report purchasing treasury shares in recent years.

PURCHASE OF TREASURY SHARES

Companies generally account for treasury shares by **the cost method**. This method uses the cost of the shares purchased to value the treasury shares. Under the cost method, the company debits **Treasury Shares** for the **price paid to reacquire the shares**. When the company disposes of the shares, it credits to Treasury Shares **the same amount** it paid to reacquire the shares.

To illustrate, assume that on January 1, 2017, the equity section of Mead, Ltd. has 100,000 HK$50 par value ordinary shares outstanding (all issued at par value) and Retained Earnings of HK$2,000,000. The equity section before purchase of treasury shares is as follows.

Illustration 11-8
Equity section with no treasury shares

MEAD, LTD.
Statement of Financial Position (partial)

Equity	
Share capital—ordinary, HK$50 par value, 100,000 shares issued and outstanding	HK$5,000,000
Retained earnings	2,000,000
Total equity	HK$7,000,000

[3] *IFRS Accounting Trends & Techniques 2011* (New York: American Institute of Certified Public Accountants).

On February 1, 2017, Mead acquires 4,000 of its shares at HK$80 per share. The entry is:

Feb. 1	Treasury Shares	320,000	
	Cash		320,000
	(To record purchase of 4,000 treasury shares at HK$80 per share)		

A	=	L	+	E
				−320,000 TS
−320,000				

Cash Flows
−320,000

Mead debits Treasury Shares for the cost of the shares purchased. Is the original Share Capital—Ordinary account affected? No, because the number of issued shares does not change. In the equity section of the statement of financial position, Mead deducts treasury shares after retained earnings to determine total equity. Treasury Shares is a **contra equity account**. Thus, the acquisition of treasury shares reduces equity.

The equity section of Mead after purchase of treasury shares is as follows.

Illustration 11-9
Equity section with treasury shares

MEAD, LTD.
Statement of Financial Position (partial)

Equity	
Share capital—ordinary, HK$50 par value, 100,000 shares issued and 96,000 shares outstanding	HK$5,000,000
Retained earnings	2,000,000
	7,000,000
Less: Treasury shares (4,000 shares)	**320,000**
Total equity	HK$6,680,000

Mead discloses in the statement of financial position both the number of shares issued (100,000) and the number in the treasury (4,000). The difference is the number of shares outstanding (96,000). The term **outstanding shares** means the number of issued shares that are being held by shareholders.

Some maintain that companies should report treasury shares as an asset because they can be sold for cash. But under this reasoning, companies would also show unissued shares as an asset, which is clearly incorrect. Rather than being an asset, treasury shares reduce shareholder claims on corporate assets. This effect is correctly shown by reporting treasury shares as a deduction from equity.

Ethics Note

The purchase of treasury shares reduces the cushion for creditors and preference shareholders. A restriction for the cost of treasury shares purchased is often required. The restriction is usually applied to retained earnings.

Accounting Across the Organization

Why Would a Company Buy Its Own Shares?
Reebok (DEU)

Paul Vidler/Alamy

In a bold (and some would say risky) move, Reebok (DEU) at one time bought back nearly a third of its shares. This repurchase of shares dramatically reduced Reebok's available cash. In fact, the company borrowed significant funds to accomplish the repurchase. In a press release, management stated that it was repurchasing the shares because it believed its shares were severely underpriced. The repurchase of so many shares was meant to signal management's belief in good future earnings.

Skeptics, however, suggested that Reebok's management was repurchasing shares to make it less likely that another company would acquire Reebok (in which case Reebok's top managers would likely lose their jobs). By depleting its cash, Reebok became a less likely acquisition target. Acquiring companies like to purchase companies with large cash balances so they can pay off debt used in the acquisition.

As noted in the Feature Story, Reebok was eventually acquired by adidas (DEU). In 2014, adidas announced a program to buy back up to 10% of its shares. This was done to appease shareholders who were disappointed with the company's results in recent years.

Q What signal might a large share repurchase send to investors regarding management's belief about the company's growth opportunities? (See page 594.)

• HELPFUL HINT
Treasury share transactions are classified as equity transactions. As in the case when shares are issued, the income statement is not involved.

DISPOSAL OF TREASURY SHARES

Treasury shares are usually sold or retired. The accounting for their sale differs when treasury shares are sold above cost than when they are sold below cost.

SALE OF TREASURY SHARES ABOVE COST If the selling price of the treasury shares is equal to their cost, the company records the sale of the shares by a debit to Cash and a credit to Treasury Shares. When the selling price of the shares is greater than their cost, the company credits the difference to Share Premium—Treasury.

To illustrate, assume that on July 1, Mead, Ltd. sells for HK$100 per share 1,000 of the 4,000 treasury shares previously acquired at HK$80 per share. The entry is as follows.

A	=	L	+	E
+100,000				
				+80,000 TS
				+20,000 TS

Cash Flows
+100,000

July 1	Cash	100,000	
	Treasury Shares		80,000
	Share Premium—Treasury		20,000
	(To record sale of 1,000 treasury shares above cost)		

Mead does not record a HK$20,000 gain on sale of treasury shares because (1) gains on sales occur when **assets** are sold, and treasury shares are not an asset, and (2) a corporation does not realize a gain or suffer a loss from share transactions with its own shareholders. Thus, companies should **not** include in net income any capital arising from the sale of treasury shares. Instead, they report Share Premium—Treasury separately on the statement of financial position, as a part of equity.

SALE OF TREASURY SHARES BELOW COST When a company sells treasury shares below their cost, it usually debits to Share Premium—Treasury the excess of cost over selling price. Thus, if Mead sells an additional 800 treasury shares on October 1 at HK$70 per share, it makes the following entry.

A	=	L	+	E
+56,000				
				−8,000 TS
				+64,000 TS

Cash Flows
+56,000

Oct. 1	Cash	56,000	
	Share Premium—Treasury	8,000	
	Treasury Shares		64,000
	(To record sale of 800 treasury shares below cost)		

Observe the following from the two sales entries. (1) Mead credits Treasury Shares at cost in each entry. (2) Mead uses Share Premium—Treasury for the difference between cost and the resale price of the shares. (3) The original Share Capital—Ordinary account is not affected. **The sale of treasury shares increases both total assets and total equity.**

After posting the foregoing entries, the treasury share accounts will show the following balances on October 1.

Illustration 11-10
Treasury share accounts

Treasury Shares			
Feb. 1	320,000	July 1	80,000
		Oct. 1	64,000
Oct. 1 Bal.	176,000		

Share Premium—Treasury			
Oct. 1	8,000	July 1	20,000
		Oct. 1 Bal.	12,000

When a company fully depletes the credit balance in Share Premium—Treasury, it debits to Retained Earnings any additional excess of cost over selling price. To illustrate, assume that Mead sells its remaining 2,200 shares at HK$70 per share on December 1. The excess of cost over selling price is HK$22,000 [2,200 × (HK$80 − HK$70)]. In this case, Mead debits HK$12,000 of the excess to Share Premium—Treasury. It debits the remainder to Retained Earnings. The entry is:

Dec. 1	Cash	154,000	
	Share Premium—Treasury	12,000	
	Retained Earnings	10,000	
	Treasury Shares		176,000
	(To record sale of 2,200 treasury shares at HK$70 per share)		

A = L + E

+154,000

−12,000 TS

−10,000 RE

+176,000 TS

Cash Flows

+154,000

DO IT!

Treasury Shares

Salvador SA purchases 3,000 shares of its R$50 par value ordinary shares for R$180,000 cash on July 1. It will hold the shares in the treasury until resold. On November 1, the corporation sells 1,000 treasury shares for cash at R$70 per share. Journalize the treasury share transactions.

Action Plan

✔ Record the purchase of treasury shares at cost.

✔ When treasury shares are sold above cost, credit the excess of the selling price over cost to Share Premium—Treasury.

✔ When treasury shares are sold below cost, debit the excess of cost over selling price to Share Premium—Treasury.

Solution

July 1	Treasury Shares	180,000	
	Cash		180,000
	(To record purchase of 3,000 shares at R$60 per share)		
Nov. 1	Cash	70,000	
	Treasury Shares		60,000
	Share Premium—Treasury		10,000
	(To record sale of 1,000 shares at R$70 per share)		

Related exercise material: BE11-5, E11-5, and DO IT! 11-4.

✔ The Navigator

Accounting for Preference Shares

Learning Objective 4

Differentiate preference shares from ordinary shares.

To appeal to more investors, a corporation may issue an additional class of shares, called preference shares. **Preference shares** have contractual provisions that give them some preference or priority over ordinary shares. Typically, preference shareholders have a priority as to (1) distributions of earnings (dividends) and (2) assets in the event of liquidation. However, they sometimes do not have voting rights.

Like ordinary shares, corporations may issue preference shares for cash or for non-cash assets. The entries for these transactions are similar to the entries for ordinary shares. When a corporation has more than one class of shares, each capital account title should identify the shares to which it relates. A company might have the following accounts: Share Capital—Preference, Share Capital—Ordinary, Share Premium—Preference, and Share Premium—Ordinary. For example, if Florence SpA issues 10,000 shares of €10 par value preference shares for €12 cash per share, the entry to record the issuance is:

Cash	120,000	
Share Capital—Preference		100,000
Share Premium—Preference		20,000
(To record issuance of 10,000 €10 par value preference shares)		

A = L + E

+120,000

+100,000 PS

+20,000 PS

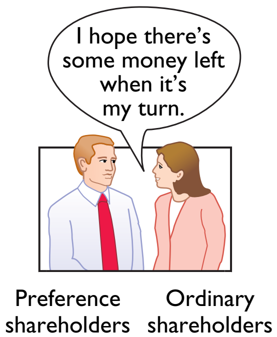
Cash Flows

+120,000

Preference shares may have either a par value or no-par value. In the equity section of the statement of financial position, companies list preference shares first because of their dividend and liquidation preferences over ordinary shares.

We discuss various features associated with the issuance of preference shares on the following pages.

DIVIDEND PREFERENCES



Dividend preferences

Preference shareholders have the right to receive dividends before ordinary shareholders. For example, if the dividend rate on preference shares is €5 per share, ordinary shareholders will not receive any dividends in the current year until preference shareholders have received €5 per share. The first claim to dividends does not, however, **guarantee** the payment of dividends. Dividends depend on many factors, such as adequate retained earnings and availability of cash. If a company does not pay dividends to preference shareholders, it cannot pay dividends to ordinary shareholders.

For preference shares, companies state the per share dividend amount as a percentage of the par value or as a specified amount. For example, Earthlink (USA) specifies a 3% dividend on its $100 par value preference shares. Rostelecom (RUS) specifies preference dividends as the higher of 10% of net income or the dividend paid to ordinary shareholders.

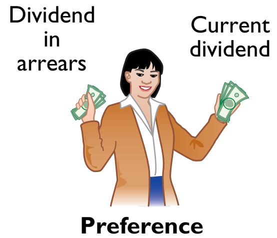
CUMULATIVE DIVIDEND Preference shares often contain a **cumulative dividend** feature. This feature stipulates that preference shareholders must be paid both current-year dividends and any unpaid prior-year dividends before ordinary shareholders are paid dividends. When preference shares are cumulative, preference dividends not declared in a given period are called **dividends in arrears**.

To illustrate, assume that Scientific Leasing has 5,000 shares of 7%, €100 par value, cumulative preference shares outstanding. Each €100 share pays a €7 dividend (.07 × €100). The annual dividend is €35,000 (5,000 × €7 per share). If dividends are two years in arrears, preference shareholders are entitled to receive the dividends shown in Illustration 11-11.

Illustration 11-11
Computation of total dividends to preference shares

Dividends in arrears (€35,000 × 2)	€ 70,000
Current-year dividends	35,000
Total preference dividends	**€105,000**

Payment of a cumulative dividend



The company cannot pay dividends to ordinary shareholders until it pays the entire preference dividend. In other words, companies cannot pay dividends to ordinary shareholders while any preference dividends are in arrears.

Dividends in arrears are not considered a liability. **No payment obligation exists until the board of directors formally declares that the company will pay a dividend.** However, companies should disclose in the notes to the financial statements the amount of dividends in arrears. Doing so enables investors to assess the potential impact of this commitment on the corporation's financial position.

The investment community does not look favorably on companies that are unable to meet their dividend obligations. As a financial officer noted in discussing one company's failure to pay its cumulative preference dividend for a period of time, "Not meeting your obligations on something like that is a major black mark on your record."

LIQUIDATION PREFERENCE

Most preference shares also have a preference on corporate assets if the corporation fails. This feature provides security for the preference shareholder. The preference to assets may be for the par value of the shares or for a specified liquidating value. The liquidation preference establishes the respective claims of creditors and preference shareholders in litigation involving bankruptcy lawsuits.

Dividends

Learning Objective 5

Prepare the entries for cash dividends and share dividends.

A dividend is generally a corporation's distribution of cash or shares to its shareholders on a pro rata (proportional to ownership) basis. Pro rata means that if you own 10% of the ordinary shares, you will receive 10% of the dividend. Dividends can take four forms: cash, property, scrip (a promissory note to pay cash), or shares. Cash dividends predominate in practice although companies also declare share dividends with some frequency. These two forms of dividends are therefore the focus of discussion in this chapter.

Investors are very interested in a company's dividend practices. In the financial press, **dividends are generally reported quarterly on a per share basis**. (Sometimes they are reported on an annual basis.) For example, in a recent year, BASF's (DEU) dividend rate was €1.95 a share, The Hershey Company's (USA) was $1.19, and Marks and Spencer plc's (GBR) was 22.5p.

Cash Dividends

A **cash dividend** is a pro rata distribution of cash to shareholders. For a corporation to pay a cash dividend, it must have the following.

1. **Retained earnings.** The legality of a cash dividend depends on the laws of the state or country in which the company is incorporated. Payment of cash dividends from retained earnings is legal in all jurisdictions. In general, cash dividend distributions from only the balance in share capital—ordinary (legal capital) are illegal.

   A dividend declared out of share capital or share premium is termed a **liquidating dividend**. Such a dividend reduces or "liquidates" the amount originally paid in by shareholders.

2. **Adequate cash.** The legality of a dividend and the ability to pay a dividend are two different things. For example, adidas (DEU), with retained earnings of over €5.0 billion, could legally declare a dividend of at least €5.0 billion. But adidas' cash balance is only €1.6 billion.

   Before declaring a cash dividend, a company's board of directors must carefully consider both current and future demands on the company's cash resources. In some cases, current liabilities may make a cash dividend inappropriate. In other cases, a major plant expansion program may warrant only a relatively small dividend.

3. **A declaration of dividends.** A company does not pay dividends unless its board of directors decides to do so, at which point the board "declares" the dividend. The board of directors has full authority to determine the amount of income to distribute in the form of a dividend and the amount to retain in the business. Dividends do not accrue like interest on a note payable, and they are not a liability until declared.

The amount and timing of a dividend are important issues for management to consider. The payment of a large cash dividend could lead to liquidity problems for the company. On the other hand, a small dividend or a missed dividend may cause unhappiness among shareholders. Many shareholders expect to receive a reasonable cash payment from the company on a periodic basis. Many companies declare and pay cash dividends quarterly. On the other hand, a number of high-growth companies pay no dividends, preferring to conserve cash to finance future capital expenditures.

ENTRIES FOR CASH DIVIDENDS

Three dates are important in connection with dividends: (1) the declaration date, (2) the record date, and (3) the payment date. Normally, there are two to four weeks between each date. Companies make accounting entries on the declaration date and the payment date.

On the **declaration date**, the board of directors formally declares (authorizes) the cash dividend and announces it to shareholders. Declaration of a cash dividend **commits the corporation to a legal obligation**. The obligation is binding and cannot be rescinded. The company makes an entry to recognize the increase in Cash Dividends and the increase in the liability Dividends Payable.

To illustrate, assume that on December 1, 2017, the directors of Media General declare a €0.50 per share cash dividend on 100,000 €10 par value ordinary shares. The dividend is €50,000 (100,000 × €0.50). The entry to record the declaration is:

A = L + E
−50,000 Div
+50,000

Cash Flows
no effect

Declaration Date

Dec. 1	Cash Dividends	50,000	
	Dividends Payable		50,000
	(To record declaration of cash dividend)		

Media General debits the account Cash Dividends. Cash dividends decrease retained earnings. We use the specific title Cash Dividends to differentiate it from other types of dividends, such as share dividends. Dividends Payable is a current liability. It will normally be paid within the next several months.

Whichever account is used for the dividend declaration, the effect is the same: Retained Earnings decreases, and a current liability increases. *For homework problems, you should use the Cash Dividends account for recording dividend declarations.*

• HELPFUL HINT
The purpose of the record date is to identify the persons or entities that will receive the dividend, not to determine the amount of the dividend liability.

At the **record date**, the company determines ownership of the outstanding shares for dividend purposes. The shareholders' records maintained by the corporation supply this information. In the interval between the declaration date and the record date, the corporation updates its share ownership records. For Media General, the record date is December 22. No entry is required on this date because the corporation's liability recognized on the declaration date is unchanged.

Record Date

Dec. 22	No entry		

On the **payment date**, the company makes cash dividend payments to the shareholders of record (as of December 22) and records the payment of the dividend. If January 20 is the payment date for Media General, the entry on that date is as follows:

A = L + E
−50,000
−50,000

Cash Flows
−50,000

Payment Date

Jan. 20	Dividends Payable	50,000	
	Cash		50,000
	(To record payment of cash dividend)		

Note that payment of the dividend reduces both current assets and current liabilities. It has no effect on equity. The cumulative effect of the declaration and payment of a cash dividend is to **decrease both equity and total assets**. Illustration 11-12 summarizes the three important dates associated with dividends for Media General.

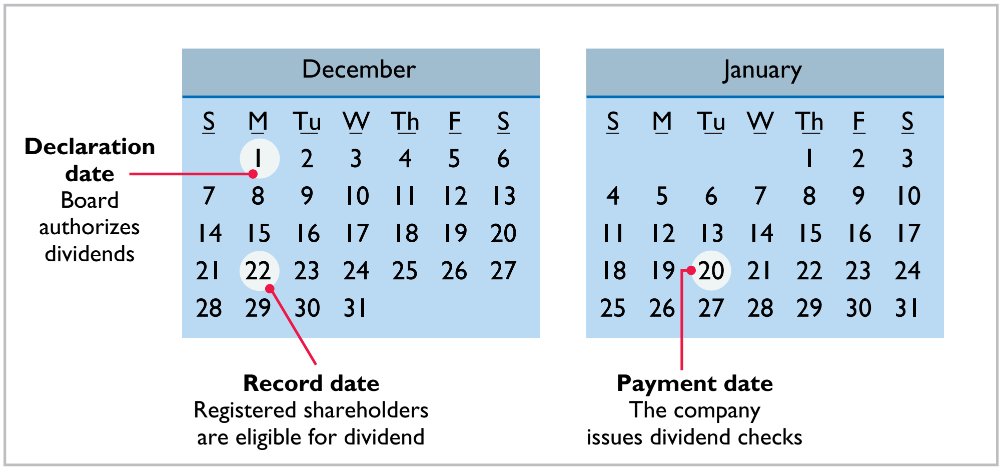


Illustration 11-12
Key dividend dates

When using a Cash Dividends account, Media General should transfer the balance of that account to Retained Earnings at the end of the year by a closing entry. The entry for Media General at closing is as follows.

Retained Earnings	50,000	
Cash Dividends		50,000
(To close Cash Dividends to Retained Earnings)		

ALLOCATING CASH DIVIDENDS BETWEEN PREFERENCE AND ORDINARY SHARES

As indicated, preference shares have priority over ordinary shares in regard to dividends. Holders of cumulative preference shares must be paid any unpaid prior-year dividends and their current year's dividend before ordinary shareholders receive dividends.

To illustrate, assume that at December 31, 2017, IBR SE has 1,000 shares of 8%, €100 par value cumulative preference shares. It also has 50,000 €10 par value ordinary shares outstanding. The dividend per share for preference shares is €8 (€100 par value × 8%). The required annual dividend for preference shares is therefore €8,000 (1,000 × €8). At December 31, 2017, the directors declare a €6,000 cash dividend. In this case, the entire dividend amount goes to preference shareholders because of their dividend preference. The entry to record the declaration of the dividend is:

Dec. 31	Cash Dividends	6,000	
	Dividends Payable		6,000
	(To record €6 per share cash dividend to preference shareholders)		

A = L + E
−6,000 Div
+6,000
Cash Flows
no effect

Because of the cumulative feature, dividends of €2 (€8 − €6) per share are in arrears on preference shares for 2017. IBR must pay these dividends to preference shareholders before it can pay any future dividends to ordinary shareholders. IBR should disclose dividends in arrears in the financial statements.

At December 31, 2018, IBR declares a €50,000 cash dividend. The allocation of the dividend to the two classes of shares is as follows.

Illustration 11-13
Allocating dividends to preference and ordinary shares

Total dividend		€50,000
Allocated to preference shares		
Dividends in arrears, 2017 (1,000 × €2)	**€2,000**	
2018 dividend (1,000 × €8)	**8,000**	10,000
Remainder allocated to ordinary shares		€40,000

A	=	L	+	E
				−50,000 Div
		+50,000		

Cash Flows
no effect

The entry to record the declaration of the dividend is as follows.

Dec. 31	Cash Dividends	50,000	
	Dividends Payable		50,000
	(To record declaration of cash dividends of €10,000 to preference shares and €40,000 to ordinary shares)		

If IBR's preference shares are not cumulative, preference shareholders receive only €8,000 in dividends in 2018. Ordinary shareholders receive €42,000.

DO IT!

Dividends on Preference and Ordinary Shares

MasterMind SA has 2,000 shares of 6%, €100 par value preference shares outstanding at December 31, 2017. At December 31, 2017, the company declared a €60,000 cash dividend. Determine the dividend paid to preference shareholders and ordinary shareholders under each of the following scenarios.

1. The preference shares are non-cumulative, and the company has not missed any dividends in previous years.
2. The preference shares are non-cumulative, and the company did not pay a dividend in each of the two previous years.
3. The preference shares are cumulative, and the company did not pay a dividend in each of the two previous years.

Action Plan

✔ Determine dividends on preference shares by multiplying the dividend rate times the par value of the share times the number of preference shares.

✔ Understand the cumulative feature: If preference shares are cumulative, then any missed dividends (dividends in arrears) and the current year's dividend must be paid to preference shareholders before dividends are paid to ordinary shareholders.

Solution

1. The company has not missed past dividends and the preference shares are non-cumulative. Thus, the preference shareholders are paid only this year's dividend. The dividend paid to preference shareholders would be €12,000 (2,000 × .06 × €100). The dividend paid to ordinary shareholders would be €48,000 (€60,000 − €12,000).
2. The preference shares are non-cumulative; thus, past unpaid dividends do not have to be paid. The dividend paid to preference shareholders would be €12,000 (2,000 × .06 × €100). The dividend paid to ordinary shareholders would be €48,000 (€60,000 − €12,000).
3. The preference shares are cumulative; thus, dividends that have been missed (dividends in arrears) must be paid. The dividend paid to preference shareholders would be €36,000 (3 × 2,000 × .06 × €100). Of the €36,000, €24,000 relates to dividends in arrears and €12,000 relates to the current dividend on preference shares. The dividend paid to ordinary shareholders would be €24,000 (€60,000 − €36,000).

Related exercise material: **E11-6 and DO IT! 11-5.**

✔ The Navigator

Share Dividends

A **share dividend** is a pro rata distribution to shareholders of the corporation's own shares. Whereas a company pays cash in a cash dividend, a company issues shares in a share dividend. **A share dividend results in a decrease in retained earnings and an increase in share capital and share premium.** Unlike a cash dividend, a share dividend does not decrease total equity or total assets.

To illustrate, assume that you have a 2% ownership interest in Cetus Ltd.; you own 20 of its 1,000 ordinary shares. If Cetus declares a 10% share dividend, it would issue 100 shares (1,000 × 10%). You would receive two shares (2% × 100).

Would your ownership interest change? No, it would remain at 2% (22 ÷ 1,100). **You now own more shares, but your ownership interest has not changed.** Illustration 11-14 shows the effect of a share dividend for shareholders.

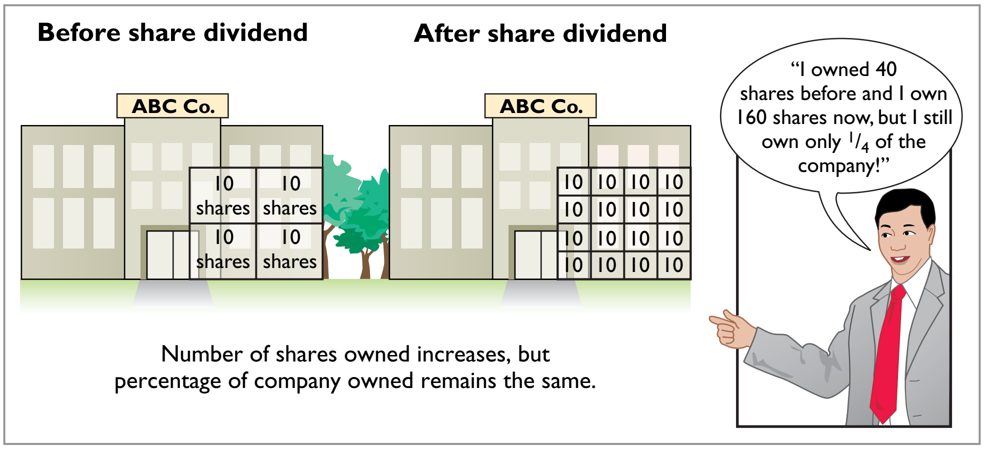


Illustration 11-14
Effect of share dividend for shareholders

Cetus has disbursed no cash and has assumed no liabilities. What, then, are the purposes and benefits of a share dividend? Corporations issue share dividends generally for one or more of the following reasons.

1. To satisfy shareholders' dividend expectations without spending cash.
2. To increase the marketability of the corporation's shares. When the number of shares outstanding increases, the market price per share decreases. Decreasing the market price of the shares makes it easier for smaller investors to purchase the shares.
3. To emphasize that a portion of equity has been permanently reinvested in the business (and is unavailable for cash dividends).

When the dividend is declared, the board of directors determines the size of the share dividend and the value assigned to each dividend.

IFRS is silent regarding the accounting for share dividends. One approach used in some countries is that if the company issues a **small share dividend** (less than 20–25% of the corporation's issued shares), the value assigned to the dividend is the fair value (market price) per share. This treatment is based on the assumption that a small share dividend will have little effect on the market price of the shares previously outstanding. Thus, many shareholders consider small share dividends to be distributions of earnings equal to the fair value of the shares distributed. If a company issues a **large share dividend** (greater than 20–25%), the value assigned to the dividend is the par or stated value. Small share dividends predominate in practice. Thus, we will illustrate only entries for small share dividends.

ENTRIES FOR SHARE DIVIDENDS

To illustrate the accounting for small share dividends, assume that Danshui Ltd. has a balance of NT$3,000,000 in retained earnings. It declares a 10% share dividend on its 50,000 shares of NT$100 par value ordinary shares. The current fair value of its shares is NT$150 per share. The number of shares to be issued is 5,000 (10% × 50,000). Therefore, the total amount to be debited to Share Dividends is NT$750,000 (5,000 × NT$150). The entry to record the declaration of the share dividend is as follows.

Share Dividends	750,000	
Ordinary Share Dividends Distributable		500,000
Share Premium—Ordinary		250,000
(To record declaration of 10% share dividend)		

A	=	L	+	E
				−750,000 Div
				+500,000 OS
				+250,000 OS

Cash Flows
no effect

Danshui debits Share Dividends for the fair value of the shares issued (NT$150 × 5,000). (Similar to Cash Dividends, Share Dividends decrease retained earnings.) Danshui also credits Ordinary Share Dividends Distributable for the par value of the dividend shares (NT$100 × 5,000) and credits Share Premium—Ordinary for the excess over par (NT$50 × 5,000).

Ordinary Share Dividends Distributable is an **equity account**. It is not a liability because assets will not be used to pay the dividend. If the company prepares a statement of financial position before it issues the dividend shares, it reports the distributable account as shown in Illustration 11-15.

Illustration 11-15
Statement presentation of ordinary share dividends distributable

Share capital—ordinary	NT$5,000,000	
Ordinary share dividends distributable	**500,000**	NT$5,500,000

When Danshui issues the dividend shares, it debits Ordinary Share Dividends Distributable and credits Share Capital—Ordinary, as follows.

A	=	L	+	E
				−500,000 OS
				+500,000 OS

Cash Flows
no effect

Ordinary Share Dividends Distributable	500,000	
Share Capital—Ordinary		500,000
(To record issuance of 5,000 shares in a share dividend)		

EFFECTS OF SHARE DIVIDENDS

How do share dividends affect equity? They **change the composition of equity** because they transfer a portion of retained earnings to share capital and share premium. However, **total equity remains the same**. Share dividends also have no effect on the par or stated value per share, but the number of shares outstanding increases. Illustration 11-16 shows these effects for Danshui Ltd.

Illustration 11-16
Share dividend effects

	Before Dividend	Change	After Dividend
Equity			
Share capital—ordinary	NT$ 5,000,000	NT$ 500,000	NT$ 5,500,000
Share premium—ordinary	—	250,000	250,000
Total paid-in capital	5,000,000	+750,000	5,750,000
Retained earnings	3,000,000	−750,000	2,250,000
Total equity	**NT$8,000,000**	**NT$–0–**	**NT$8,000,000**
Outstanding shares	**50,000**	**+5,000**	**55,000**
Par value per share	**NT$ 100.00**	**NT$–0–**	**NT$ 100.00**

In this example, the total of share capital—ordinary and share premium—ordinary increases by NT$750,000 (50,000 shares × 10% × NT$150) and retained earnings decreases by the same amount. Note also that total equity remains unchanged at NT$8,000,000. The number of shares increases by 5,000 (50,000 × 10%).

Share Splits

A **share split**, like a share dividend, involves issuance of additional shares to shareholders according to their percentage ownership. **However, a share split results in a reduction in the par or stated value per share.** The purpose of a share split is to increase the marketability of the shares by lowering the market price per share. This, in turn, makes it easier for the corporation to issue additional shares.

The effect of a split on market price is generally **inversely proportional** to the size of the split. For example, after a 2-for-1 share split, the market price of Nike's (USA) shares fell from $111 to approximately $55. The lower market price stimulated market activity, and within one year the shares were trading above $100 again.

In a share split, the company increases the number of shares in the same proportion that par or stated value per share decreases. For example, in a 2-for-1 split, the company exchanges one $10 par value share for two $5 par value shares. **A share split does not have any effect on share capital, share premium, retained earnings, or total equity.** However, the number of shares outstanding increases, and par value per share decreases. Illustration 11-17 shows these effects for Danshui Ltd., assuming that it splits its 50,000 ordinary shares on a 2-for-1 basis.

• HELPFUL HINT
A share split changes the par value per share but does not affect any balances in equity.

Illustration 11-17
Share split effects

	Before Share Split	Change	After Share Split
Equity			
Share capital—ordinary	NT$ 5,000,000	NT$ –0–	NT$ 5,000,000
Share premium—ordinary	–0–	–0–	–0–
Retained earnings	3,000,000	–0–	3,000,000
Total equity	**NT$8,000,000**	**NT$ –0–**	**NT$8,000,000**
Outstanding shares	**50,000**	**+50,000**	**100,000**
Par value per share	**NT$ 100.00**	**−NT$ 50.00**	**NT$ 50.00**

A share split does not affect the balances in any equity accounts. Therefore, **a company does not need to journalize a share split**.

Illustration 11-18 summarizes the differences between share dividends and share splits.

Illustration 11-18
Differences between the effects of share dividends and share splits

Item	Share Dividend	Share Split
Total retained earnings	Decrease	No change
Total par value (ordinary shares)	Increase	No change
Par value per share	No change	Decrease
Outstanding shares	Increase	Increase
Total equity	No change	No change

Investor Insight **A No-Split Philosophy** **Berkshire Hathaway (USA)**


Dietmar Klement/iStockphoto

Warren Buffett's company, Berkshire Hathaway (USA), has two classes of shares. Until recently, the company had never split either class of shares. As a result, the class A shares had a market price of $97,000 and the class B sold for about $3,200 per share. Because the price per share is so high, the shares do not trade as frequently as the shares of other companies. Mr. Buffett has always opposed share splits because he feels that a lower share price attracts short-term investors. He appears to be correct. For example, while more than 6 million shares of IBM (USA) are exchanged on the average day, only about 1,000 class A shares of Berkshire are traded. Despite Mr. Buffett's aversion to splits, in order to accomplish a recent acquisition, Berkshire decided to split its class B shares 50 to 1.

Source: Scott Patterson, "Berkshire Nears Smaller Baby B's," *Wall Street Journal Online* (January 19, 2010).

Q Why does Warren Buffett usually oppose share splits? (See page 594.)

> DO IT!

Share Dividends and Share Splits

Sing CD Company has had five years of record earnings. Due to this success, the market price of its 500,000 shares of £2 par value ordinary shares has tripled from £15 per share to £45. During this period, the sum of share capital and share premium remained the same at £2,000,000. Retained earnings increased from £1,500,000 to £10,000,000. CEO Joan Elbert is considering either a 10% share dividend or a 2-for-1 share split. She asks you to show the before-and-after effects of each option on retained earnings, total equity, total shares outstanding, and par value per share.

Action Plan

- ✔ Calculate the share dividend's effect on retained earnings by multiplying the number of new shares times the market price of the shares (or par value for a large share dividend).
- ✔ Recall that a share dividend increases the number of shares without affecting total equity.
- ✔ Recall that a share split only increases the number of shares outstanding and decreases the par value per share.

Solution

The share dividend amount is £2,250,000 [(500,000 × 10%) × £45]. The new balance in retained earnings is £7,750,000 (£10,000,000 − £2,250,000). The retained earnings balance after the share split is the same as it was before the split: £10,000,000. Total equity does not change. The effects on the equity accounts are as follows.

	Original Balances	After Dividend	After Split
Share capital/premium	£ 2,000,000	£ 4,250,000	£ 2,000,000
Retained earnings	10,000,000	7,750,000	10,000,000
Total equity	£12,000,000	£12,000,000	£12,000,000
Shares outstanding	500,000	550,000	1,000,000
Par value per share	£2	£2	£1

Related exercise material: **BE11-8, BE11-9, E11-14, E11-15, E11-16, and DO IT! 11-6.**

✔ The Navigator

Retained Earnings

Learning Objective 6

Identify the items reported in a retained earnings statement.

Recall that **retained earnings** is net income that a company retains in the business. The balance in retained earnings is part of the shareholders' claim on the total assets of the corporation. It does not, though, represent a claim on any specific asset. Nor can the amount of retained earnings be associated with the balance of any asset account. For example, a NT$10,000,000 balance in retained earnings does not mean that there should be NT$10,000,000 in cash. The reason is that the company may have used the cash resulting from the excess of revenues over expenses to purchase buildings, equipment, and other assets.

To demonstrate that retained earnings and cash may be quite different, Illustration 11-19 shows recent amounts of retained earnings and cash in selected companies.

Illustration 11-19
Retained earnings and cash balances

	(in millions)	
Company	Retained Earnings	Cash
Stora Enso (FIN)	€3,197	€2,065
Cathay Pacific (HKG)	HK$40,320	HK$12,359
Orion (KOR)	₩457,219	₩223,179
China Mobile Limited (CHN)	¥44,931	¥786,631

Remember that when a company has net income, it closes net income to retained earnings. The closing entry is a debit to Income Summary and a credit to Retained Earnings.

When a company has a **net loss** (expenses exceed revenues), it also closes this amount to retained earnings. The closing entry in this case is a debit to Retained Earnings and a credit to Income Summary. To illustrate, assume that Rendle Corporation has a net loss of $400,000 in 2017. The closing entry to record this loss is as follows.

Retained Earnings	400,000	
Income Summary		400,000
(To close net loss to Retained Earnings)		

This closing entry is done even if it results in a debit balance in Retained Earnings. **Companies do not debit net losses to share capital or share premium.** If cumulative losses exceed cumulative income over a company's life, a debit balance in Retained Earnings results. A debit balance in Retained Earnings is identified as a **deficit**. A company reports a deficit as a deduction in the equity section, as shown below.

• HELPFUL HINT
Remember that Retained Earnings is an equity account, whose normal balance is a credit.

Illustration 11-20
Equity with deficit

Statement of Financial Position (partial)

Equity	
Share capital—ordinary	€800,000
Retained earnings (deficit)	**(50,000)**
Total equity	€750,000

Retained Earnings Restrictions

The balance in retained earnings is generally available for dividend declarations. In some cases, however, there may be **retained earnings restrictions**. These make a portion of the retained earnings balance currently unavailable for dividends. Restrictions result from one or more of the following causes.

1. **Legal restrictions.** Many governments require a corporation to restrict retained earnings for the cost of treasury shares purchased. The restriction keeps intact the corporation's legal capital that is being temporarily held as treasury shares. When the company sells the treasury shares, the restriction is lifted.
2. **Contractual restrictions.** Long-term debt contracts may restrict retained earnings as a condition for the loan. The restriction limits the use of corporate assets for payment of dividends. Thus, it increases the likelihood that the corporation will be able to meet required loan payments.
3. **Voluntary restrictions.** The board of directors may voluntarily create retained earnings restrictions for specific purposes. For example, the board may authorize a restriction for future plant expansion. By reducing the amount of retained earnings available for dividends, the company makes more cash available for the planned expansion.

Companies generally disclose **retained earnings restrictions** in the notes to the financial statements. For example, as shown in Illustration 11-21, Tektronix Inc. (USA),

Illustration 11-21
Disclosure of restriction

Real World

TEKTRONIX INC.
Notes to the Financial Statements

Certain of the Company's debt agreements require compliance with debt covenants. Management believes that the Company is in compliance with such requirements. The Company had unrestricted retained earnings of $223.8 million after meeting those requirements.

a manufacturer of electronic measurement devices, had total retained earnings of $774 million, but the unrestricted portion was only $223.8 million.

Prior Period Adjustments

Suppose that a company has closed its books and issued financial statements. The company then discovers that it made a material error in reporting net income of a prior year. How should the company record this situation in the accounts and report it in the financial statements?

The correction of an error in previously issued financial statements is known as a **prior period adjustment**. The company makes the correction directly to Retained Earnings because the effect of the error is now in this account. The net income for the prior period has been recorded in retained earnings through the journalizing and posting of closing entries.

To illustrate, assume that General Microwave AG discovers in 2017 that it understated depreciation expense on equipment in 2016 by £300,000 due to computational errors. These errors overstated both net income for 2016 and the current balance in retained earnings. The entry for the prior period adjustment, ignoring all tax effects, is as follows.

A	=	L	+	E
				−300,000 RE
−300,000				

Cash Flows
no effect

Retained Earnings	300,000	
Accumulated Depreciation—Equipment		300,000
(To adjust for understatement of depreciation in a prior period)		

A debit to an income statement account in 2017 is incorrect because the error pertains to a prior year.

Companies report prior period adjustments in the retained earnings statement.[4] They add (or deduct, as the case may be) these adjustments from the beginning retained earnings balance. This results in an adjusted beginning balance. For example, assuming a beginning balance of £800,000 in retained earnings, General Microwave reports the prior period adjustment as follows.

Illustration 11-22
Statement presentation of prior period adjustments

GENERAL MICROWAVE AG
Retained Earnings Statement (partial)

Balance, January 1, as reported	£ 800,000
Correction for overstatement of net income in prior period (depreciation error)	**(300,000)**
Balance, January 1, as adjusted	£ 500,000

Again, reporting the correction in the current year's income statement would be incorrect because it applies to a prior year's income statement.

Retained Earnings Statement

The **retained earnings statement** shows the changes in retained earnings during the year. The company prepares the statement from the Retained Earnings account. Illustration 11-23 shows (in T-account form) transactions that affect retained earnings.

[4]A complete retained earnings statement is shown in Illustration 11-24 on the next page.

Illustration 11-23
Debits and credits to retained earnings

Retained Earnings	
1. Net loss	1. Net income
2. Prior period adjustments for overstatement of net income	2. Prior period adjustments for understatement of net income
3. Cash dividends and share dividends	
4. Some disposals of treasury shares	

As indicated, net income increases retained earnings, and a net loss decreases retained earnings. Prior period adjustments may either increase or decrease retained earnings. Both cash dividends and share dividends decrease retained earnings. The circumstances under which treasury share transactions decrease retained earnings are explained on page 552.

A complete retained earnings statement for Graber SA, based on assumed data, is as follows.

Illustration 11-24
Retained earnings statement

GRABER SA
Retained Earnings Statement
For the Year Ended December 31, 2017

Balance, January 1, as reported		€1,050,000
Correction for understatement of net income in prior period (inventory error)		50,000
Balance, January 1, as adjusted		1,100,000
Add: Net income		360,000
		1,460,000
Less: Cash dividends	€100,000	
Share dividends	200,000	300,000
Balance, December 31		€1,160,000

DO IT!

Retained Earnings Statement

Chen Ltd. has retained earnings of ¥5,130,000 on January 1, 2017. During the year, Chen earned ¥2,000,000 of net income. It declared and paid a ¥250,000 cash dividend. In 2017, Chen recorded an adjustment of ¥180,000 due to the understatement (from a mathematical error) of 2016 depreciation expense. Prepare a retained earnings statement for 2017.

Action Plan

✔ Recall that a retained earnings statement begins with retained earnings, as reported at the end of the previous year.

✔ Add or subtract any prior period adjustments to arrive at the adjusted beginning figure.

✔ Add net income and subtract dividends declared to arrive at the ending balance in retained earnings.

Solution

CHEN LTD.
Retained Earnings Statement
For the Year Ended December 31, 2017

Balance, January 1, as reported	¥5,130,000
Correction for overstatement of net income in prior period (depreciation error)	(180,000)
Balance, January 1, as adjusted	4,950,000
Add: Net income	2,000,000
	6,950,000
Less: Cash dividends	250,000
Balance, December 31	¥6,700,000

Related exercise material: **BE11-10, BE11-11, E11-17, E11-18, and DO IT! 11-7.**

✔ The Navigator

Statement Presentation and Analysis

Learning Objective 7

Prepare and analyze a comprehensive equity section.

The equity section of the statement of financial position reports share capital, share premium, and retained earnings.

1. **Share capital.** This category consists of preference and ordinary shares. Preference shares are shown before ordinary shares because of their preferential rights. Par value, shares authorized, shares issued, and shares outstanding are reported for each class of shares.
2. **Share premium.** This includes the excess of amounts paid over par or stated value and share premium from treasury shares.

Presentation

Illustration 11-25 presents the equity section of Graber SA's statement of financial position. Note the following: (1) "Ordinary share dividends distributable" is shown under "Share capital—ordinary" and (2) A note (Note R) discloses a retained earnings restriction.

Illustration 11-25
Comprehensive equity section

GRABER SA
Statement of Financial Position (partial)

Equity		
Share capital—preference, 9% €100 par value, cumulative, callable at €120, 10,000 shares authorized, 6,000 shares issued and outstanding		€ 600,000
Share capital—ordinary, no-par, €5 stated value, 500,000 shares authorized, 400,000 shares issued and 390,000 outstanding	€2,000,000	
Ordinary share dividends distributable	**50,000**	2,050,000
Share premium—preference	30,000	
Share premium—ordinary	1,050,000	1,080,000
Retained earnings **(see Note R)**		1,160,000
Less: Treasury shares (10,000 shares)		80,000
Total equity		€4,810,000

Note R: Retained earnings is restricted for the cost of treasury shares, €80,000.

The equity section of Graber SA in Illustration 11-25 includes most of the accounts discussed in this chapter. The disclosures pertaining to Graber's ordinary shares indicate that the company issued 400,000 shares; 100,000 shares are unissued (500,000 authorized less 400,000 issued); and 390,000 shares are outstanding (400,000 issued less 10,000 shares in treasury).

Published annual reports often combine and report as a single amount the individual sources of share premium, as shown in Illustration 11-26. In addition, authorized shares are sometimes not reported. Finally, notice the line labeled "Reserves."

Under IFRS, companies often use the term "Reserves" for forms of equity other than that contributed by shareholders. Reserves sometimes includes retained earnings. More commonly, this line item is used to report the equity impact of comprehensive income items, such as the Revaluation Surplus that resulted from the revaluation of property, plant, and equipment in Chapter 9.

Instead of presenting a detailed equity section in the statement of financial position and a retained earnings statement, many companies prepare a **statement of changes in equity**. This statement shows the changes (1) in each equity account and (2) in total that occurred during the year. An example of an equity statement is illustrated in an appendix to this chapter (see Illustration 11A-1).

Illustration 11-26
Equity section

KALE AG Statement of Financial Position (partial) (€ in millions)	
Equity	
Share capital—ordinary, €0.25 par value	
Issued: 418,842,707 shares	€ 105
Share premium—ordinary	438
Reserves	(2,141)
Retained earnings	4,836
Less: Treasury shares, at cost	
36,981,580 shares	(1,790)
Total equity	€ 1,448

Analysis

Investors and analysts can measure profitability from the viewpoint of the investor in ordinary shares by the **return on ordinary shareholders' equity**. This ratio, as shown below for Carrefour (FRA), indicates how many euros of net income the company earned for each euro invested by the ordinary shareholders. It is computed by dividing **net income available to ordinary shareholders** (which is net income minus preference dividends) by average ordinary shareholders' equity.

Carrefour's beginning-of-the-year and end-of-the-year ordinary shareholders' equity were €8,047 and €8,597 million, respectively. Its net income was €1,263 million, and no preference shares were outstanding. The return on ordinary shareholders' equity is computed as follows.

Illustration 11-27
Return on ordinary shareholders' equity and computation

Net Income Minus Preference Dividends	÷	Average Ordinary Shareholders' Equity	=	Return on Ordinary Shareholders' Equity
(€1,263 − €0)	÷	$\frac{(€8,047 + €8,597)}{2}$	=	15.2%

As shown above, if a company has preference shares, we deduct the amount of **preference dividends** from the company's net income to compute income available to ordinary shareholders. Also, the par value of preference shares is deducted from total average shareholders' equity to arrive at the amount of ordinary shareholders' equity.

> DO IT!

Shareholders' Equity

On January 1, 2017, Busan Ltd. purchased 2,000,000 treasury shares. Other information regarding Busan is provided below. (All amounts in thousands.)

	2016	2017
Net income	₩110,000	₩110,000
Dividends on preference shares	₩10,000	₩10,000
Dividends on ordinary shares	₩2,000	₩1,600
Ordinary shareholders' equity, beginning of year	₩500,000	₩400,000*
Ordinary shareholders' equity, end of year	₩500,000	₩400,000

*Adjusted for purchase of treasury shares.

Compute (a) return on ordinary shareholders' equity for each year and (b) discuss the changes from 2016 to 2017.

Action Plan

✔ Determine return on ordinary shareholders' equity by dividing net income available to ordinary shareholders by the average ordinary shareholders' equity.

Solution

(All amounts in thousands.)

(a)

	2016	2017
Return on ordinary shareholders' equity	$\dfrac{(₩110{,}000 - ₩10{,}000)}{(₩500{,}000 + ₩500{,}000)/2} = 20\%$	$\dfrac{(₩110{,}000 - ₩10{,}000)}{(₩400{,}000 + ₩400{,}000)/2} = 25\%$

(b) Between 2016 and 2017, return on ordinary shareholders' equity improved from 20% to 25%. While this would appear to be good news for the company's ordinary shareholders, these increases should be carefully evaluated. It is important to note that net income did not change during this period. The increase in the ratio was due to the purchase of treasury shares, which reduced the denominator of the ratio. As the company repurchases its own shares, it becomes more reliant on debt and thus increases its risk.

Related exercise material: **E11-22 and DO IT! 11-8.**

✔ The Navigator

APPENDIX 11A Statement of Changes in Equity

Learning Objective *8

Describe the use and content of the statement of changes in equity.

When statements of financial position and income statements are presented by a corporation, changes in the separate accounts comprising equity should also be disclosed. Disclosure of such changes is necessary to make the financial statements sufficiently informative for users. The disclosures are made in an additional statement called the statement of changes in equity. The statement shows the changes in **each** equity account and in **total** equity during the year. As shown in Illustration 11A-1, the statement is prepared in columnar form. It contains columns for each account and for total equity. The transactions are then identified and their effects are shown in the appropriate columns.

HAMPTON AG
Statement of Changes in Equity
For the Year Ended December 31, 2017

	Share Capital (€5 Par)	Share Premium	Retained Earnings	Treasury Shares	Total
Balance January 1	€300,000	€200,000	€650,000	€(34,000)	€1,116,000
Issued 5,000 ordinary shares at €15	25,000	50,000			75,000
Declared a €40,000 cash dividend			(40,000)		(40,000)
Purchased 2,000 shares for treasury at €16				(32,000)	(32,000)
Net income for year			240,000		240,000
Balance December 31	€325,000	€250,000	€850,000	€(66,000)	€1,359,000

Illustration 11A-1
Statement of changes in equity

In practice, additional columns are usually provided to show the number of shares of issued shares and treasury shares. **When a statement of changes in equity is presented, a retained earnings statement is not necessary** because the retained earnings column explains the changes in this account.

APPENDIX 11B Book Value—Another per Share Amount

Book Value per Share

Learning Objective *9
Compute book value per share.

You have learned about a number of per share amounts in this chapter. Another per share amount of some importance is **book value per share**. It represents **the equity an ordinary shareholder has in the net assets of the corporation** from owning one share. Remember that the net assets (total assets minus total liabilities) of a corporation must be equal to total equity. Therefore, the formula for computing book value per share when a company has only one class of shares outstanding is as follows.

Total Ordinary Shareholders' Equity	÷	Number of Ordinary Shares Outstanding	=	Book Value per Share

Illustration 11B-1
Book value per share formula

Thus, if Marlo Corporation has total ordinary shareholders' equity of \$1,500,000 (share capital—ordinary \$1,000,000 and retained earnings \$500,000) and 50,000 shares of ordinary shares outstanding, book value per share is \$30 (\$1,500,000 ÷ 50,000).

When a company has both preference and ordinary shares, the computation of book value is more complex. Since preference shareholders have a prior claim on net assets over ordinary shareholders, their equity must be deducted from total equity. Then we can determine the equity that applies to the ordinary shares. The computation of book value per share involves the following steps.

1. **Compute the preference share equity.** This equity is equal to the sum of the call price of preference shares plus any cumulative dividends in arrears. If the preference shares do not have a call price, the par value of the shares is used.
2. **Determine the ordinary shareholders' equity.** Subtract the preference share equity from total equity.
3. **Determine book value per share.** Divide ordinary shareholders' equity by ordinary shares.

EXAMPLE

We will use the equity section of Graber SA shown in Illustration 11-25. Graber's preference shares are callable at €120 per share and are cumulative. Assume that dividends on Graber's preference shares were in arrears for one year, €54,000 (6,000 × €9). The computation of preference share equity (Step 1 in the preceding list) is shown below.

Call price (6,000 shares × €120)	€ 720,000
Dividends in arrears (6,000 shares × €9)	54,000
Preference share equity	**€774,000**

Illustration 11B-2
Computation of preference share equity—Step 1

The computation of book value (Steps 2 and 3) is as follows.

Total equity	€ 4,810,000
Less: **Preference share equity**	**774,000**
Ordinary shareholders' equity	**€4,036,000**
Ordinary shares outstanding	**390,000**
Book value per share (€4,036,000 ÷ 390,000)	**€10.35**

Illustration 11B-3
Computation of book value per share with preference shares—Steps 2 and 3

Note that we used the call price of €120 instead of the par value of €100. Note also that share premium—preference, €30,000, **is not assigned to the preference share equity**. Preference shareholders ordinarily do not have a right to amounts contributed in excess of par value. Therefore, such amounts are assigned to the ordinary shareholders' equity in computing book value.

Book Value versus Market Price

Be sure you understand that **book value per share may not equal market price per share**. Book value generally is based on recorded costs. Market price reflects the subjective judgments of thousands of shareholders and prospective investors about a company's potential for future earnings and dividends. Market price per share may exceed book value per share, but that fact does not necessarily mean that the shares are overpriced. The correlation between book value and the annual range of a company's market price per share is often remote, as indicated by the following recent data for some U.S. companies.

Illustration 11B-4
Book value and market price compared

Company	Book Value (year-end)	Market Range (for the year)
The Limited, Inc.	$13.38	$31.03–$22.89
H. J. Heinz Company	$ 7.48	$40.61–$34.53
Cisco Systems	$ 3.66	$21.24–$17.01
Wal-Mart Stores	$12.79	$50.87–$42.31

Book value per share **is useful** in determining the trend of a shareholder's per share equity in a corporation. It is also significant in many contracts and in court cases where the rights of individual parties are based on cost information.

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Identify the major characteristics of a corporation.** The major characteristics of a corporation are separate legal existence, limited liability of shareholders, transferable ownership rights, ability to acquire capital, continuous life, corporation management, government regulations, and additional taxes.

2 **Record the issuance of ordinary shares.** When the issuance of ordinary shares for cash is recorded, the par value of the shares is credited to Share Capital—Ordinary. The portion of the proceeds that is above or below par value is recorded in a separate account. When no-par ordinary shares have a stated value, the entries are similar to those for par value shares. When no-par shares do not have a stated value, the entire proceeds are credited to Share Capital—Ordinary.

3 **Explain the accounting for treasury shares.** The cost method is generally used in accounting for treasury shares. Under this approach, Treasury Shares is debited at the price paid to reacquire the shares. The same amount is credited to Treasury Shares when the shares are sold. The difference between the sales price and cost is recorded in equity accounts, not in income statement accounts.

4 **Differentiate preference shares from ordinary shares.** Preference shares have contractual provisions that give them priority over ordinary shares in certain areas. Typically, preference shareholders have a preference to (1) dividends and (2) assets in liquidation. They sometimes do not have voting rights.

5 **Prepare the entries for cash dividends and share dividends.** Entries for both cash and share dividends are required on the declaration date and the payment date. At the **declaration date**, the entries are cash dividend—debit Cash Dividends and credit Dividends Payable; small share dividend—debit Share Dividends, credit Share Premium—Ordinary, and credit Ordinary Share Dividends Distributable. At the **payment date**, the entries for cash and share dividends are cash dividend—debit Dividends Payable and credit Cash; small share dividend—debit Ordinary Share Dividends Distributable and credit Share Capital—Ordinary.

6 **Identify the items reported in a retained earnings statement.** Each of the individual debits and credits to retained earnings should be reported in the retained earnings statement. Additions consist of net income

and prior period adjustments to correct understatements of prior years' net income. Deductions consist of net loss, prior period adjustments to correct overstatements of prior years' net income, cash and share dividends, and some disposals of treasury shares.

7 **Prepare and analyze a comprehensive equity section.** In the equity section, share capital, share premium, and retained earnings are reported. If a corporation has treasury shares, the cost of treasury shares is deducted from share capital and retained earnings to obtain total equity. One measure of profitability is the return on ordinary shareholders' equity. It is calculated by dividing net income minus preference share dividends by average ordinary shareholders' equity.

*8 **Describe the use and content of the statement of changes in equity.** Corporations must disclose changes in equity accounts and may choose to do so by issuing a separate equity statement. This statement, prepared in columnar form, shows changes in each equity account and in total equity during the accounting period. When this statement is presented, a retained earnings statement is not necessary.

*9 **Compute book value per share.** Book value per share represents the equity an ordinary shareholder has in the net assets of a corporation from owning one share. When there are only ordinary shares outstanding, the formula for computing book value is Total ordinary shareholders' equity ÷ Number of ordinary shares outstanding.

GLOSSARY REVIEW

Authorized shares The amount of shares that a corporation is authorized to sell as indicated in its charter. (p. 543).

***Book value per share** The equity an ordinary shareholder has in the net assets of the corporation from owning one share. (p. 569).

Cash dividend A pro rata distribution of cash to shareholders. (p. 555).

Charter A document that sets forth important terms and features regarding the creation of a corporation. (p. 541).

Corporation A business organized as a legal entity separate and distinct from its owners under corporation law. (p. 538).

Cumulative dividend A feature of preference shares entitling the shareholder to receive current and unpaid prior-year dividends before ordinary shareholders receive any dividends. (p. 554).

Declaration date The date the board of directors formally declares the dividend and announces it to shareholders. (p. 556).

Deficit A debit balance in retained earnings. (p. 563).

Dividend A corporation's distribution of cash or shares to its shareholders on a pro rata (proportional) basis. (p. 555).

Liquidating dividend A dividend declared out of share capital or share premium. (p. 555).

No-par value shares Shares that have not been assigned a value in the corporate charter. (p. 544).

Organization costs Costs incurred in the formation of a corporation. (p. 541).

Outstanding shares Shares that have been issued and are being held by shareholders. (p. 551).

Par value shares (sometimes **nominal**) Capital shares that have been assigned a value per share in the corporate charter. (p. 544).

Payment date The date dividends are transferred to shareholders. (p. 556).

Preference shares Shares that have some contractual preferences over ordinary shares. (p. 553).

Prior period adjustment The correction of an error in previously issued financial statements. (p. 564).

Privately held corporation A corporation that has only a few shareholders and whose shares are not available for sale to the general public. (p. 538).

Publicly held corporation A corporation that may have thousands of shareholders and whose shares are regularly traded on a national securities exchange. (p. 538).

Record date The date when ownership of outstanding shares is determined for dividend purposes. (p. 556).

Retained earnings Net income that a corporation retains for future use. (p. 545).

Retained earnings restrictions Circumstances that make a portion of retained earnings currently unavailable for dividends. (p. 563).

Retained earnings statement A financial statement that shows the changes in retained earnings during the year. (p. 564).

Return on ordinary shareholders' equity A ratio that measures profitability from the shareholders' point of view. It is computed by dividing net income available to ordinary shareholders by average ordinary shareholders' equity. (p. 567).

Share capital Cash and other assets paid into the corporation by shareholders in exchange for shares. (p. 545).

Share dividend A pro rata distribution of the corporation's own shares to shareholders. (p. 558).

Share split The issuance of additional shares to shareholders accompanied by a reduction in the par or stated value per share. (p. 560).

Stated value The amount per share assigned by the board of directors to no-par shares that become legal capital per share. (p. 544).

Statement of changes in equity A statement that shows the changes in each equity account and in total equity during the year. (p. 566).

Treasury shares A corporation's own shares that the corporation has issued and reacquired but not retired. (p. 550).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Which of the following is **not** a major advantage of the corporate form of organization?
(a) Separate legal existence.
(b) Continuous life.
(c) Government regulations.
(d) Transferable ownership rights.

(LO 1) **2.** A major disadvantage of a corporation is:
(a) limited liability of shareholders.
(b) additional taxes.
(c) transferable ownership rights.
(d) separate legal existence.

(LO 2) **3.** Which of the following statements is **false**?
(a) Ownership of ordinary shares gives the owner a voting right.
(b) The equity section begins with a share capital section.
(c) The authorization of share capital does not result in a formal accounting entry.
(d) Par value and market price of a company's shares are always the same.

(LO 2) **4.** ABC Industries Ltd. issues 1,000 €10 par ordinary shares value at €12 per share. In recording the transaction, credits are made to:
(a) Share Capital—Ordinary €10,000 and Share Premium—Ordinary €2,000.
(b) Share Capital—Ordinary €12,000.
(c) Share Capital—Ordinary €10,000 and Gain from Sale of Shares €2,000.
(d) Share Capital—Ordinary €10,000 and Retained Earnings €2,000.

(LO 3) **5.** XYZ, Ltd. sells 100 of its £5 par value treasury shares at £13 per share. If the cost of acquiring the shares was £10 per share, the entry for the sale should include credits to:
(a) Treasury Shares 1,000 and Share Premium—Treasury 300.
(b) Treasury Shares 500 and Share Premium—Treasury 800.
(c) Treasury Shares 1,000 and Retained Earnings 300.
(d) Treasury Shares 500 and Gain from Sale of Treasury Shares 800.

(LO 3) **6.** In the statement of financial position, the cost of treasury shares is deducted in:
(a) expenses. (c) equity.
(b) revenues. (d) liabilities.

(LO 4) **7.** Preference shares may have priority over ordinary shares **except** in:
(a) dividends.
(b) assets in the event of liquidation.
(c) cumulative dividend features.
(d) voting.

(LO 4,5) **8.** M-Bot Enterprises has 10,000 8%, £100 par value, cumulative preference shares outstanding at December 31, 2017. No dividends were declared in 2015 or 2016. If M-Bot wants to pay £375,000 of dividends in 2017, ordinary shareholders will receive:
(a) £0. (c) £215,000.
(b) £295,000. (d) £135,000.

9. Entries for cash dividends are required on the: (LO 5)
(a) declaration date and the payment date.
(b) record date and the payment date.
(c) declaration date, record date, and payment date.
(d) declaration date and the record date.

10. Which of the following statements about small share dividends is **true**? (LO 5)
(a) A debit to Retained Earnings for the par value of the shares issued should be made.
(b) A small share dividend decreases total equity.
(c) Market price per share should be assigned to the dividend shares.
(d) A small share dividend ordinarily will have an effect on par value per share.

11. All **but one** of the following is reported in a retained earnings statement. The exception is: (LO 6)
(a) cash and share dividends.
(b) net income and net loss.
(c) sales revenue.
(d) prior period adjustments.

12. A prior period adjustment is: (LO 6)
(a) reported in the income statement as a non-typical item.
(b) a correction of an error that is recorded directly to retained earnings.
(c) reported directly in the equity section of the statement of financial position.
(d) reported in the retained earnings statement as an adjustment of the ending balance of retained earnings.

13. In the equity section of the statement of financial position, share capital—ordinary: (LO 7)
(a) is listed before share capital—preference.
(b) is listed after retained earnings.
(c) is listed after share capital—preference.
(d) is reduced for treasury shares.

14. Adana A.Ş. reported net income of ₺186,000 during 2017, paid dividends of ₺26,000 on ordinary shares, and paid dividends of ₺60,000 on preference shares. It also has 10,000 shares of 6%, ₺100 par value, non-cumulative preference shares outstanding. Ordinary shareholders' equity was ₺1,200,000 on January 1, 2017, and ₺1,600,000 on December 31, 2017. The company's return on ordinary shareholders' equity for 2017 is: (LO 7)
(a) 10.0%.
(b) 9.0%.
(c) 7.1%.
(d) 13.3%.

***15.** When a statement of changes in equity is presented, it is **not** necessary to prepare a (an): (LO 8)
(a) retained earnings statement.
(b) statement of financial position.
(c) income statement.
(d) statement of cash flows.

(LO 9) *16. The ledger of JFK, plc shows share capital—ordinary, treasury shares—ordinary, and no preference shares. For this company, the formula for computing book value per share is:
- (a) total equity divided by the number of ordinary shares issued.
- (b) share capital—ordinary divided by the number of ordinary shares issued.
- (c) total equity divided by the number of ordinary shares outstanding.
- (d) share capital—ordinary divided by the number of ordinary shares outstanding.

Solutions

1. (c) Government regulations are a disadvantage of a corporation. The other choices are advantages of a corporation.

2. (b) Additional taxes are a disadvantage of a corporation. The other choices are advantages of a corporation.

3. (d) Par value has no relationship with market price, and many governments today do not require a par value. The other choices are true statements.

4. (a) Share Capital—Ordinary should be credited for €10,000 and Share Premium—Ordinary should be credited for €2,000. The shares are par value, so the excess above par is reported separately. This excess is contributed, not earned, capital. The other choices are therefore incorrect.

5. (a) Treasury Shares should be credited for £1,000 (100 shares × £10, the acquisition price). Share Premium—Treasury should be credited for the difference between the £1,000 and the cash received of £1,300 (100 shares × £13), or £300. The other choices are therefore incorrect.

6. (c) The cost of treasury shares is deducted in equity accounts. The other choices are therefore incorrect.

7. (d) Preference shares usually do not have voting rights and therefore does not have priority over ordinary shares on this issue. The other choices are true statements.

8. (d) The preference shareholders will receive a total of £240,000 of dividends [dividends in arrears (£80,000 × 2 years) + current-year dividends (£80,000)]. If M-Bot wants to pay a total of £375,000 in 2017, then ordinary shareholders will receive £135,000 (£375,000 − £240,000), not (a) £0, (b) £295,000, or (c) £215,000.

9. (a) Entries are required for cash dividends on the declaration date and the payment date, but not the record date. The other choices are therefore incorrect.

10. (c) Because the share dividend is considered small, the fair value (market price), not the par value, is assigned to the shares. The other choices are incorrect because (a) a debit to Retained Earnings for the fair value of the shares issued should be made; (b) a small share dividend changes the composition of total shareholders' equity, but does not change the total; and (d) a small share dividend will have no effect on par value per share.

11. (c) Sales revenue is not reported on the retained earnings statement. The other choices are true statements.

12. (b) A prior period adjustment is a correction of an error that is recorded directly to retained earnings. The other choices are incorrect because a prior period adjustment is reported in the retained earnings statement, not in the (a) income statement or (c) equity section of the statement of financial position. Choice (d) is incorrect because the prior period adjustment is an adjustment of the beginning, not the ending, balance of retained earnings.

13. (c) Share capital—ordinary is listed after share capital—preference. The other choices are incorrect because share capital—ordinary (a) is listed after preference shares, (b) is listed before retained earnings, and (d) is not reduced for treasury shares.

14. (b) Return on ordinary shareholders' equity is Net income available to ordinary shareholders divided by Average ordinary shareholders' equity. Net income available to ordinary shareholders is Net income less Preference dividends = ৳126,000 [৳186,000 − (10,000 × .06 × ৳100)]. The company's return on shareholders' equity for the year is therefore 9.0% [৳126,000/(৳1,200,000 + ৳1,600,000)/2)], not (a) 10.0%, (c) 7.1%, or (d) 13.3%.

***15. (a)** When a statement of changes in equity is presented a retained earnings statement is unnecessary as the information would be redundant. Choices (b) statement of financial position, (c) income statement, and (d) statement of cash flows are required statements.

***16. (c)** When a company has only one class of shares outstanding, Book value per share is Total equity divided by Number of ordinary shares outstanding. The other choices are therefore incorrect.

PRACTICE EXERCISES

Journalize issuance of ordinary and preference shares and purchase of treasury shares.
(LO 2, 3)

1. Maci plc had the following transactions during the current period.

Mar. 2	Issued 5,000 shares of £5 par value ordinary shares to attorneys in payment of a bill for £35,000 for services performed in helping the company to incorporate.
June 12	Issued 60,000 shares of £5 par value ordinary shares for cash of £370,000.
July 11	Issued 1,000 shares of £100 par value preference shares for cash at £112 per share.
Nov. 28	Purchased 2,000 shares of treasury shares for £70,000.

Instructions

Journalize the transactions.

Solution

1. Mar. 2	Organization Expense	35,000	
	Share Capital—Ordinary (5,000 × £5)		25,000
	Share Premium—Ordinary		10,000
June 12	Cash	370,000	
	Share Capital—Ordinary (60,000 × £5)		300,000
	Share Premium—Ordinary		70,000
July 11	Cash (1,000 × £112)	112,000	
	Share Capital—Preference (1,000 × £100)		100,000
	Share Premium—Preference (1,000 × £12)		12,000
Nov. 28	Treasury Shares	70,000	
	Cash		70,000

Journalize cash dividends; indicate statement presentation.

(LO 5, 6)

2. On January 1, Chong Ltd. had 95,000 shares of no-par ordinary shares issued and outstanding. The shares have a stated value of NT$60 per share. During the year, the following occurred.

Apr.	1	Issued 25,000 additional ordinary shares for NT$170 per share.
June	15	Declared a cash dividend of NT$10 per share to shareholders of record on June 30.
July	10	Paid the NT$10 cash dividend.
Dec.	1	Issued 2,000 additional ordinary shares for NT$190 per share.
	15	Declared a cash dividend on outstanding shares of NT$12 per share to shareholders of record on December 31.

Instructions

(a) Prepare the entries, if any, on each of the three dividend dates.

(b) How are dividends and dividends payable reported in the financial statements prepared at December 31?

Solution

2. (a) June 15	Cash Dividends (120,000 × NT$10)	1,200,000	
	Dividends Payable		1,200,000
July 10	Dividends Payable	1,200,000	
	Cash		1,200,000
Dec. 15	Cash Dividends (122,000 × NT$12)	1,464,000	
	Dividends Payable		1,464,000

(b) In the retained earnings statement, dividends of NT$2,664,000 will be deducted. In the statement of financial position, Dividends Payable of NT$1,464,000 will be reported as a current liability.

Prepare a retained earnings statement.

(LO 6)

3. On January 1, 2017, Rabb AG had retained earnings of €550,000. During the year, Rabb had the following selected transactions.

1. Declared cash dividends €120,000.
2. Corrected overstatement of 2016 net income because of depreciation error €30,000.
3. Earned net income €320,000.
4. Declared share dividends €60,000.

Instructions

Prepare a retained earnings statement for the year ended December 31, 2017.

Solution

3.

RABB AG Retained Earnings Statement For the Year Ended December 31, 2017		
Balance, January 1, as reported		€550,000
Correction for overstatement of 2016 net income (depreciation error)		(30,000)
Balance, January 1, as adjusted		520,000
Add: Net income		320,000
		840,000
Less: Cash dividends	€120,000	
Share dividends	60,000	180,000
Balance, December 31		€660,000

PRACTICE PROBLEM

Journalize transactions and prepare equity section.

(LO 2, 3, 6)

Cabral SA is authorized to issue 1,000,000 R$5 par value ordinary shares. In its first year, the company has the following share transactions.

Jan. 10	Issued 400,000 ordinary shares at R$8 per share.
July 1	Issued 100,000 ordinary shares for land. The land had an asking price of R$900,000. The shares are currently selling on a national exchange at R$8.25 per share.
Sept. 1	Purchased 10,000 ordinary shares for the treasury at R$9 per share.
Dec. 1	Sold 4,000 treasury shares at R$10 per share.

Instructions

(a) Journalize the transactions.

(b) Prepare the equity section assuming the company had retained earnings of R$200,000 at December 31.

Solution

(a) Jan. 10	Cash	3,200,000	
	Share Capital—Ordinary		2,000,000
	Share Premium—Ordinary		1,200,000
	(To record issuance of 400,000 R$5 par value shares)		
July 1	Land	825,000	
	Share Capital—Ordinary		500,000
	Share Premium—Ordinary		325,000
	(To record issuance of 100,000 R$5 par value shares for land)		
Sept. 1	Treasury Shares	90,000	
	Cash		90,000
	(To record purchase of 10,000 treasury shares at cost)		
Dec. 1	Cash	40,000	
	Treasury Shares		36,000
	Share Premium—Treasury		4,000
	(To record sale of 4,000 treasury shares above cost)		

(b)

CABRAL SA Statement of Financial Position (partial)		
Equity		
Share capital—ordinary, R$5 par value, 1,000,000 shares authorized, 500,000 shares issued, 494,000 shares outstanding		R$2,500,000
Share premium—ordinary	R$1,525,000	
Share premium—treasury	4,000	1,529,000
Retained earnings		200,000
Less: Treasury shares (6,000 shares)		54,000
Total equity		R$4,175,000

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NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendices to the chapter.

QUESTIONS

1. Mark Adler, a student, asks your help in understanding the following characteristics of a corporation: (a) separate legal existence, (b) limited liability of shareholders, and (c) transferable ownership rights. Explain these characteristics to Mark.
2. (a) Your friend Paula Leuck cannot understand how the characteristic of corporation management is both an advantage and a disadvantage. Clarify this problem for Paula.
   (b) Identify and explain two other disadvantages of a corporation.
3. The following terms pertain to the forming of a corporation: (1) charter, (2) by-laws, and (3) organization costs. Explain the terms.
4. What are the basic ownership rights of ordinary shareholders in the absence of restrictive provisions?
5. A corporation has been defined as an entity separate and distinct from its owners. In what ways is a corporation a separate legal entity?
6. (a) What are the two principal components of equity?
   (b) What is share capital? Give three examples.
7. The corporate charter of Keller Ltd. allows the issuance of a maximum of 100,000 ordinary shares. During its first two years of operations, Keller sold 70,000 shares and reacquired 7,000 of these shares. After these transactions, how many shares are authorized, issued, and outstanding?
8. Which is the better investment—ordinary shares with a par value of ₩5,000 per share, or ordinary shares with a par value of ₩20,000 per share? Why?
9. What factors help determine the market price of shares?
10. Why are ordinary shares usually not issued at a price that is less than par value?
11. Land appraised at £84,000 is purchased by issuing 1,000 £10 par value ordinary shares. The market price of the shares at the time of the exchange, based on active trading in the securities market, is £95 per share. Should the land be recorded at £10,000, £84,000, or £95,000? Explain.
12. For what reasons might a company like IBM (USA) repurchase some of its shares (treasury shares)?
13. Luz, A/S purchases 1,000 shares of its own previously issued €5 par value ordinary shares for €9,000. Assuming the shares are held in the treasury, what effect does this transaction have on (a) net income, (b) total assets, (c) retained earnings, and (d) total equity?
14. The treasury shares purchased in Question 13 are resold by Luz, A/S for €13,000. What effect does this transaction have on (a) net income, (b) total assets, (c) retained earnings, and (d) total equity?
15. (a) What are the principal differences between ordinary shares and preference shares?
    (b) Preference shares may be cumulative. Discuss this feature.
    (c) How are dividends in arrears presented in the financial statements?
16. Identify the events that result in credits and debits to retained earnings.
17. Tim Miotke maintains that adequate cash is the only requirement for the declaration of a cash dividend. Is Tim correct? Explain.
18. (a) Three dates are important in connection with cash dividends. Identify these dates, and explain their significance to the corporation and its shareholders.
    (b) Identify the accounting entries that are made for a cash dividend and the date of each entry.
19. Contrast the effects of a cash dividend and a share dividend on a corporation's statement of financial position.
20. Travis Plum asks, "Since share dividends don't change anything, why declare them?" What is your answer to Travis?

21. Meloy Company Ltd. has 30,000 £9 par value ordinary shares outstanding when it announces a 3-for-1 share split. Before the split, the shares had a market price of £120 per share. After the split, how many shares will be outstanding? What will be the approximate market price per share?

22. The board of directors is considering either a share split or a share dividend. They understand that total equity will remain the same under either action. However, they are not sure of the different effects of the two types of actions on other aspects of equity. Explain the differences to the directors.

23. What is a prior period adjustment, and how is it reported in the financial statements?

24. What is the purpose of a retained earnings restriction? Identify the possible causes of retained earnings restrictions.

***25.** What is the formula for computing book value per share when a corporation has only ordinary shares?

***26.** Bihar Ltd.'s ordinary shares have a par value of Rs10, a book value of Rs240, and a current market price of Rs180. Explain why these amounts are all different.

BRIEF EXERCISES

BE11-1 Kari Home is studying for her accounting midterm examination. Identify for Kari the advantages and disadvantages of the corporate form of business organization.

List the advantages and disadvantages of a corporation.
(LO 1)

BE11-2 On May 10, Chen Co. issues 2,000 €6 par value ordinary shares for cash at €13 per share. Journalize the issuance of the shares.

Prepare entries for issuance of par value ordinary shares.
(LO 2)

BE11-3 On June 1, Federia Ltd. issues 4,500 no-par ordinary shares at a cash price of ¥6 per share. Journalize the issuance of the shares assuming the shares have a stated value of ¥2 per share.

Prepare entries for issuance of no-par value ordinary shares.
(LO 2)

BE11-4 Alou Ltd.'s £10 par value ordinary shares are actively traded at a market price of £15 per share. Alou issues 5,000 shares to purchase land advertised for sale at £81,000. Journalize the issuance of the shares in acquiring the land.

Prepare entries for issuance of shares in a non-cash transaction.
(LO 2)

BE11-5 On July 1, Pearl River Industries purchases 500 of its HK$20 par value ordinary shares for the treasury at a cash price of HK$80 per share. On September 1, it sells 350 treasury shares for cash at HK$90 per share. Journalize the two treasury share transactions.

Prepare entries for treasury share transactions.
(LO 3)

BE11-6 Chard Ltd. issues 5,000 £100 par value preference shares for cash at £118 per share. Journalize the issuance of the preference shares.

Prepare entries for issuance of preference shares.
(LO 4)

BE11-7 Fields Enterprises has 70,000 ordinary shares outstanding. It declares a €1.5 per share cash dividend on November 1 to shareholders of record on December 1. The dividend is paid on December 31. Prepare the entries on the appropriate dates to record the declaration and payment of the cash dividend.

Prepare entries for a cash dividend.
(LO 5)

BE11-8 Valiant Ltd. has 56,000 £10 par value ordinary shares outstanding. It declares a 10% share dividend on December 1 when the market price per share is £16. The dividend shares are issued on December 31. Prepare the entries for the declaration and payment of the share dividend.

Prepare entries for a share dividend.
(LO 5)

BE11-9 The equity section of Neely Company Ltd. consists of share capital—ordinary (£10 par) £2,000,000 and retained earnings £500,000. A 15% share dividend (30,000 shares) is declared when the market price per share is £16. Show the before-and-after effects of the dividend on the following.
(a) The components of equity.
(b) Shares outstanding.
(c) Par value per share.

Show before-and-after effects of a share dividend.
(LO 5)

BE11-10 For the year ending December 31, 2017, Abbott SE reports net income €140,000 and dividends €55,000. Prepare the retained earnings statement for the year assuming the balance in retained earnings on January 1, 2017, was €220,000.

Prepare a retained earnings statement.
(LO 6)

Prepare a retained earnings statement.
(LO 6)

BE11-11 The balance in retained earnings on January 1, 2017, for Sandra Ltd. was £800,000. During the year, the corporation paid cash dividends of £50,000 and distributed a share dividend of £8,000. In addition, the company determined that it had understated its depreciation expense in prior years by £35,000. Net income for 2017 was £120,000. Prepare the retained earnings statement for 2017.

Prepare equity section.
(LO 7)

BE11-12 Garcia Enterprises SLU has the following accounts at December 31: Share Capital—Ordinary, €10 par, 5,000 shares issued, €50,000; Share Premium—Ordinary €32,000; Retained Earnings €45,000; and Treasury Shares, 500 shares, €9,000. Prepare the equity section of the statement of financial position.

Compute book value per share.
(LO 9)

***BE11-13** The statement of financial position for Lauren Ltd. shows the following: total equity £817,000, ordinary shares issued 44,000 shares, and ordinary shares outstanding 35,000 shares. Compute the book value per share. (No preference shares are outstanding.)

> DO IT! REVIEW

Analyze statements about corporate organization.
(LO 1)

DO IT! 11-1 Indicate whether each of the following statements is true or false. If false, indicate how to correct the statement.

_______ 1. The corporation is an entity separate and distinct from its owners.

_______ 2. The liability of shareholders is normally limited to their investment in the corporation.

_______ 3. The relative lack of government regulation is an advantage of the corporate form of business.

_______ 4. There is no journal entry to record the authorization of ordinary shares.

_______ 5. No-par value shares are quite rare today.

Close net income and prepare equity section.
(LO 1)

DO IT! 11-2 At the end of its first year of operation, Jaeger Industries AG has €1,000,000 of ordinary shares and net income of €228,000. Prepare (a) the closing entry for net income and (b) the equity section at year-end.

Journalize issuance of shares.
(LO 2)

DO IT! 11-3 Zermatt AG began operations on April 1 by issuing 50,000 CHF2 par value ordinary shares for cash at CHF13 per share. On April 19, it issued 2,000 ordinary shares to attorneys in settlement of their bill of CHF27,100 for organization costs. Journalize both issuances, assuming the shares are not publicly traded.

Journalize treasury share transactions.
(LO 3)

DO IT! 11-4 Delsman Limited purchased 2,000 of its £5 par value ordinary shares for £128,000 on August 1. It will hold these shares in the treasury until resold. On December 1, the corporation sold 1,200 treasury shares for cash at £72 per share. Journalize the treasury share transactions.

Determine dividends paid to preference and ordinary shareholders.
(LO 5)

DO IT! 11-5 Inmann SE has 2,000 7%, €100 par value preference shares outstanding at December 31, 2017. At December 31, 2017, the company declared a €110,000 cash dividend. Determine the dividend paid to preference shareholders and ordinary shareholders under each of the following scenarios.

1. The preference shares are non-cumulative, and the company has not missed any dividends in previous years.
2. The preference shares are non-cumulative, and the company did not pay a dividend in each of the two previous years.
3. The preference shares are cumulative, and the company did not pay a dividend in each of the two previous years.

Determine effects of share dividend and share split.
(LO 5)

DO IT! 11-6 Sentry Company Ltd. has had 4 years of strong earnings. Due to this success, the market price of its 400,000 £2 par value ordinary shares has increased from £12 per share to £49. During this period, share capital and share premium remained the same at a total of £2,400,000. Retained earnings increased from £1,800,000 to £12,000,000. CEO T. Boldt is considering either a 15% share dividend or a 2-for-1 share split. He asks you to show the before-and-after effects of each option on (a) retained earnings, (b) total equity, and (c) outstanding shares and par value per share.

DO IT! 11-7 Raymond SA has retained earnings of €3,100,000 on January 1, 2017. During the year, Raymond earned €1,200,000 of net income. It declared and paid a €130,000 cash dividend. In 2017, Raymond recorded an adjustment of €75,000 due to the overstatement (from mathematical error) of 2016 depreciation expense. Prepare a retained earnings statement for 2017.

Prepare a retained earnings statement.

(LO 6)

DO IT! 11-8 On January 1, 2017, Leonard Industries purchased 1,000 treasury shares. Other information regarding Leonard Industries is provided below.

Compute return on equity.

(LO 7)

	2016	2017
Net income	£200,000	£210,000
Dividends on preference shares	£30,000	£30,000
Dividends on ordinary shares	£20,000	£25,000
Weighted-average number of ordinary shares outstanding	10,000	9,000
Ordinary shareholders' equity beginning of year	£600,000	£760,000
Ordinary shareholders' equity end of year	£760,000	£830,000

Compute return on ordinary shareholders' equity for each year.

EXERCISES

E11-1 Victoria has prepared the following list of statements about corporations.

Identify characteristics of a corporation.

(LO 1)

1. A corporation is an entity separate and distinct from its owners.
2. As a legal entity, a corporation has most of the rights and privileges of a person.
3. Most of the largest corporations are privately held corporations.
4. Corporations may buy, own, and sell property; borrow money; enter into legally binding contracts; and sue and be sued.
5. The net income of a corporation is not taxed as a separate entity.
6. Creditors have a legal claim on the personal assets of the owners of a corporation if the corporation does not pay its debts.
7. The transfer of shares from one owner to another requires the approval of either the corporation or other shareholders.
8. The board of directors of a corporation legally owns the corporation.
9. The chief accounting officer of a corporation is the controller.
10. Corporations are subject to fewer regulations than partnerships or proprietorships.

Instructions

Identify each statement as true or false. If false, indicate how to correct the statement.

E11-2 Victoria (see E11-1) has studied the information you gave her in that exercise and has come to you with more statements about corporations.

Identify characteristics of a corporation.

(LO 1, 2)

1. Corporation management is both an advantage and a disadvantage of a corporation compared to a proprietorship or a partnership.
2. Limited liability of shareholders, government regulations, and additional taxes are the major disadvantages of a corporation.
3. When a corporation is formed, organization costs are recorded as an asset.
4. Each ordinary share gives the shareholder the ownership rights to vote at shareholder meetings, share in corporate earnings, keep the same percentage ownership when new shares are issued, and share in assets upon liquidation.
5. The number of issued shares is always greater than or equal to the number of authorized shares.
6. A journal entry is required for the authorization of ordinary shares.
7. Publicly held corporations usually issue shares directly to investors.
8. The trading of shares on a securities exchange involves the transfer of already issued shares from an existing shareholder to another investor.

9. The market price of ordinary shares is usually the same as its par value.
10. Retained earnings is the total amount of cash and other assets paid in to the corporation by shareholders in exchange for shares.

Instructions
Identify each statement as true or false. If false, indicate how to correct the statement.

Journalize issuance of ordinary shares.
(LO 2)

E11-3 During its first year of operations, Punjab Limited had the following transactions pertaining to its ordinary shares.

Jan. 10 Issued 70,000 shares for cash at Rs5 per share.
July 1 Issued 30,000 shares for cash at Rs7 per share.

Instructions
(a) Journalize the transactions, assuming that the ordinary shares have a par value of Rs5 per share.
(b) Journalize the transactions, assuming that the ordinary shares are no-par with a stated value of Rs1 per share.

Journalize issuance of ordinary shares.
(LO 2)

E11-4 Luis SLU issued 1,000 ordinary shares.

Instructions
Prepare the entry for the issuance under the following assumptions.

(a) The shares had a par value of €5 per share and were issued for a total of €48,000.
(b) The shares had a stated value of €5 per share and were issued for a total of €48,000.
(c) The shares had no par or stated value and were issued for a total of €48,000.
(d) The shares had a par value of €5 per share and were issued to attorneys for services during incorporation valued at €48,000.
(e) The shares had a par value of €5 per share and were issued for land worth €48,000.

Journalize treasury share transactions.
(LO 3)

E11-5 Nanjing Ltd. purchased from its shareholders 5,000 shares of its own previously issued shares for ¥250,000. It later resold 1,300 shares for ¥54 per share, then 2,000 more shares for ¥49 per share, and finally 1,700 shares for ¥40 per share.

Instructions
Prepare journal entries for the purchase of the treasury shares and the three sales of treasury shares.

Differentiate between preference and ordinary shares.
(LO 4)

E11-6 Robydek Limited issued 100,000 £20 par value, cumulative, 9% preference shares on January 1, 2015, for £2,080,000. In December 2017, Robydek declared its first dividend of £550,000.

Instructions
(a) Prepare Robydek's journal entry to record the issuance of the preference shares.
(b) If the preference shares are **not** cumulative, how much of the £550,000 would be paid to **ordinary** shareholders?
(c) If the preference shares are cumulative, how much of the £550,000 would be paid to **ordinary** shareholders?

Journalize issuance of ordinary and preference shares and purchase of treasury shares.
(LO 2, 3, 4)

E11-7 Sorocaba Co. had the following transactions during the current period.

Mar. 2 Issued 5,000 R$1 par value ordinary shares to attorneys in payment of a bill for R$44,000 for services performed in helping the company to incorporate.
June 12 Issued 60,000 R$1 par value ordinary shares for cash of R$468,000.
July 11 Issued 1,000 R$100 par value preference shares for cash at R$110 per share.
Nov. 28 Purchased 2,000 treasury shares for R$18,000.

Instructions
Journalize the transactions.

Journalize non-cash ordinary share transactions.
(LO 2)

E11-8 As an auditor for the firm of Gratis and Goode, you encounter the following situations in auditing different clients.

1. JR SpA is a closely held corporation whose shares are not publicly traded. On December 5, the corporation acquired land by issuing 5,000 €10 par value ordinary shares. The owners' asking price for the land was €138,000, and the fair value of the land was €124,000.
2. Novak A/S is a publicly held corporation whose ordinary shares are traded on the securities markets. On June 1, it acquired land by issuing 20,000 €10 par value ordinary shares. At the time of the exchange, the land was advertised for sale at €250,000. The shares were selling at €11 per share.

Instructions
Prepare the journal entries for each of the situations above.

Journalize treasury share transactions. (LO 3)

E11-9 On January 1, 2017, the equity section of Bergin ASA shows share capital—ordinary (£5 par value) £1,500,000; share premium—ordinary £1,000,000; and retained earnings £1,200,000. During the year, the following treasury share transactions occurred.

Mar. 1	Purchased 50,000 shares for cash at £12 per share.
July 1	Sold 10,000 treasury shares for cash at £14 per share.
Sept. 1	Sold 8,000 treasury shares for cash at £10 per share.

Instructions
(a) Journalize the treasury share transactions.
(b) Restate the entry for September 1, assuming the treasury shares were sold at £9 per share.

Journalize preference share transactions and indicate statement presentation. (LO 4, 7)

E11-10 Suliman SJSC is authorized to issue both preference and ordinary shares. The par value of the preference shares is €50. During the first year of operations, the company had the following events and transactions pertaining to its preference shares.

Feb. 1	Issued 12,000 shares for cash at €53 per share.
July 1	Issued 23,000 shares for cash at €57 per share.

Instructions
(a) Journalize the transactions.
(b) Post to the equity accounts.
(c) Indicate the financial statement presentation of the related accounts.

Answer questions about equity section. (LO 2, 3, 4, 7)

E11-11 The equity section of Ahab SA at December 31 is as follows.

AHAB SA
Statement of Financial Position (partial)

Equity	
Share capital—preference, cumulative, 10,000 shares authorized, 5,000 shares issued and outstanding	€ 300,000
Share capital—ordinary, no par, 750,000 shares authorized, 600,000 shares issued	1,200,000
Retained earnings	1,858,000
Less: Treasury shares—ordinary (75,000 shares)	75,000
Total equity	€3,283,000

Instructions
From a review of the equity section, as chief accountant, write a memo to the president of the company answering the following questions.
(a) How many ordinary shares are outstanding?
(b) Assuming there is a stated value, what is the stated value of the ordinary shares?
(c) What is the par value of the preference shares?
(d) If the annual dividend on preference shares is €24,000, what is the dividend rate on preference shares?
(e) If dividends of €48,000 were in arrears on preference shares, what would be the balance in Retained Earnings?

Prepare correct entries for share capital transactions. (LO 2, 3, 4)

E11-12 Anya OAO recently hired a new accountant with extensive experience in accounting for partnerships. Because of the pressure of the new job, the accountant was unable to review his textbooks on the topic of corporation accounting. During the first month, the accountant made the following entries for the corporation's share capital.

May 2	Cash	130,000	
	Share Capital—Ordinary		130,000
	(Issued 10,000 €10 par value ordinary shares at €13 per share)		
10	Cash	580,000	
	Share Capital—Ordinary		580,000
	(Issued 10,000 €50 par value preference shares at €58 per share)		

May 15	Share Capital—Ordinary	18,000	
	Cash		18,000
	(Purchased 1,200 ordinary shares for the treasury at €15 per share)		
31	Cash	8,000	
	Share Capital—Ordinary		5,000
	Gain on Sale of Shares		3,000
	(Sold 500 treasury shares at €16 per share)		

Instructions

On the basis of the explanation for each entry, prepare the entry that should have been made for the share capital transactions.

Journalize cash dividends; indicate statement presentation.
(LO 5)

E11-13 On January 1, Chevon Enterprises SA had 98,000 no-par ordinary shares issued and outstanding. The shares have a stated value of €4 per share. During the year, the following occurred.

Apr. 1 Issued 18,000 additional ordinary shares for €17 per share.
June 15 Declared a cash dividend of €1 per share to shareholders of record on June 30.
July 10 Paid the €1 cash dividend.
Dec. 1 Issued 2,000 additional ordinary shares for €19 per share.
15 Declared a cash dividend on outstanding shares of €1.20 per share to shareholders of record on December 31.

Instructions

(a) Prepare the entries, if any, on each of the three dividend dates.
(b) How are dividends and dividends payable reported in the financial statements prepared at December 31?

Journalize share dividends.
(LO 5)

E11-14 On January 1, 2017, Lanie Limited had £1,000,000 of ordinary shares outstanding that were issued at par. It also had retained earnings of £750,000. The company issued 40,000 ordinary shares at par on July 1 and earned net income of £400,000 for the year.

Instructions

Journalize the declaration of a 15% share dividend on December 10, 2017, for the following independent assumptions.

(a) Par value is £8, and market price is £18.
(b) Par value is £5, and market price is £20.

Compare effects of a share dividend and a share split.
(LO 5)

E11-15 On October 31, the equity section of Lucerne Company AG consists of share capital—ordinary CHF300,000 and retained earnings CHF860,000. Lucerne is considering the following two courses of action: (1) declaring a 7% share dividend on the 50,000, CHF6 par value shares outstanding, or (2) effecting a 2-for-1 share split that will reduce par value to CHF3 per share. The current market price is CHF13 per share.

Instructions

Prepare a tabular summary of the effects of the alternative actions on the components of equity, outstanding shares, and par value per share. Use the following column headings: Before Action, After Share Dividend, and After Share Split.

Prepare correcting entries for dividends and a share split.
(LO 5)

E11-16 Before preparing financial statements for the current year, the chief accountant for Paul Company discovered the following errors in the accounts.

1. The declaration and payment of a €50,000 cash dividend was recorded as a debit to Interest Expense €50,000 and a credit to Cash €50,000.
2. A 10% share dividend (1,200 shares) was declared on the €10 par value shares when the market price per share was €17. The only entry made was Share Dividends (Dr.) €12,000 and Dividends Payable (Cr.) €12,000. The shares have not been issued.
3. A 4-for-1 share split involving the issue of 400,000 €5 par value ordinary shares for 100,000 €20 par value ordinary shares was recorded as a debit to Retained Earnings €2,000,000 and a credit to Share Capital—Ordinary €2,000,000.

Instructions

Prepare the correcting entries at December 31.

E11-17 On January 1, 2017, Richard Industries Ltd. had retained earnings of £550,000. During the year, Richard had the following selected transactions.

Prepare a retained earnings statement. (LO 6)

1. Declared cash dividends £96,000.
2. Corrected overstatement of 2016 net income because of depreciation error £31,000.
3. Earned net income £350,000.
4. Declared share dividends £62,000.

Instructions
Prepare a retained earnings statement for the year.

E11-18 Bindra Company A.Ş. reported retained earnings at December 31, 2016, of ₺340,000. Bindra had 200,000 ordinary shares outstanding at January 1, 2017.

Prepare a retained earnings statement. (LO 6)

The following transactions occurred during 2017.

1. An error was discovered: in 2015, depreciation expense was recorded at ₺66,000, but the correct amount was ₺50,000.
2. A cash dividend of ₺0.50 per share was declared and paid.
3. A 5% share dividend was declared and distributed when the market price per share was ₺14 per share.
4. Net income was ₺285,000.

Instructions
Prepare a retained earnings statement for 2017.

E11-19 The ledger of Summit SA contains the following accounts: Share Capital—Ordinary, Share Capital—Preference, Treasury Shares, Share Premium—Preference, Share Premium—Ordinary, Share Premium—Treasury, and Retained Earnings.

Classify equity accounts. (LO 7)

Instructions
Classify each account using the following table headings.

Account	Share Capital	Share Premium	Retained Earnings	Other

E11-20 The following accounts appear in the ledger of Tiger Ltd. after the books are closed at December 31.

Prepare an equity section. (LO 7)

Share Capital—Ordinary, no par, ¥1 stated value, 400,000 shares authorized; 300,000 shares issued	¥ 300,000
Ordinary Share Dividends Distributable	30,000
Share Premium—Ordinary	1,200,000
Share Capital—Preference, ¥5 par value, 8%, 40,000 shares authorized; 30,000 shares issued	150,000
Retained Earnings	800,000
Treasury Shares—Ordinary (10,000 shares)	65,000
Share Premium—Preference	50,000

Instructions
Prepare the equity section at December 31, assuming retained earnings is restricted for plant expansion in the amount of ¥150,000.

E11-21 Perrin SA reported the following balances at December 31, 2016: share capital—ordinary €400,000; share premium—ordinary €220,000; and retained earnings €250,000. During 2017, the following transactions affected equity.

Prepare an equity section. (LO 7)

1. Issued preference shares with a par value of €125,000 for €160,000.
2. Purchased treasury shares (ordinary) for €40,000.
3. Earned net income of €128,000.
4. Declared and paid cash dividends of €33,000.

Instructions
Prepare the equity section of Perrin SA's December 31, 2017, statement of financial position.

E11-22 In 2017, Orasco Company SA had net sales of R$600,000 and cost of goods sold of R$360,000. Operating expenses were R$153,000, and interest expense was R$7,500. The corporation's tax rate is 25%. The corporation declared preference dividends of R$12,000 in 2017, and its average ordinary shareholders' equity during the year was R$180,000.

Prepare an income statement and compute return on ordinary shareholders' equity. (LO 7)

Instructions

(a) Prepare an income statement for Orasco Company SA.
(b) Compute Orasco's return on ordinary shareholders' equity for 2017.

Prepare an equity section.
(LO 7, 9)

***E11-23** The equity section of Atrio Ltd. showed the following: share premium €6,101, share capital—ordinary €925, share capital—preference €58, retained earnings €7,420, and treasury shares €2,828. (All amounts are in millions.)

The preference shares have 577,740 shares authorized, with a par value of €100 and an annual €3.50 per share cumulative dividend preference. At December 31, 577,649 preference shares are issued and 546,024 shares are outstanding. There are 1.8 billion shares of €1 par value ordinary shares authorized, of which 924.6 million are issued and 844.8 million are outstanding at December 31.

Instructions

(a) Prepare the equity section, including disclosure of all relevant data.
(b) Compute the book value per share of ordinary shares, assuming there are no preference dividends in arrears. (Round to two decimals.)

Compute book value per share with preference shares.
(LO 4, 9)

***E11-24** At December 31, Gorden Limited has total equity of £3,200,000. Included in this total are share capital—preference £500,000 and share premium—preference £50,000. There are 10,000 shares of £50 par value, 8% cumulative preference shares outstanding. At year-end, 200,000 ordinary shares are outstanding.

Instructions

Compute the book value per share of ordinary shares, under each of the following assumptions.

(a) There are no preference dividends in arrears, and the preference shares do not have a call price.
(b) Preference dividends are one year in arrears, and the preference shares have a call price of £60 per share.

Compute book value per share; indicate account balances after a share dividend.
(LO 5, 7, 9)

***E11-25** On October 1, Venden Limited's equity is as follows.

Share capital—ordinary, £5 par value	£400,000
Share premium—ordinary	25,000
Retained earnings	225,000
Total equity	£650,000

On October 1, Venden declares and distributes a 12% share dividend when the market price of the shares is £14 per share.

Instructions

(a) Compute the book value per share (1) before the share dividend and (2) after the share dividend. (Round to two decimals.)
(b) Indicate the balances in the three equity accounts after the dividend shares have been distributed.

PROBLEMS: SET A

Journalize share transactions, post, and prepare share capital section.
(LO 2, 4, 7)

P11-1A Gão Limited was organized on January 1, 2017. It is authorized to issue 10,000 8%, HK$1,000 par value preference shares, and 500,000 no-par ordinary shares with a stated value of HK$20 per share. The following share transactions were completed during the first year.

Jan. 10	Issued 100,000 ordinary shares for cash at HK$48 per share.
Mar. 1	Issued 5,000 preference shares for cash at HK$1,050 per share.
Apr. 1	Issued 18,000 ordinary shares for land. The asking price of the land was HK$980,000. The fair value of the land was HK$920,000.
May 1	Issued 80,000 ordinary shares for cash at HK$45 per share.
Aug. 1	Issued 10,000 ordinary shares to attorneys in payment of their bill of HK$320,000 for services provided in helping the company organize.
Sept. 1	Issued 10,000 ordinary shares for cash at HK$50 per share.
Nov. 1	Issued 1,000 preference shares for cash at HK$1,060 per share.

Instructions

(a) Journalize the transactions.
(b) Post to the equity accounts. (Use J5 as the posting reference.)
(c) Prepare the share capital section of the statement of financial position at December 31, 2017.

(c) Total equity HK$16,450,000

P11-2A Elston Limited had the following equity accounts on January 1, 2017: Share Capital—Ordinary (£5 par) £400,000, Share Premium—Ordinary £200,000, and Retained Earnings £100,000. In 2017, the company had the following treasury share transactions.

Journalize and post treasury share transactions, and prepare equity section.

(LO 3, 7)

Mar.	1	Purchased 5,000 shares at £9 per share.
June	1	Sold 500 shares at £12 per share.
Sept.	1	Sold 2,500 shares at £10 per share.
Dec.	1	Sold 1,000 shares at £6 per share.

Elston uses the cost method of accounting for treasury shares. In 2017, the company reported net income of £34,000.

Instructions

(a) Journalize the treasury share transactions, and prepare the closing entry at December 31, 2017, for net income.
(b) Open accounts for (1) Share Premium—Treasury, (2) Treasury Shares, and (3) Retained Earnings. Post to these accounts using J10 as the posting reference.
(c) Prepare the equity section for Elston Limited at December 31, 2017.

(b) Treasury Shares £9,000

(c) Total equity £726,000

P11-3A The equity accounts of Terrell SE on January 1, 2017, were as follows.

Journalize and post transactions, prepare equity section.

(LO 2, 3, 4, 7)

Share Capital—Preference (9%, €50 par, cumulative, 10,000 shares authorized)	€ 400,000
Share Capital—Ordinary (€1 stated value, 2,000,000 shares authorized)	1,000,000
Share Premium—Preference	100,000
Share Premium—Ordinary	1,450,000
Retained Earnings	1,816,000
Treasury Shares—Ordinary (20,000 shares)	50,000

During 2017, the corporation had the following transactions and events pertaining to its equity.

Feb.	1	Issued 30,000 ordinary shares for €120,000.
Apr.	14	Sold 9,000 treasury shares—ordinary for €42,000.
Sept.	3	Issued 7,000 ordinary shares for a patent valued at €32,000.
Nov.	10	Purchased 1,000 ordinary shares for the treasury at a cost of €6,000.
Dec.	31	Determined that net income for the year was €452,000.

No dividends were declared during the year.

Instructions

(a) Journalize the transactions and the closing entry for net income.
(b) Enter the beginning balances in the accounts, and post the journal entries to the equity accounts. (Use J5 for the posting reference.)
(c) Prepare an equity section at December 31, 2017, including the disclosure of the preference dividends in arrears.

(c) Total equity €5,356,000

P11-4A On January 1, 2017, Prasad SpA had the following equity accounts.

Prepare dividend entries and equity section.

(LO 5, 7)

Share Capital—Ordinary (€25 par value, 48,000 shares issued and outstanding)	€1,200,000
Share Premium—Ordinary	200,000
Retained Earnings	600,000

During the year, the following transactions occurred.

Feb. 1	Declared a €1 cash dividend per share to shareholders of record on February 15, payable March 1.
Mar. 1	Paid the dividend declared in February.
Apr. 1	Announced a 5-for-1 share split. Prior to the split, the market price per share was €36.
July 1	Declared a 10% share dividend to shareholders of record on July 15, distributable July 31. On July 1, the market price was €7 per share.

July 31 Issued the shares for the share dividend.
Dec. 1 Declared a €0.40 per share dividend to shareholders of record on December 15, payable January 5, 2018.
31 Determined that net income for the year was €350,000.

Instructions

(a) Journalize the transactions and the closing entries for net income and dividends.
(b) Enter the beginning balances, and post the entries to the equity accounts. (*Note:* Open additional equity accounts as needed.)
(c) Prepare an equity section at December 31.

(c) Total equity €2,196,400

Prepare retained earnings statement and equity section, and allocation of dividends.

(LO 5, 6, 7)

P11-5A The post-closing trial balance of Russo Company SpA at December 31, 2017, contains the following equity accounts.

Share Capital—Preference (12,000 shares issued)	€ 600,000
Share Capital—Ordinary (250,000 shares issued)	2,500,000
Share Premium—Preference	250,000
Share Premium—Ordinary	425,000
Ordinary Share Dividends Distributable	250,000
Retained Earnings	1,078,000

A review of the accounting records reveals the following.

1. No errors have been made in recording 2017 transactions or in preparing the closing entry for net income.
2. Preference shares are €50 par, 8%, and cumulative; 12,000 shares have been outstanding since January 1, 2016.
3. Authorized shares are 20,000 preference shares, 500,000 ordinary shares with a €10 par value.
4. The January 1 balance in Retained Earnings was €1,200,000.
5. On July 1, 20,000 ordinary shares were issued for cash at €16 per share.
6. On September 1, the company discovered an understatement error of €60,000 in computing depreciation in 2016. The net of tax effect of €42,000 was properly debited directly to Retained Earnings.
7. A cash dividend of €240,000 was declared and properly allocated to preference and ordinary shares on October 1. No dividends were paid to preference shareholders in 2016.
8. On December 31, a 10% ordinary share dividend was declared out of retained earnings on ordinary shares when the market price per share was €17.
9. Net income for the year was €585,000.
10. On December 31, 2017, the directors authorized disclosure of a €200,000 restriction of retained earnings for plant expansion. (Use Note X.)

Instructions

(a) Reproduce the Retained Earnings account for 2017.
(b) Prepare a retained earnings statement for 2017.
(c) Prepare an equity section at December 31, 2017.
(d) Compute the allocation of the cash dividend to preference and ordinary shares.

(c) Total equity €5,103,000

Prepare entries for share transactions and prepare equity section.

(LO 2, 3, 4, 7)

P11-6A Jude Limited has been authorized to issue 20,000 £100 par value, 10%, noncumulative preference shares and 1,000,000 no-par ordinary shares. The corporation assigned a £2.50 stated value to the ordinary shares. At December 31, 2017, the ledger contained the following balances pertaining to equity.

Share Capital—Preference	£ 120,000
Share Premium—Preference	12,000
Share Capital—Ordinary	1,000,000
Share Premium—Ordinary	1,600,000
Treasury Shares—Ordinary (1,000 shares)	9,000
Share Premium—Treasury	1,000
Retained Earnings	82,000

The preference shares were issued for land having a fair value of £132,000. All ordinary shares issued were for cash. In November, 1,500 ordinary shares were purchased for the treasury at a per share cost of £9. In December, 500 treasury shares were sold for £11 per share. No dividends were declared in 2017.

Instructions

(a) Prepare the journal entries for the:
  (1) Issuance of preference shares for land.
  (2) Issuance of ordinary shares for cash.
  (3) Purchase of treasury shares (ordinary) for cash.
  (4) Sale of treasury shares for cash.
(b) Prepare the equity section at December 31, 2017.

(b) Total equity £2,806,000

Prepare dividend entries and equity section.

(LO 5, 7)

P11-7A On January 1, 2017, Primo plc had the following equity accounts.

Share Capital—Ordinary (£10 par value, 75,000 shares issued and outstanding)	£750,000
Share Premium—Ordinary	200,000
Retained Earnings	540,000

During the year, the following transactions occurred.

Jan.	15	Declared a £2 cash dividend per share to shareholders of record on January 31, payable February 15.
Feb.	15	Paid the dividend declared in January.
Apr.	15	Declared a 10% share dividend to shareholders of record on April 30, distributable May 15. On April 15, the market price of the shares was £15 per share.
May	15	Issued the shares for the share dividend.
July	1	Announced a 2-for-1 share split. The market price per share prior to the announcement was £15. (The new par value is £5.)
Dec.	1	Declared a £0.60 per share cash dividend to shareholders of record on December 15, payable January 10, 2018.
	31	Determined that net income for the year was £260,000.

Instructions

(a) Journalize the transactions and the closing entries for net income and dividends.
(b) Enter the beginning balances, and post the entries to the equity accounts. (*Note:* Open additional equity accounts as needed.)
(c) Prepare an equity section at December 31.

(c) Total equity £1,501,000

Prepare equity section; compute book value per share.

(LO 7, 9)

***P11-8A** The following equity accounts are in the ledger of Westin SE at December 31, 2017.

Share Capital—Ordinary (€10 stated value)	€1,500,000
Share Premium—Treasury	6,000
Share Premium—Ordinary	690,000
Share Premium—Preference	42,400
Share Capital—Preference (8%, €100 par, non-cumulative)	360,000
Retained Earnings	776,000
Treasury Shares—Ordinary (7,000 shares)	92,000

Instructions

(a) Prepare an equity section at December 31, 2017.
(b) Compute the book value per share of the ordinary shares, assuming the preference shares have a call price of €110 per share.

(a) Total equity €3,282,400

Prepare statement of changes in equity.

(LO 7, 8)

***P11-9A** On January 1, 2017, Chamblin AG had the following equity balances.

Share Capital—Ordinary (400,000 shares issued)	CHF800,000
Share Premium—Ordinary	500,000
Ordinary Share Dividends Distributable	120,000
Retained Earnings	600,000

During 2017, the following transactions and events occurred.

1. Issued 60,000 CHF2 par value ordinary shares as a result of 15% share dividend declared on December 15, 2016.
2. Issued 25,000 ordinary shares for cash at CHF4 per share.
3. Purchased 22,000 ordinary shares for the treasury at CHF5 per share.
4. Declared and paid a cash dividend of CHF111,000.
5. Sold 8,000 treasury shares for cash at CHF5 per share.
6. Earned net income of CHF360,000.

Instructions

Prepare a statement of changes in equity for the year.

Total equity CHF2,299,000

PROBLEMS: SET B

Journalize share transactions, post, and prepare share capital section.

(LO 2, 4, 7)

P11-1B Welles plc was organized on January 1, 2017. It is authorized to issue 20,000 6%, £40 par value preference shares, and 500,000 no-par ordinary shares with a stated value of £1 per share. The following share transactions were completed during the first year.

Jan. 10	Issued 74,000 ordinary shares for cash at £3 per share.
Mar. 1	Issued 10,000 preference shares for cash at £43 per share.
Apr. 1	Issued 25,000 ordinary shares for land. The asking price of the land was £90,000. The company's estimate of fair value of the land was £75,000.
May 1	Issued 75,000 ordinary shares for cash at £4 per share.
Aug. 1	Issued 10,000 ordinary shares to attorneys in payment of their bill for £44,000 for services performed in helping the company organize.
Sept. 1	Issued 5,000 ordinary shares for cash at £6 per share.
Nov. 1	Issued 2,000 preference shares for cash at £45 per share.

Instructions

(a) Journalize the transactions.
(b) Post to the equity accounts. (Use J1 as the posting reference.)
(c) Prepare the share capital section of the statement of financial position at December 31, 2017.

(c) Total share capital £1,191,000

Journalize and post treasury share transactions, and prepare equity section.

(LO 3, 7)

P11-2B Plover Limited had the following equity accounts on January 1, 2017: Share Capital—Ordinary (£1 par) £400,000, Share Premium—Ordinary £500,000, and Retained Earnings £100,000. In 2017, the company had the following treasury share transactions.

Mar. 1	Purchased 5,000 shares at £7 per share.
June 1	Sold 800 shares at £10 per share.
Sept. 1	Sold 1,700 shares at £9 per share.
Dec. 1	Sold 1,000 shares at £5 per share.

Plover uses the cost method of accounting for treasury shares. In 2017, the company reported net income of £80,000.

Instructions

(a) Journalize the treasury share transactions, and prepare the closing entry at December 31, 2017, for net income.
(b) Open accounts for (1) Share Premium—Treasury, (2) Treasury Shares, and (3) Retained Earnings. Post to these accounts using J12 as the posting reference.
(c) Prepare the equity section for Plover Limited at December 31, 2017.

(b) Treasury Shares £10,500

(c) Total equity £1,073,300

Journalize and post transactions, prepare equity section.

(LO 2, 3, 4, 7)

P11-3B The equity accounts of Marya SA on January 1, 2017, were as follows.

Share Capital—Preference (9%, €100 par, cumulative, 5,000 shares authorized)	€300,000
Share Capital—Ordinary (€3 stated value, 300,000 shares authorized)	660,000
Share Premium—Preference	20,000
Share Premium—Ordinary	396,000
Retained Earnings	488,000
Treasury Shares—Ordinary (5,000 shares)	30,000

During 2017, the corporation had the following transactions and events pertaining to its equity.

Feb. 1	Issued 2,800 ordinary shares for €18,200.
Mar. 20	Purchased 1,200 additional treasury shares (ordinary) at €6 per share.
June 14	Sold 4,000 treasury shares (ordinary) for €26,000.
Sept. 3	Issued 2,000 ordinary shares for a patent valued at €14,000.
Dec. 31	Determined that net income for the year was €365,000.

No dividends were declared during the year.

Instructions

(a) Journalize the transactions and the closing entry for net income.
(b) Enter the beginning balances in the accounts and post the journal entries to the equity accounts. (Use J1 as the posting reference.)
(c) Prepare an equity section at December 31, 2017, including the disclosure of the preference dividends in arrears.

(c) Total equity €2,250,000

P11-4B On January 1, 2017, Belgium Industries SA had the following equity accounts.

Prepare dividend entries and equity section.

(LO 5, 7)

Share Capital—Ordinary (€4 par value, 250,000 shares issued and outstanding)	€1,000,000
Share Premium—Ordinary	200,000
Retained Earnings	840,000

During the year, the following transactions occurred.

Jan. 15	Declared a €1 cash dividend per share to shareholders of record on January 31, payable February 15.
Feb. 15	Paid the dividend declared in January.
Apr. 15	Declared a 10% share dividend to shareholders of record on April 30, distributable May 15. On April 15, the market price was €11 per share.
May 15	Issued the shares for the share dividend.
July 1	Announced a 2-for-1 share split. The market price per share prior to the announcement was €12. (The new par value is €2.)
Dec. 1	Declared a €0.50 per share cash dividend to shareholders of record on December 15, payable January 10, 2018.
31	Determined that net income for the year was €264,000.

Instructions

(a) Journalize the transactions and the closing entries for net income and dividends.
(b) Enter the beginning balances, and post the entries to the equity accounts. (*Note:* Open additional equity accounts as needed.)
(c) Prepare an equity section at December 31.

(c) Total equity €1,779,000

P11-5B On December 31, 2016, Andes Company SA had 1,500,000 €10 par ordinary shares issued and outstanding. The equity accounts at December 31, 2016, had the following balances.

Prepare retained earnings statement and equity section.

(LO 6, 7)

Share Capital—Ordinary	€15,000,000
Share Premium—Ordinary	1,500,000
Retained Earnings	900,000

Transactions during 2017 and other information related to equity accounts were as follows.

1. On January 10, 2017, Andes issued at €104 per share 100,000 €100 par value, 7% cumulative preference shares.
2. On February 8, 2017, Andes reacquired 16,000 ordinary shares for €14 per share.
3. On June 8, 2017, Andes declared a cash dividend of €1 per share on the ordinary shares outstanding, payable on July 10, 2017, to shareholders of record on July 1, 2017.
4. On December 15, 2017, Andes declared the yearly cash dividend on preference shares, payable January 10, 2018, to shareholders of record on December 15, 2017.
5. Net income for the year is €3,600,000.
6. It was discovered that depreciation expense had been understated in 2016 by €58,000.

Instructions

(a) Prepare a retained earnings statement for the year ended December 31, 2017.
(b) Prepare the equity section of Andes's statement of financial position at December 31, 2017.

(b) Total equity €28,934,000

P11-6B The ledger of Fortaleza SA at December 31, 2017, after the books have been closed, contains the following equity accounts.

Prepare retained earnings statement and equity section, and allocation of dividends.

(LO 5, 6, 7)

Share Capital—Preference (8,000 shares issued)	R$ 800,000
Share Capital—Ordinary (400,000 shares issued)	2,000,000
Share Premium—Preference	100,000
Share Premium—Ordinary	1,220,000
Ordinary Share Dividends Distributable	200,000
Retained Earnings	2,520,000

A review of the accounting records reveals the following.

1. No errors have been made in recording 2017 transactions or in preparing the closing entry for net income.
2. Preference shares are 8%, R$100 par value, non-cumulative, and callable at R$125. Since January 1, 2016, 8,000 shares have been outstanding; 20,000 shares are authorized.

3. Ordinary shares are no-par with a stated value of R$5 per share; 600,000 shares are authorized.
4. The January 1 balance in Retained Earnings was R$2,450,000.
5. On October 1, 100,000 ordinary shares were sold for cash at R$8 per share.
6. A cash dividend of R$500,000 was declared and properly allocated to preference and ordinary shares on November 1. No dividends were paid to preference shareholders in 2016.
7. On December 31, a 10% ordinary share dividend was declared out of retained earnings on ordinary shares when the market price per share was R$10.
8. Net income for the year was R$970,000.
9. On December 31, 2017, the directors authorized disclosure of a R$100,000 restriction of retained earnings for plant expansion. (Use Note A.)

Instructions

(a) Reproduce the Retained Earnings account (T-account) for 2017.
(b) Prepare a retained earnings statement for 2017.
(c) Total equity R$6,840,000
(c) Prepare an equity section at December 31, 2017.
(d) Compute the allocation of the cash dividend to preference and ordinary shares.

Prepare equity section; compute book value per share.
(LO 7, 9)

***P11-7B** The following equity accounts are in the ledger of Crivello SpA at December 31, 2017.

Share Capital—Ordinary (€3 stated value)	€2,250,000
Share Premium—Treasury	10,000
Share Premium—Ordinary	1,500,000
Share Premium—Preference	220,000
Share Capital—Preference (8%, €50 par, non-cumulative)	800,000
Retained Earnings	1,448,000
Treasury Shares—Ordinary (10,000 shares)	68,000

Instructions

(a) Total equity €6,160,000
(a) Prepare an equity section at December 31, 2017.
(b) Compute the book value per share of the ordinary shares, assuming the preference shares have a call price of €60 per share.

COMPREHENSIVE PROBLEM

CP11-1 Voltaire Enterprises SA's statement of financial position at December 31, 2016, is presented below.

VOLTAIRE ENTERPRISES SA
Statement of Financial Position
December 31, 2016

Land	€ 40,000	Share capital—ordinary (€1 par)	€ 50,000
Buildings	130,000	Retained earnings	147,400
Accumulated depreciation—buildings	(20,000)	Accounts payable	25,600
Supplies	4,400		€223,000
Accounts receivable	45,500		
Allowance for doubtful accounts	(1,500)		
Cash	24,600		
	€223,000		

During 2017, the following transactions occurred.

1. On January 1, 2017, Voltaire issued 1,500 €20 par, 6% preference shares for €33,000.
2. On January 1, 2017, Voltaire also issued 900 €1 par value ordinary shares for €6,300.
3. Voltaire performed services for €276,000 on account.
4. On April 1, 2017, Voltaire collected fees of €36,000 in advance for services to be performed from April 1, 2017, to March 31, 2018.

5. Voltaire collected €267,000 from customers on account.
6. Voltaire bought €26,100 of supplies on account.
7. Voltaire paid €32,200 on accounts payable.
8. Voltaire reacquired 400 ordinary shares on June 1, 2017, for €8 per share.
9. Paid other operating expenses of €188,200.
10. On December 31, 2017, Voltaire declared the annual preference share dividend and a €0.50 per share dividend on the outstanding ordinary shares, all payable on January 15, 2018.
11. An account receivable of €1,300 which originated in 2016 is written off as uncollectible.

Adjustment data:

1. A count of supplies indicates that €5,900 of supplies remain unused at year-end.
2. Recorded revenue recognized from item 4 above.
3. The allowance for doubtful accounts should have a balance of €3,500 at year-end.
4. Depreciation is recorded on the building on a straight-line basis based on a 30-year life and a residual value of €10,000.
5. The income tax rate is 30%. (*Hint:* Prepare the income statement up to income before taxes and multiply by 30% to compute the amount.)

Instructions

(You may want to set up T-accounts to determine ending balances.)

(a) Prepare journal entries for the transactions listed above and adjusting entries.
(b) Prepare an adjusted trial balance at December 31, 2017.
(c) Prepare an income statement and a retained earnings statement for the year ending December 31, 2017, and a classified statement of financial position as of December 31, 2017.

(b) Totals €647,620
(c) Net income €58,030
Tot. assets €344,900

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–10.)

MC11 Mei-ling and her friend Curtis Lesperance decide that they can benefit from joining Matcha Creations and Curtis's coffee shop. In the first part of this problem, they come to you with questions about setting up a corporation for their new business. In the second part of the problem, they want your help in preparing financial information following the first year of operations of their new business, Matcha & Coffee Creations.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP11-1 The equity section for TSMC is shown in Appendix A. The complete annual report, including the notes to the financial statements (use Note 24), is available in the Investors section of the company's website at *www.tsmc.com*.

Instructions

(a) What is the par or stated value per share of TSMC's ordinary shares?
(b) What percentage of TSMC's authorized ordinary shares was issued at December 31, 2013?
(c) How many ordinary shares were outstanding at December 31, 2013, and at December 31, 2012?

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP11-2 Nestlé's financial statements are presented in Appendix B, and its complete annual report is available at *www.nestle.com*. Petra Foods' financial statements are presented in Appendix C, and its complete annual report is available at *www.petrafoods.com*.

Instructions

Use the financial statements provided in this textbook, as well as the notes to the financial statements provided at each company's website, to answer the following questions.

(a) What was the amount of basic earnings per share reported by each company for the most recent fiscal year shown? (For Petra Foods, use earnings related to continuing operations.)
(b) Compute the return on ordinary shareholders' equity for both companies for the most recent fiscal year shown. (For Petra Foods, use earnings related to continuing operations.) Discuss the relative profitability of the two companies.
(c) What was the total amount of dividends paid by each company for the most recent fiscal year shown?

Real-World Focus

BYP11-3 Use the equity section of an annual report and identify the major components.

Address: **www.annualreports.com**, or go to **www.wiley.com/college/weygandt**

Steps

1. From Annual Reports Homepage, choose **Search by Alphabet**, and choose a letter.
2. Select a particular company.
3. Choose Annual Report.
4. Follow instructions below.

Instructions

Answer the following questions.

(a) What is the company's name?
(b) What classes of share capital has the company issued?
(c) For each class:
   (1) How many shares are authorized, issued, and/or outstanding?
   (2) What is the par value?
(d) What are the company's retained earnings?
(e) Has the company acquired treasury shares? How many?

Critical Thinking

Decision-Making Across the Organization

BYP11-4 The shareholders' meeting for Kissinger Company SE has been in progress for some time. The chief financial officer for Kissinger is presently reviewing the company's financial statements and is explaining the items that comprise the equity section of the statement of financial position for the current year. The equity section of Kissinger at December 31, 2017, is as follows.

KISSINGER COMPANY SE
Statement of Financial Position (partial)
December 31, 2017

Share capital—preference, authorized 1,000,000 shares cumulative, €100 par value, €8 per share, 6,000 shares issued and outstanding	€ 600,000
Share capital—ordinary, authorized 5,000,000 shares, €1 par value, 3,000,000 shares issued, and 2,700,000 outstanding	3,000,000
Share premium—preference	50,000
Share premium—ordinary	25,000,000
Retained earnings	900,000
Less: Treasury shares (300,000 shares)	9,300,000
Total equity	€20,250,000

At the meeting, shareholders have raised a number of questions regarding the equity section.

Instructions

With the class divided into groups, answer the following questions as if you were the chief financial officer for Kissinger Company SE.

(a) "What does the cumulative provision related to the preference shares mean?"
(b) "I thought the ordinary shares were presently selling at €29.75, but the company has the shares stated at €1 per share. How can that be?"
(c) "Why is the company buying back its ordinary shares? Furthermore, the treasury shares have a debit balance because they are subtracted from equity. Why are treasury shares not reported as an asset if they have a debit balance?"

Communication Activity

BYP11-5 Jerrod Platt, your uncle, is an inventor who has decided to incorporate. Uncle Jerrod knows that you are an accounting major at U.N.O. In a recent letter to you, he ends with the question, "I'm filling out an incorporation application. Can you tell me the difference in the following terms: (1) authorized shares, (2) issued shares, (3) outstanding shares, and (4) preference shares?"

Instructions

In a brief note, differentiate for Uncle Jerrod among the four different share terms. Write the letter to be friendly, yet professional.

Ethics Case

BYP11-6 The R&D division of Hancock Chemical Ltd. has just developed a chemical for sterilizing the vicious Brazilian "killer bees" which are invading Mexico and the southern states of the United States. The president of Hancock is anxious to get the chemical on the market to boost the company's profits. He believes his job is in jeopardy because of decreasing sales and profits. Hancock has an opportunity to sell this chemical in Central American countries, where the laws are much more relaxed than in the United States.

The director of Hancock's R&D division strongly recommends further testing in the laboratory for side-effects of this chemical on other insects, birds, animals, plants, and even humans. He cautions the president, "We could be sued from all sides if the chemical has tragic side-effects that we didn't even test for in the labs." The president answers, "We can't wait an additional year for your lab tests. We can avoid losses from such lawsuits by establishing a separate wholly owned corporation to shield Hancock Ltd. from such lawsuits. We can't lose any more than our investment in the new corporation, and we'll invest in just the patent covering this chemical. We'll reap the benefits if the chemical works and is safe, and avoid the losses from lawsuits if it's a disaster." The following week, Hancock creates a new wholly owned corporation called Badell Ltd., sells the chemical patent to it for $10, and watches the spraying begin.

Instructions

(a) Who are the stakeholders in this situation?
(b) Are the president's motives and actions ethical?
(c) Can Hancock shield itself against losses of Badell Ltd.?

Answers to Insight and Accounting Across the Organization Questions

p. 544 How to Read Share Quotes Q: For shares traded on organized securities exchanges, how are the prices per share established? What factors might influence the price of shares in the marketplace? **A:** The prices per share are established by the interaction between buyers and sellers of the shares. The price of shares is influenced by a company's earnings and dividends as well as by factors beyond a company's control, such as changes in interest rates, labor strikes, scarcity of supplies or resources, and politics. The number of willing buyers and sellers (demand and supply) also plays a part in the price of shares.

p. 546 The Impact of Corporate Social Responsibility Q: Why are CSR-related shareholder proposals increasing? **A:** The increase in shareholder proposals reflects a growing belief that a company's social and environmental policies correlate strongly with its risk-management strategy and ultimately its financial performance.

p. 551 Why Would a Company Buy Its Own Shares? Q: What signal might a large share repurchase send to investors regarding management's belief about the company's growth opportunities? **A:** When a company has many growth opportunities, it will normally conserve its cash in order to be better able to fund expansion. A large use of cash to buy back shares (and essentially shrink the company) would suggest that management was not optimistic about its growth opportunities.

p. 561 A No-Split Philosophy Q: Why does Warren Buffett usually oppose share splits? **A:** Mr. Buffett prefers to attract shareholders who will make a long-term commitment to his company, as opposed to traders who will only hold their investment for a short period of time. He believes that a high share price discourages short-term investment.

A Look at U.S. GAAP

Learning Objective 10

Compare the accounting for equity under IFRS and U.S. GAAP.

The accounting for transactions related to equity, such as issuance of shares and purchase of treasury shares, are similar under IFRS and GAAP. Major differences relate to terminology used, introduction of items such as revaluation surplus, and presentation of equity information. The basic accounting for cash and share dividends is essentially the same under both GAAP and IFRS although IFRS terminology may differ.

Key Points

- Many countries have a different mix of investor groups than in the United States. For example, in Germany, financial institutions like banks are not only major creditors of corporations but often are the largest corporate shareholders as well. In the United States, Asia, and the United Kingdom, many companies rely on substantial investment from private investors.
- There are often terminology differences for equity accounts. The following summarizes some of the common differences in terminology.

GAAP	IFRS
Common stock	Share capital—ordinary
Stockholders	Shareholders
Authorized stock	Authorized share capital
Preferred stock	Share capital—preference
Paid-in capital	Issued/allocated share capital
Paid-in capital in excess of par—common stock	Share premium—ordinary
Paid-in capital in excess of par—preferred stock	Share premium—preference
Retained earnings	Retained earnings or Retained profits
Retained earnings deficit	Accumulated losses
Accumulated other comprehensive income	General reserve and other reserve accounts

As an example of how similar transactions use different terminology under GAAP, consider the accounting for the issuance of 1,000 shares of $1 par value ordinary shares for $5 per share. Under GAAP, the entry is as follows.

Cash	5,000	
Common Stock		1,000
Paid-in Capital in Excess of Par—Common Stock		4,000

- Equity is given various descriptions under IFRS, such as shareholders' equity, owners' equity, capital and reserves, and shareholders' funds.

Similarities

- The accounting related to prior period adjustment is essentially the same under IFRS and GAAP. IFRS addresses the accounting for errors in *IAS 8* ("Accounting Policies, Changes in Accounting Estimates, and Errors"). One area where IFRS and GAAP differ in reporting relates to error corrections in previously issued financial statements. While IFRS requires restatement with some exceptions, GAAP does not permit any exceptions.

- The income statement using IFRS and GAAP is presented in a one- or two-statement format. The single-statement approach includes all items of income and expense, as well as each component of other comprehensive income or loss by its individual characteristic. In the two-statement approach, a traditional income statement is prepared. It is then followed by a statement of comprehensive income, which starts with net income or loss and then adds other comprehensive income or loss items. Regardless of which approach is reported, income tax expense is required to be reported.
- The computations related to earnings per share are essentially the same under IFRS and GAAP.

Differences

- As indicated in the chapter, under IFRS, the term **reserves** is used to describe all equity accounts other than those arising from contributed (paid-in) capital. This would include, for example, reserves related to retained earnings, asset revaluations, and fair value differences.
- GAAP has always discouraged the use of the term "Reserves" in any context. Under GAAP, comprehensive income items are reported in the equity section of the statement of financial position in a line labeled accumulated other comprehensive income.
- The accounting for treasury shares differs somewhat between IFRS and GAAP. However, many of the differences are beyond the scope of this course. Like IFRS, GAAP does not allow a company to record gains or losses on purchases of its own shares. One difference worth noting is that, when a company purchases its own shares, IFRS treats it as a reduction of equity, but it does not specify which particular equity accounts are to be affected. Therefore, it could be shown as an increase to a contra-equity account (Treasury Shares) or a decrease to retained earnings or share capital.
- A major difference between IFRS and GAAP relates to the account Revaluation Surplus. Revaluation surplus arises under IFRS because companies are permitted to revalue their property, plant, and equipment to fair value under certain circumstances. This account is part of general reserves under IFRS and is not considered contributed capital. GAAP does not permit revaluation of property, plant, and equipment.
- IFRS often uses terms such as **retained profits** or **accumulated profit or loss** to describe retained earnings. The term **retained earnings** is also often used under GAAP.

Looking to the Future

The IASB and the FASB are currently working on a project related to financial statement presentation. An important part of this study is to determine whether certain line items, subtotals, and totals should be clearly defined and required to be displayed in the financial statements. For example, it is likely that the statement of changes in equity and its presentation will be examined closely.

Both the IASB and FASB are working toward convergence of any remaining differences related to earnings per share computations. This convergence will deal with highly technical changes beyond the scope of this textbook.

GAAP Practice

GAAP Self-Test Questions

1. Under GAAP, a purchase by a company of its own shares is recorded by:
   (a) an increase in Treasury Stock.
   (b) a decrease in accumulated comprehensive income.
   (c) a decrease in retained earnings.
   (d) All of these are acceptable treatments.
2. Which of the following is **true**?
   (a) In the United States, the primary corporate shareholders are financial institutions.
   (b) Share capital means total assets under IFRS.
   (c) The IASB and FASB are presently studying how financial statement information should be presented.
   (d) The accounting for treasury shares differs extensively between GAAP and IFRS.
3. Under GAAP, the amount of capital received in excess of par value would be credited to:
   (a) Retained Earnings.
   (b) Paid-in Capital in Excess of Par—Common Stock.
   (c) Share Premium.
   (d) Par value is not used under GAAP.

4. Which of the following is **false**?
(a) Under GAAP, companies cannot record gains on transactions involving their own shares.
(b) Under IFRS, companies cannot record gains on transactions involving their own shares.
(c) Under GAAP, the income statement is presented in a one- or two-statement format.
(d) Under IFRS, a company records a revaluation surplus when it experiences an increase in the price of its ordinary shares.

5. Which of the following does **not** represent a pair of GAAP/IFRS-comparable terms?
(a) Additional paid-in capital/Share premium.
(b) Treasury stock/Repurchase reserve.
(c) Common stock/Share capital.
(d) Preferred stock/Preference shares.

6. The basic accounting for cash dividends and share dividends:
(a) is different under IFRS versus GAAP.
(b) is the same under IFRS and GAAP.
(c) differs only for the accounting for cash dividends between GAAP and IFRS.
(d) differs only for the accounting for share dividends between GAAP and IFRS.

7. Which item in **not** considered part of reserves?
(a) Accumulated other comprehensive income.
(b) Revaluation surplus.
(c) Retained earnings.
(d) Issued shares.

8. Under GAAP, a statement of comprehensive income must include:
(a) accounts payable.
(b) retained earnings.
(c) income tax expense.
(d) preferred stock.

9. Which term is used to describe total equity under GAAP?
(a) Other comprehensive income.
(b) Capital and reserves.
(c) Stockholders' equity.
(d) All of the above.

10. Earnings per share computations related to IFRS and GAAP:
(a) are essentially similar.
(b) result in an amount referred to as earnings per share.
(c) must deduct preferred (preference) dividends when computing earnings per share.
(d) All of the above.

GAAP Exercises

GAAP11-1 On May 10, Romano Corporation issues 1,000 shares of $10 par value ordinary shares for cash at $18 per share. Journalize the issuance of the shares using GAAP.

GAAP11-2 Ingram Corporation has the following accounts at December 31: Common Stock, $10 par, 5,000 shares issued, $50,000; Paid-in Capital in Excess of Par—Common Stock, $10,000; Retained Earnings, $45,000; and Treasury Stock, 500 shares, $11,000. Prepare the stockholders' equity section of the balance sheet (statement of financial position) using GAAP.

GAAP11-3 Sorocaba Co. had the following transactions during the current period.

Mar. 2	Issued 5,000 shares of $1 par value ordinary shares to attorneys in payment of a bill for $30,000 for services performed in helping the company to incorporate.
June 12	Issued 60,000 shares of $1 par value ordinary shares for cash of $375,000.
July 11	Issued 1,000 shares of $100 par value preference shares for cash at $110 per share.
Nov. 28	Purchased 2,000 treasury shares for $80,000.

Instructions
Journalize the above transactions using GAAP.

GAAP Financial Reporting Problem: Apple Inc.

GAAP11-4 The financial statements of Apple are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions

Use the company's financial statements and notes to the financial statements to answer the following questions.

(a) What is the par or stated value per share of Apple's common stock?
(b) What percentage of Apple's authorized common stock was issued at September 28, 2013? (Round to the nearest full percent.)
(c) How many shares of common stock were outstanding at September 29, 2012, and at September 28, 2013?
(d) Calculate the earnings per share and return on common stockholders' equity for 2013.

Answers to GAAP Self-Test Questions

1. a **2.** c **3.** b **4.** d **5.** b **6.** b **7.** d **8.** c **9.** c **10.** d

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✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER

12 Investments

FEATURE STORY Playing for Fun and Profit

Sony (JPN) has thrived for decades despite being engaged in lines of business that are constantly changing. It is not an environment for the timid. Sony began in 1945 as a radio repair shop in Tokyo. Soon, it was making Japan's first tape recorders. Long before Apple's (USA) iPod, Sony changed the way the world listened to music by developing high-quality, low-cost transistor radios, which enabled people to listen to music on the go. Then came the Walkman portable tape player, which combined Sony's tape recorder technology with its ability to make things small. When CDs replaced audio cassettes, Sony was ready with the Discman. Over the years as technologies, tastes, and lifestyles changed, Sony adapted and invested.

Much of Sony's success in electronics is due to the innovative spirit within the Sony Electronics division. As a result of this innovative spirit, Sony has invented many game-changing new products. However, despite its internal successes, Sony has not been afraid to invest in other companies when it saw strategic advantages and opportunities. For example, Sony Electronics recently acquired Hawk-Eye Innovations (GBR) and Chip Plant (JPN) to enhance the competitiveness of its product lines.

One of Sony's most well-known recent successes is the PlayStation® video-gaming console. PlayStations have outsold all competitors. Yet, even in this case, Sony has made strategic investments to strengthen its position. In order to stay on top, Sony's Computer Entertainment Division has invested in numerous other video-gaming companies including Zipper Interactive (USA), Sucker Punch Productions (USA), and Media Molecule (GBR).

Although Sony is probably best known for technology, the reality is that it engages in many different business lines. Much of its growth outside of electronics has resulted from major strategic acquisitions. Two of its biggest acquisitions occurred when Sony Music Entertainment acquired CBS Records (USA) and when Sony Pictures Entertainment acquired Columbia Pictures Entertainment (USA). In both instances, Sony became a major player by boldly acquiring a large, established business.

Sony has also made investments that were less than 100% acquisitions. For example, it partnered in a 50% joint venture called Sony Ericsson with Ericsson (SWE) to make cell phones. It also has a one-third interest in a joint venture with Sharp (JPN) to make LCD panels, and it acquired a 20% interest in movie company Metro-Goldwyn-Mayer (USA). To succeed in an ever-changing world, Sony will need to continue to innovate internally as well as make smart investments. ■

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- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 621–627
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Discuss why corporations invest in debt and share securities.
2. Explain the accounting for debt investments.
3. Explain the accounting for share investments.
4. Describe the use of consolidated financial statements.
5. Indicate how debt and share investments are reported in financial statements.
6. Distinguish between short-term and long-term investments.

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PREVIEW OF CHAPTER 12

Sony's (JPN) management believes in aggressive growth through investing in the shares of existing companies. Besides purchasing shares, companies also purchase other securities such as bonds issued by corporations or by governments. Companies can make investments for a short or long period of time, as a passive investment, or with the intent to control another company. As you will see in this chapter, the way in which a company accounts for its investments is determined by a number of factors.

The content and organization of Chapter 12 are as follows.

INVESTMENTS

Why Corporations Invest	Accounting for Debt Investments	Accounting for Share Investments	Valuing and Reporting Investments
• Cash management • Investment income • Strategic reasons	• Recording acquisition of bonds • Recording bond interest • Recording sale of bonds	• Holdings of less than 20% • Holdings between 20% and 50% • Holdings of more than 50%	• Categories of securities • Statement of financial position presentation • Realized and unrealized gain or loss • Classified statement of financial position

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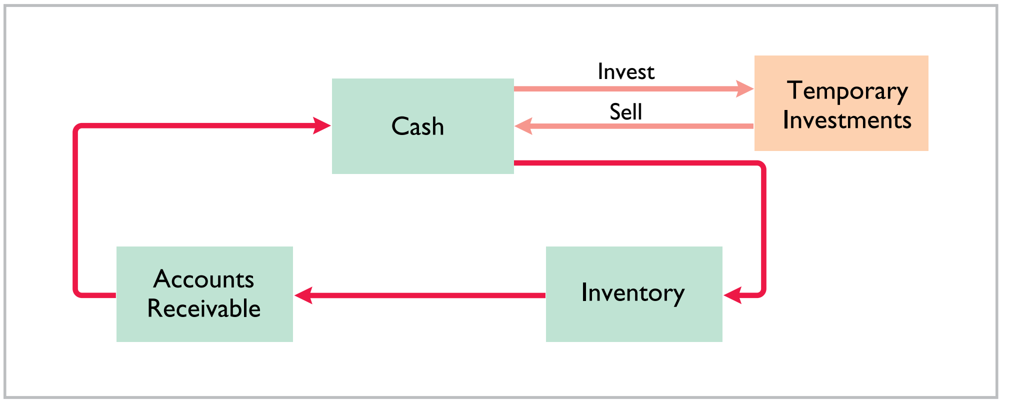
Why Corporations Invest

Learning Objective 1

Discuss why corporations invest in debt and share securities.

Corporations purchase investments in debt or share securities generally for one of three reasons. First, a corporation may **have excess cash** that it does not need for the immediate purchase of operating assets. For example, many companies experience seasonal fluctuations in sales. A marina has more sales in the spring and summer than in the fall and winter. (The reverse is true for many ski shops.) At the end of an operating cycle, the marina may have cash on hand that is temporarily idle until the start of another operating cycle. It may invest the excess funds to earn a greater return—interest and dividends—than it would get by just holding the funds in the bank. Illustration 12-1 depicts the role that such temporary investments play in the operating cycle.

Illustration 12-1
Temporary investments and the operating cycle



Excess cash may also result from economic cycles. For example, when the economy is booming, Siemens (DEU) generates considerable excess cash. It uses some of this cash to purchase new plant and equipment, and pays out some of the cash in dividends. But, it may also invest excess cash in liquid assets in anticipation of a future downturn in the economy. It can then liquidate these investments during a recession, when sales slow and cash is scarce.

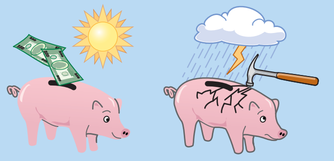
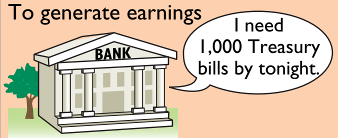
When investing excess cash for short periods of time, corporations invest in low-risk, highly liquid securities—most often short-term government securities. It is generally not wise to invest short-term excess cash in ordinary shares because share investments can experience rapid price changes. If you did invest your short-term excess cash in shares and the price of the shares declined significantly just before you needed cash again, you would be forced to sell your investment at a loss.

A second reason some companies purchase investments is to generate **earnings from investment income**. For example, banks make most of their earnings by lending money, but they also generate earnings by investing primarily in debt securities. Conversely, mutual share funds invest primarily in share securities in order to benefit from share-price appreciation and dividend revenue.

Third, companies also invest for **strategic reasons**. A company can exercise some influence over a customer or supplier by purchasing a significant, but not controlling, interest in that company. Or, a company may purchase a noncontrolling interest in another company in a related industry in which it wishes to establish a presence. A corporation may also choose to purchase a controlling interest in another company. For example, Kraft (USA) recently purchased Cadbury (GBR) to expand its presence in the food industry.

In summary, businesses invest in other companies for the reasons shown in Illustration 12-2.

Illustration 12-2
Why corporations invest

Reason	Typical Investment
To house excess cash until needed 	Low-risk, high-liquidity, short-term securities such as government-issued securities
To generate earnings 	Debt securities (banks and other financial institutions) and share securities (mutual funds and pension funds)
To meet strategic goals 	Shares of companies in a related industry or in an unrelated industry that the company wishes to enter

Accounting for Debt Investments

Learning Objective 2
Explain the accounting for debt investments.

Debt investments are investments in government and corporation bonds. In accounting for debt investments, companies make entries to record (1) the acquisition, (2) the interest revenue, and (3) the sale.

Recording Acquisition of Bonds

At acquisition, investments are recorded at cost. Cost includes all expenditures necessary to acquire these investments, such as the price paid plus brokerage fees (commissions), if any.

Assume, for example, that Kuhl NV acquires 50 Doan SA 8%, 10-year, €1,000 bonds on January 1, 2017, at a cost of €50,000. The entry to record the investment is:

Jan. 1	Debt Investments (50 × €1,000)	50,000	
	Cash		50,000
	(To record purchase of 50 Doan SA bonds)		

A	=	L	+	E
+50,000				
−50,000				

Cash Flows
−50,000

Recording Bond Interest

The Doan SA bonds pay interest of €4,000 annually on January 1 (€50,000 × 8%). If Kuhl NV's fiscal year ends on December 31, it accrues the interest of €4,000 earned since January 1. The adjusting entry is:

Dec. 31	Interest Receivable	4,000	
	Interest Revenue		4,000
	(To accrue interest on Doan SA bonds)		

A	=	L	+	E
+4,000				
				+4,000 Rev

Cash Flows
no effect

Kuhl reports Interest Receivable as a current asset in the statement of financial position. It reports Interest Revenue under "Other income and expense" in the income statement.

A	=	L	+	E
+4,000				
−4,000				

Cash Flows
+4,000

Kuhl reports receipt of the interest on January 1 as follows.

Jan. 1	Cash	4,000	
	Interest Receivable		4,000
	(To record receipt of accrued interest)		

A credit to Interest Revenue at this time is incorrect because the company earned and accrued interest revenue in the **preceding** accounting period.

Recording Sale of Bonds

When Kuhl NV sells the bonds, it credits the investment account for the cost of the bonds. Kuhl records as a gain or loss any difference between the net proceeds from the sale (sales price less brokerage fees) and the cost of the bonds.

Assume, for example, that Kuhl receives net proceeds of €54,000 on the sale of the Doan SA bonds on January 1, 2018, after receiving the interest due. Since the securities cost €50,000, the company realizes a gain of €4,000. It records the sale as:

A	=	L	+	E
+54,000				
−50,000				
				+4,000 Rev

Cash Flows
+54,000

Jan. 1	Cash	54,000	
	Debt Investments		50,000
	Gain on Sale of Debt Investments		4,000
	(To record sale of Doan SA bonds)		

Kuhl reports any gains or losses on the sale of debt investments under "Other income and expense" in the income statement.

Investor Insight **Hey, I Thought It Was Safe!**

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It is often stated that bond investments are safer than share investments. After all, with an investment in bonds, you are guaranteed return of principal and interest payments over the life of the bonds. However, here are some other factors you may want to consider:

- In 2013, the value of bonds fell by 2% due to interest rate risk. That is, when interest rates rise, it makes the yields paid on existing bonds less attractive. As a result, the price of the existing bond you are holding falls.
- While interest rates are currently low, it is likely that they will increase in the future. If you hold bonds, there is a real possibility that the value of your bonds will be reduced.
- Credit risk also must be considered. Credit risk means that a company may not be able to pay back what it borrowed. Former bondholders in companies that declared bankruptcy saw their bond values drop substantially.

An advantage of a bond investment over shares is that if you hold it to maturity, you will receive your principal and also interest payments over the life of the bond. But if you have to sell your bond investment before maturity, you may be facing a roller coaster regarding its value.

Q Why is the fluctuating value of bonds of concern if a company intends to hold them until maturity? (See page 641.)

> DO IT!

Debt Investments

Waldo AG had the following transactions pertaining to debt investments.

Jan. 1, 2017	Purchased 30, €1,000 Hillary AG 10% bonds for €30,000. Interest is payable annually on January 1.
Dec. 31, 2017	Accrued interest on Hillary AG bonds in 2017.
Jan. 1, 2018	Received interest on Hillary AG bonds.
Jan. 1, 2018	Sold 15 Hillary AG bonds for €14,600.
Dec. 31, 2018	Accrued interest on Hillary AG bonds in 2018.

Journalize the transactions.

Action Plan

✔ Record bond investments at cost.

✔ Record interest when accrued.

✔ When bonds are sold, credit the investment account for the cost of the bonds.

✔ Record any difference between the cost and the net proceeds as a gain or loss.

Solution

Jan. 1 (2017)	Debt Investments	30,000	
	Cash		30,000
	(To record purchase of 30 Hillary AG bonds)		
Dec. 31 (2017)	Interest Receivable	3,000	
	Interest Revenue (€30,000 × 10%)		3,000
	(To accrue interest on Hillary AG bonds)		
Jan. 1 (2018)	Cash	3,000	
	Interest Receivable		3,000
	(To record receipt of interest on Hillary AG bonds)		
Jan. 1 (2018)	Cash	14,600	
	Loss on Sale of Debt Investments	400	
	Debt Investments (€30,000 × 15/30)		15,000
	(To record sale of 15 Hillary AG bonds)		
Dec. 31 (2018)	Interest Receivable	1,500	
	Interest Revenue (€15,000 × 10%)		1,500
	(To accrue interest on Hillary AG bonds)		

Related exercise material: **BE12-1, E12-2, E12-3, and DO IT! 12-1.**

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Accounting for Share Investments

Share investments are investments in the shares of other corporations. When a company holds shares (and/or debt) of several different corporations, the group of securities is identified as an **investment portfolio**.

The accounting for investments in shares depends on the extent of the investor's influence over the operating and financial affairs of the issuing corporation (the **investee**). Illustration 12-3 (page 604) shows the general guidelines.

Learning Objective 3

Explain the accounting for share investments.

Illustration 12-3
Accounting guidelines for share investments

Investor's Ownership Interest in Investee's Ordinary Shares	Presumed Influence on Investee	Accounting Guidelines
 Less than 20%	Insignificant	Cost method with adjustment to fair value
 Between 20% and 50%	Significant	Equity method
 More than 50%	Controlling	Consolidated financial statements

Companies are required to use judgment instead of blindly following the guidelines.[1] We explain the application of each guideline next.

Holdings of Less than 20%

• **HELPFUL HINT**
The entries for investments in ordinary shares also apply to investments in preference shares.

In accounting for share investments of less than 20%, companies use the cost method. Under the **cost method**, companies record the investment at cost, and recognize revenue only when cash dividends are received.

RECORDING ACQUISITION OF SHARES

At acquisition, share investments are recorded at cost. Cost includes all expenditures necessary to acquire these investments, such as the price paid plus any brokerage fees (commissions).

For example, assume that on July 1, 2017, Lee Ltd. acquires 1,000 shares (10% ownership) of Beal Ltd. Lee pays HK$405 per share. The entry for the purchase is:

A = L + E
+405,000
−405,000
Cash Flows
−405,000

July 1	Share Investments (1,000 × HK$405)	405,000	
	Cash		405,000
	(To record purchase of 1,000 ordinary shares of Beal Ltd.)		

RECORDING DIVIDENDS

During the time Lee owns the shares, it makes entries for any cash dividends received. If Lee receives a HK$20 per share dividend on December 31, the entry is:

A = L + E
+20,000
+20,000 Rev
Cash Flows
+20,000

Dec. 31	Cash (1,000 × HK$20)	20,000	
	Dividend Revenue		20,000
	(To record receipt of a cash dividend)		

Lee reports Dividend Revenue under "Other income and expense" in the income statement. Unlike interest on notes and bonds, dividends do not accrue. Therefore, companies do not make adjusting entries to accrue dividends.

RECORDING SALE OF SHARES

When a company sells a share investment, it recognizes as a gain or a loss the difference between the net proceeds from the sale (sales price less brokerage fees) and the cost of the shares.

[1]Among the questions that are considered in determining an investor's influence are these: (1) Does the investor have representation on the investee's board? (2) Does the investor participate in the investee's policy-making process? (3) Are there material transactions between the investor and investee? (4) Are the ordinary shares held by other shareholders concentrated or dispersed?

Assume that Lee Ltd. receives net proceeds of HK$395,000 on the sale of its Beal shares on February 10, 2018. Because the shares cost HK$405,000, Lee incurred a loss of HK$10,000. The entry to record the sale is:

Feb. 10	Cash	395,000	
	Loss on Sale of Share Investments	10,000	
	Share Investments		405,000
	(To record sale of Beal shares)		

A	=	L	+	E
+395,000				
				−10,000 Exp
−405,000				

Cash Flows
+395,000

Lee reports the loss under "Other income and expense" in the income statement.

Holdings Between 20% and 50%

When an investor company owns only a small portion of the ordinary shares of another company, the investor cannot exercise control over the investee. But, when an investor owns between 20% and 50% of the ordinary shares of a corporation, it is presumed that the investor has significant influence over the financial and operating activities of the investee. When an investor has significant influence but not control over an investee, it refers to the investee as an **associate**. The investor probably has a representative on the associate's board of directors and, through that representative, may exercise some control over the associate. The associate company in some sense becomes part of the investor company.

Under the **equity method**, **the investor records its share of the net income of the associate in the year when it is earned**. An alternative might be to delay recognizing the investor's share of net income until the associate declares a cash dividend. But, that approach would ignore the fact that the investor and associate are, in some sense, one company, making the investor better off by the associate's earned income.

Under the equity method, the investor company initially records the investment in ordinary shares of an associate at cost. After that, it **adjusts** the investment account annually to show the investor's equity in the associate. Each year, the investor does the following. (1) It increases (debits) the investment account and increases (credits) revenue for its share of the associate's net income.[2] (2) The investor also decreases (credits) the investment account for the amount of dividends received. The investment account is reduced for dividends received because payment of a dividend decreases the net assets of the associate.

• HELPFUL HINT
Under the equity method, the investor recognizes revenue on the accrual basis, i.e., when it is earned by the associate.

RECORDING ACQUISITION OF SHARES

Assume that Milar plc acquires 30% of the ordinary shares of Beck plc for £120,000 on January 1, 2017. The entry to record this transaction is:

Jan. 1	Share Investments	120,000	
	Cash		120,000
	(To record purchase of Beck ordinary shares)		

A	=	L	+	E
+120,000				
−120,000				

Cash Flows
−120,000

RECORDING REVENUE AND DIVIDENDS

For 2017, Beck reports net income of £100,000. It declares and pays a £40,000 cash dividend. Milar records (1) its share of Beck's income, £30,000 (30% × £100,000),

[2]Conversely, the investor increases (debits) a loss account and decreases (credits) the investment account for its share of the associate's net loss.

and (2) the reduction in the investment account for the dividends received, £12,000 (£40,000 × 30%). The entries are:

A = L + E
+30,000
+30,000 Rev
Cash Flows
no effect

(1)

Dec. 31	Share Investments	30,000	
	Revenue from Share Investments		30,000
	(To record 30% equity in Beck's 2017 net income)		

A = L + E
+12,000
−12,000
Cash Flows
+12,000

(2)

Dec. 31	Cash	12,000	
	Share Investments		12,000
	(To record dividends received)		

After Milar posts the transactions for the year, its investment and revenue accounts will show the following.

Illustration 12-4
Investment and revenue accounts after posting

Share Investments

Jan. 1	120,000	Dec. 31	**12,000**
Dec. 31	**30,000**		
Dec. 31 Bal.	138,000		

Revenue from Share Investments

		Dec. 31	**30,000**

During the year, the investment account increased £18,000. This increase of £18,000 is explained as follows: (1) Milar records a £30,000 increase in revenue from its share investment in Beck, and (2) Milar records a £12,000 decrease due to dividends received from its share investment in Beck.

Note that the difference between reported revenue under the cost method and reported revenue under the equity method can be significant. For example, Milar would report only £12,000 (30% × £40,000) of dividend revenue if it used the cost method.

Holdings of More than 50%

Learning Objective 4
Describe the use of consolidated financial statements.

A company that owns more than 50% of the ordinary shares of another entity is known as the **parent company**. The entity whose shares the parent company owns is called the **subsidiary (affiliated) company**. Because of its share ownership, the parent company has a **controlling interest** in the subsidiary.

When a company owns more than 50% of the ordinary shares of another company, it usually prepares **consolidated financial statements**. These statements present the total assets and liabilities controlled by the parent company. They also present the total revenues and expenses of the subsidiary companies. Companies prepare consolidated statements **in addition to** the financial statements for the parent and individual subsidiary companies.

• HELPFUL HINT
If parent (A) has three wholly owned subsidiaries (B, C, and D), there are four separate legal entities. From the viewpoint of the shareholders of the parent company, there is only one economic entity.

Consolidated statements are useful to the shareholders, board of directors, and managers of the parent company. These statements indicate the magnitude and scope of operations of the companies under common control. For example, regulators and the courts undoubtedly used the consolidated statements of AT&T (USA) to determine whether a breakup of the company was in the public interest. Illustration 12-5 lists three companies that prepare consolidated statements and some of the companies they have owned. Appendix 12A discusses how to prepare consolidated financial statements.

Unilever (NLD)	adidas (DEU)	The Disney Company (USA)
Hellmann's	Reebok	Capital Cities/ABC, Inc.
Lipton	Rockport	Disneyland, Disney World
Bertolli	TaylorMade	Mighty Ducks
Knorr	Ashworth	Anaheim Angels
		ESPN

Illustration 12-5
Examples of consolidated companies and their subsidiaries

Accounting Across the Organization

Who's in Control? — **adidas (DEU)**

adidas (DEU) owns 100% of the shares of Rockport (USA). The ordinary shareholders of adidas elect the board of directors of the company, who, in turn, select the officers and managers of the company. adidas's board of directors controls the property owned by the corporation, which includes the ordinary shares of Rockport. Thus, they are in a position to elect the board of directors of Rockport and, in effect, control its operations. These relationships are graphically illustrated below.

Q Where on adidas's statement of financial position will you find its investment in Rockport? (See page 641.)

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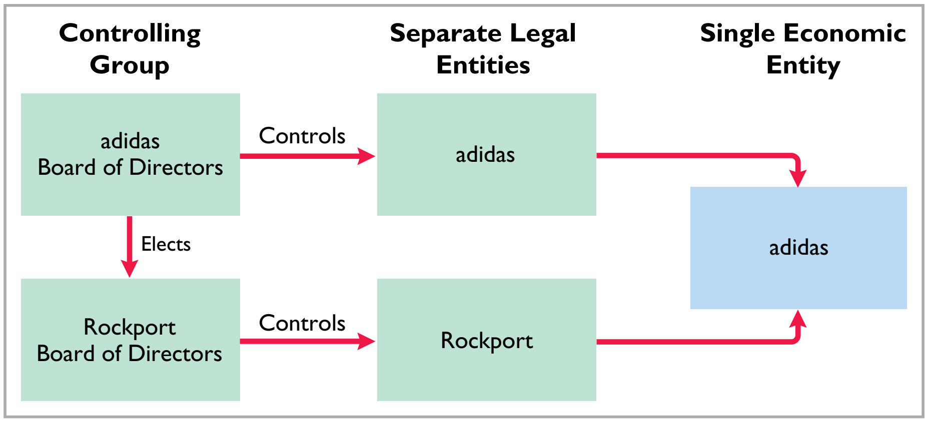

DO IT!

Share Investments

Presented below are two independent situations.

1. Rho Jean Ltd. acquired 5% of the 400,000 ordinary shares of Stillwater Ltd. at a total cost of NT$60 per share on May 18, 2017. On August 30, Stillwater declared and paid a NT$750,000 dividend. On December 31, Stillwater reported net income of NT$2,440,000 for the year.
2. Natal, Ltd. obtained significant influence over North Sails by buying 40% of North Sails' 60,000 outstanding ordinary shares at a cost of NT$120 per share on January 1, 2017. On April 15, North Sails declared and paid a cash dividend of NT$450,000. On December 31, North Sails reported net income of NT$1,200,000 for the year.

Prepare all necessary journal entries for 2017 for (1) Rho Jean and (2) Natal.

Action Plan

✔ Presume that the investor has relatively little influence over the investee when an investor owns less than 20% of the ordinary shares of another corporation. In this case, net income earned by the investee is not considered a proper basis for recognizing income from the investment by the investor.

✔ Presume significant influence for investments of 20%–50%. Therefore, record the investor's share of the net income of the associate.

Solution

(1)	May 18	Share Investments (400,000 × 5% × NT$60)	1,200,000	
		Cash		1,200,000
		(To record purchase of 20,000 shares of Stillwater)		
	Aug. 30	Cash	37,500	
		Dividend Revenue (NT$750,000 × 5%)		37,500
		(To record receipt of cash dividend)		
(2)	Jan. 1	Share Investments (60,000 × 40% × NT$120)	2,880,000	
		Cash		2,880,000
		(To record purchase of 24,000 shares of North Sails)		
	Apr. 15	Cash	180,000	
		Share Investments (NT$450,000 × 40%)		180,000
		(To record receipt of cash dividend)		
	Dec. 31	Share Investments (NT$1,200,000 × 40%)	480,000	
		Revenue from Share Investments		480,000
		(To record 40% equity in North Sails' net income)		

Related exercise material: **BE12-2, BE12-3, E12-4, E12-5, E12-6, E12-7, E12-8, and DO IT! 12-2.**

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Valuing and Reporting Investments

Learning Objective 5

Indicate how debt and share investments are reported in financial statements.

The value of debt and share investments may fluctuate during the time they are held. For example, in one 12-month period, the share price of Unilever (NLD) hit a high of $44.41 and a low of $36.57. In light of such price fluctuations, how should companies value investments at the statement of financial position date? Valuation could be at cost, at fair value, or at the lower-of-cost-or-net realizable value.

Many people argue that fair value offers the best approach because it represents the expected cash realizable value of securities. **Fair value** is the amount for which a security could be sold in a normal market. Others counter that, unless a security is going to be sold soon, the fair value is not relevant because the price of the security will likely change again.

Categories of Securities

In general, *IFRS 9* requires that companies determine how to measure their financial assets based on two criteria: (1) the company's business model for managing its financial assets, and (2) the contractual cash flow characteristics of the specific financial asset. As a result of applying these criteria, investment securities are generally classified as trading, non-trading, or held-for-collection.

DEBT INVESTMENTS For purposes of valuation and reporting at a financial statement date, companies classify debt investments into two categories.

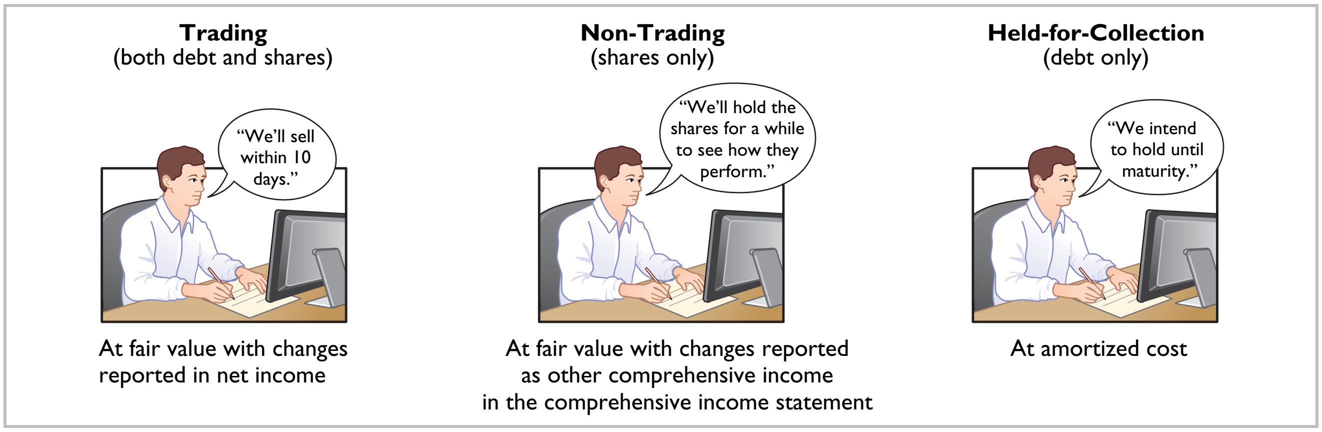
1. **Trading securities** are bought and held primarily for sale in the near term to generate income on short-term price differences. At the financial reporting date, these securities are adjusted to their fair value with changes reported in net income.
2. **Held-for-collection securities** are debt investments that a company intends to hold, to collect the contractual cash flows. At the financial reporting date, these securities are reported at **amortized cost**. Amortized cost is the initial cost of the investment, minus any repayments received, and plus or minus cumulative amortization of discounts or premiums. Amortization of bond discounts and premiums using the effective-interest method is discussed in Appendix 10A.

SHARE INVESTMENTS Share investments do not have fixed interest or principal payment schedules and therefore are never classified as held-for-collection securities. Share investments are classified into two categories.

1. **Trading securities** (as defined above).
2. **Non-trading securities** are share investments held for purpose other than trading. For example, a company may hold a share investment for strategic reasons, such as to sell a product in a particular area. These securities are accounted for at fair value. The change in fair value during the year is **not** reported in net income. Instead, the change in value is reported as a component of other comprehensive income in the comprehensive income statement.

Illustration 12-6 shows the valuation guidelines for these securities. **These guidelines apply to all debt securities and to those share investments in which the holdings are less than 20%.**

Illustration 12-6
Valuation guidelines



TRADING SECURITIES

Companies hold trading securities with the intention of selling them in a short period (generally less than a month). **Trading** means frequent buying and selling. As indicated in Illustration 12-6, companies adjust trading securities to fair value at the end of each period (an approach referred to as mark-to-market accounting). They report changes from cost as part of net income. The changes are reported as **unrealized gains or losses** because the securities have not been sold. The unrealized gain or loss is the difference between the **total cost** of trading securities and their **total fair value**. Companies classify trading securities as current assets.

• HELPFUL HINT
The fact that trading securities are short-term investments increases the likelihood that they will be sold at fair value (the company may not be able to time their sale) and the likelihood that there will be realized gains or losses.

Illustration 12-7 shows the cost and fair values for investments Pace SA classified as trading securities on December 31, 2017. **This was Pace's first year of operations.** Pace has an unrealized gain of €7,000 because total fair value of €147,000 is €7,000 greater than total cost of €140,000.[3]

Illustration 12-7
Valuation of trading securities

Trading Securities, December 31, 2017

Investments	Cost	Fair Value	Unrealized Gain (Loss)
Yorkville Company bonds	€ 50,000	€ 48,000	€(2,000)
Kodak Company shares	90,000	99,000	9,000
Total	€140,000	€147,000	**€ 7,000**

Pace records fair value and unrealized gain or loss through an adjusting entry at the time it prepares financial statements. In this entry, the company uses a valuation allowance account, Fair Value Adjustment—Trading, to record the difference between the total cost and the total fair value of the securities. The adjusting entry for Pace is:

A	=	L	+	E
+7,000				
				+7,000 Rev

Cash Flows
no effect

Dec. 31 (2017)	Fair Value Adjustment—Trading	7,000	
	Unrealized Gain—Income		7,000
	(To record unrealized gain on trading securities)		

Ethics Note

At one time, the U.S. Securities and Exchange Commission (SEC) accused investment bank Morgan Stanley (USA) of overstating the value of certain bond investments by $75 million. The SEC stated that, in applying market value accounting, Morgan Stanley used its own more-optimistic assumptions rather than relying on external pricing sources.

The use of a Fair Value Adjustment—Trading account enables Pace to maintain a record of the investment cost. It needs actual cost to determine the gain or loss realized when it sells the securities. Pace adds the debit balance (or subtracts a credit balance) of the Fair Value Adjustment—Trading account to the cost of the investments to arrive at a fair value for the trading securities.

The fair value of the securities is the amount Pace reports on its statement of financial position. It reports the unrealized gain in the income statement in the "Other income and expense" section. The term "Income" in the account title Unrealized Gain—Income indicates that the gain affects net income.

If the total cost of the trading securities is greater than total fair value, an unrealized loss has occurred. In such a case, the adjusting entry is a debit to Unrealized Loss—Income and a credit to Fair Value Adjustment—Trading. Companies report the unrealized loss under "Other income and expense" in the income statement.

The Fair Value Adjustment—Trading account is carried forward into future accounting periods. The company does not make any entry to the account until the end of each reporting period. At that time, the company adjusts the balance in the account to the difference between cost and fair value. For trading securities, it closes the Unrealized Gain (Loss)—Income account at the end of the reporting period.

Illustration 12-8 shows the cost and fair values for investments that Pace classified as trading securities on December 31, 2018.

Illustration 12-8
Valuation of trading securities

Trading Securities, December 31, 2018

Investments	Cost	Fair Value	Unrealized Gain (Loss)
Toby Company bonds	€ 40,000	€ 41,000	€ 1,000
Vince Company shares	80,000	74,000	(6,000)
Total	€120,000	€115,000	**€(5,000)**

[3]Technically, the cost for debt securities is amortized cost, which includes amortization of discounts and premiums. Illustration 12-7, as well as all end-of-chapter material, assumes there are no discounts or premiums on investments in debt securities.

Since the fair value of Pace's trading securities is €5,000 less than cost at the end of 2018, Pace's Fair Value Adjustment—Trading account needs to be adjusted to a €5,000 credit balance. It has a €7,000 debit balance from the previous year, so Pace must credit its Fair Value Adjustment—Trading account by €12,000 (€7,000 + €5,000) to achieve a €5,000 credit balance. It debits Unrealized Loss—Income for €12,000 as well. The adjusting entry for Pace is as follows.

Dec. 31 (2018)	Unrealized Loss—Income	12,000	
	Fair Value Adjustment—Trading		12,000
	(To record unrealized loss on trading securities)		

Fair Value Adjustment—Trading

7,000	
	12,000
	5,000

NON-TRADING SECURITIES

As indicated earlier, debt investments are classified either as trading or held-for-collection securities. Share investments are classified either as trading or non-trading. **Non-trading securities** are share investments that are held for purposes other than trading. If the intent is to sell the securities within the next year or operating cycle, the investor classifies the securities as current assets in the statement of financial position. Otherwise, it classifies them as non-current assets in the investments section of the statement of financial position.

Companies report non-trading securities at fair value. The procedure for adjusting to fair value and the unrealized gain or loss for these securities is the same as for trading securities. To illustrate, assume that Ingrao AG has two securities that it classifies as non-trading. Illustration 12-9 provides information on the cost, fair value, and amount of the unrealized gain or loss on December 31, 2017. **This is Ingrao's first year of operations.** There is an unrealized loss of €9,537 because total cost of €293,537 is €9,537 more than total fair value of €284,000.

Ethics Note

Some managers seem to hold their non-trading securities that have experienced losses, while selling those that have gains, thus increasing income. Do you think this is ethical?

Illustration 12-9
Valuation of non-trading securities

Non-Trading Securities, December 31, 2017

Investments	Cost	Fair Value	Unrealized Gain (Loss)
Rachel Soup AG shares	€ 93,537	€103,600	€ 10,063
Zeller Company shares	200,000	180,400	(19,600)
Total	€293,537	€284,000	**€ (9,537)**

Both the adjusting entry and the reporting of the unrealized gain or loss for Ingrao's non-trading securities differ from those illustrated for trading securities. The differences result because Ingrao does not expect to sell these securities in the near term. Thus, prior to actual sale, it is more likely that changes in fair value may change either unrealized gains or losses. Therefore, Ingrao does not report an unrealized gain or loss in the income statement. Instead, it is a component of other comprehensive income.

In the adjusting entry, Ingrao identifies the fair value adjustment account with non-trading securities, and it identifies the unrealized gain or loss account with equity. Ingrao records the unrealized loss of €9,537 as follows.

Dec. 31 (2017)	Unrealized Gain or Loss—Equity	9,537	
	Fair Value Adjustment—Non-Trading		9,537
	(To record unrealized loss on non-trading securities)		

A	=	L	+	E
				−9,537 Exp
−9,537				

Cash Flows
no effect

If total fair value exceeds total cost, Ingrao debits Fair Value Adjustment—Non-Trading and credits Unrealized Gain or Loss—Equity.

The amount of the current period adjustment to the Unrealized Gain or Loss—Equity account is presented in the comprehensive income statement. Suppose that Ingrao had net income during 2017 of €126,200. Its comprehensive income statement would appear as follows.

Illustration 12-10
Comprehensive income statement

INGRAO AG
Comprehensive Income Statement
For the Year Ended December 31, 2017

Net income	€126,200
Other comprehensive income	
Unrealized loss on non-trading securities	(9,537)
Comprehensive income	€116,663

At December 31, 2017, Ingrao reports on its statement of financial position investments of €284,000 (cost of €293,537 − €9,537). In its equity section, it reports accumulated other comprehensive income of €9,537. The closing entry to transfer the Unrealized Gain or Loss—Equity to Accumulated Other Comprehensive Income is as follows.

A	=	L	+	E
				−9,537
				+9,537

Cash Flows
no effect

Dec. 31 (2017)	Accumulated Other Comprehensive Income	9,537	
	Unrealized Gain or Loss—Equity		9,537
	(To close unrealized gain or loss to equity)		

Accumulated Other Comprehensive Income

	0
9,537	
9,537	

The Accumulated Other Comprehensive Income account aggregates the change in the Unrealized Gain or Loss—Equity account from year to year. Since this was Ingrao's first year of operations, it started with a balance of zero. The balance in the Accumulated Other Comprehensive Income account, which at this point is a €9,537 loss, is presented by Ingrao in the equity section of its 2017 statement of financial position as follows.

Illustration 12-11
Presentation of accumulated other comprehensive income in statement of financial position

INGRAO AG
Statement of Financial Position (partial)
December 31, 2017

Equity	
Share capital—ordinary	€1,200,000
Retained earnings	126,200
Accumulated other comprehensive loss	(9,537)
Total equity	€1,316,663

At each future statement of financial position date, Ingrao adjusts the Fair Value Adjustment—Non-Trading and the Unrealized Gain or Loss—Equity accounts to show the difference between cost and fair value at the time. Illustration 12-12 shows the cost and fair values for investments Ingrao classified as non-trading securities on December 31, 2018, its second year of operations.

Illustration 12-12
Valuation of non-trading securities

Non-Trading Securities, December 31, 2018

Investments	Cost	Fair Value	Unrealized Gain (Loss)
Rachel Soup AG shares	€ 93,537	€102,774	€ 9,237
Zeller Company shares	200,000	192,400	(7,600)
Total	€293,537	€295,174	€ 1,637

Since the fair value of Ingrao's non-trading securities is €1,637 more than cost at the end of 2018, Ingrao's Fair Value Adjustment—Non-Trading account needs to be adjusted to a €1,637 debit balance. It has a €9,537 credit balance from the previous year, so Ingrao must debit its Fair Value Adjustment—Non-Trading account by €11,174 (€9,537 + €1,637) to achieve a €1,637 debit balance. It credits Unrealized Gain or Loss—Equity for €11,174 as well. The adjusting entry for Ingrao is as follows.

Dec. 31 (2018)	Fair Value Adjustment—Non-Trading	11,174	
	Unrealized Gain or Loss—Equity		11,174
	(To record unrealized gain on non-trading securities)		

Fair Value Adjustment—Non-Trading

	9,537
11,174	
1,637	

A	=	L	+	E
+11,174				
				+11,174

Cash Flows
no effect

The amount of the current period adjustment to the Unrealized Gain or Loss—Equity account is presented in the comprehensive income statement. Suppose that Ingrao had net income during 2018 of €201,400. Its comprehensive income statement would appear as follows.

Illustration 12-13
Comprehensive income statement

INGRAO AG
Comprehensive Income Statement
For the Year Ended December 31, 2018

Net income	€201,400
Other comprehensive income	
Unrealized gain on non-trading securities	11,174
Comprehensive income	€212,574

At December 31, 2018, Ingrao reports on its statement of financial position investments of €295,174 (cost of €293,537 + €1,637). In its equity section, it reports accumulated other comprehensive income of €1,637. The closing entry to transfer the Unrealized Gain or Loss—Equity to Accumulated Other Comprehensive Income is as follows.

Dec. 31 (2018)	Unrealized Gain or Loss—Equity	11,174	
	Accumulated Other Comprehensive Income		11,174
	(To close unrealized gain or loss to equity)		

Accumulated Other Comprehensive Income

9,537	
	11,174
	1,637

A	=	L	+	E
				−11,174
				+11,174

Cash Flows
no effect

The balance in the Accumulated Other Comprehensive Income account of €1,637 is presented by Ingrao in the equity section of its 2018 statement of financial position as follows.

Illustration 12-14
Presentation of accumulated other comprehensive income in statement of financial position

INGRAO AG
Statement of Financial Position (partial)
December 31, 2018

Equity	
Share capital—ordinary	€1,200,000
Retained earnings	327,600
Accumulated other comprehensive income	1,637
Total equity	€1,529,237

> DO IT!

Trading and Non-Trading Securities

Some of Chengdu Ltd.'s investment securities are classified as trading securities and some are classified as non-trading. The cost and fair value of each category at December 31, 2017, are shown on the next page.

	Cost	Fair Value	Unrealized Gain (Loss)
Trading securities	¥936,000	¥949,000	¥13,000
Non-trading securities	¥488,000	¥514,000	¥26,000

At December 31, 2016, the Fair Value Adjustment—Trading account had a debit balance of ¥92,000, and the Fair Value Adjustment—Non-Trading account had a credit balance of ¥57,500. Prepare the required journal entries for each group of securities for December 31, 2017.

Action Plan

✔ Adjust trading securities to fair value and report the adjustment in current-period income.

✔ Mark non-trading securities to fair value and report the adjustment as a separate component of equity.

Solution

Trading securities:		
Unrealized Loss—Income (¥92,000 − ¥13,000)	79,000	
Fair Value Adjustment—Trading		79,000
(To record unrealized loss on trading securities)		
Non-trading securities:		
Fair Value Adjustment—Non-Trading	83,500	
Unrealized Gain or Loss—Equity (¥57,500 + ¥26,000)		83,500
(To record unrealized gain on non-trading securities)		

Related exercise material: **BE12-4, BE12-5, BE12-6, BE12-7, E12-10, E12-11, E12-12, and DO IT! 12-3.**

✔ The Navigator

Statement of Financial Position Presentation

Learning Objective 6
Distinguish between short-term and long-term investments.

In the statement of financial position, companies classify investments as either short-term or long-term. Trading securities are always classified as short-term. Non-trading securities and held-for-collection securities can be either short-term or long-term depending on the circumstances.

SHORT-TERM INVESTMENTS

Short-term investments (also called **marketable securities**) are securities held by a company that are (1) **readily marketable** and (2) **intended to be converted into cash** within the next year or operating cycle, whichever is longer. Investments that do not meet **both criteria** are classified as **long-term investments**.

READILY MARKETABLE **An investment is readily marketable when it can be sold easily whenever the need for cash arises.** Short-term paper[4] meets this criterion. It can be readily sold to other investors. Shares and bonds traded on organized securities exchanges are readily marketable. They can be bought and sold daily. In contrast, there may be only a limited market for the securities issued by small corporations, and no market for the securities of a privately held company.

INTENT TO CONVERT **Intent to convert means that management intends to sell the investment within the next year or operating cycle, whichever is longer.** Generally, this criterion is satisfied when the investment is considered a resource that the investor will use whenever the need for cash arises. For example, a ski resort may invest idle cash during the summer months with the intent to sell the securities to buy supplies and equipment shortly before the winter season.

[4]**Short-term paper** includes (1) certificates of deposit (CDs) issued by banks, (2) money market certificates issued by banks and savings and loan associations, (3) Treasury bills issued by a government, and (4) commercial paper (notes) issued by corporations with good credit ratings.

This investment is considered short-term even if lack of snow cancels the next ski season and eliminates the need to convert the securities into cash as intended.

Because of their high liquidity, short-term investments appear immediately above Cash in the "Current assets" section of the statement of financial position. They are reported at fair value. For example, Pace SA would report its trading securities as shown in Illustration 12-15.

Illustration 12-15
Presentation of short-term investments

PACE SA
Statement of Financial Position (partial)

Current assets	
Short-term investments, at fair value	€147,000
Cash	21,000

LONG-TERM INVESTMENTS

Companies generally report long-term investments in a separate section of the statement of financial position immediately above "Current assets," as shown later in Illustration 12-18 (page 616). Long-term investments in held-for-collection debt securities are reported at amortized cost. Long-term investments in non-trading share investments are reported at fair value. Investments in ordinary shares accounted for under the equity method are reported at equity.

Presentation of Realized and Unrealized Gain or Loss

Companies must present in the financial statements gains and losses on investments, whether realized or unrealized. In the income statement, companies report gains and losses in the non-operating activities section under the categories listed in Illustration 12-16. Interest and dividend revenue are also reported in that section.

Illustration 12-16
Non-operating items related to investments

Other Income and Expense

Interest Revenue	Unrealized Gain—Income
Dividend Revenue	Loss on Sale of Investments
Gain on Sale of Investments	Unrealized Loss—Income

In a comprehensive income statement, companies report unrealized gains or losses on non-trading securities as other comprehensive income or loss. In the statement of financial position, companies report in the equity section accumulated other comprehensive income or loss. Illustration 12-17 shows the statement of financial position of equity assuming that Dawson plc has share capital—ordinary of £3,000,000, retained earnings of £1,500,000, and an accumulated other comprehensive loss of £100,000.

Illustration 12-17
Accumulated other comprehensive loss

DAWSON plc
Statement of Financial Position (partial)

Equity	
Share capital—ordinary	£3,000,000
Retained earnings	1,500,000
Accumulated other comprehensive loss	**(100,000)**
Total equity	£4,400,000

Note that the presentation of accumulated other comprehensive loss is similar to the presentation of the cost of treasury shares in the equity section (it decreases equity). Accumulated other comprehensive income is added to equity. Reporting the unrealized gain or loss as components of other comprehensive income and in the equity section serves two purposes. (1) It reduces the volatility of net income due to fluctuations in fair value. (2) It informs the financial statement user of the gain or loss that would occur if the securities were sold at fair value.

Companies must report items such as unrealized gains or losses on non-trading securities as part of comprehensive income. Unrealized gains and losses on non-trading securities therefore affect comprehensive income (and equity) but are not included in the computation of net income.

Classified Statement of Financial Position

We have presented many sections of classified statements of financial position in this and preceding chapters. The classified statement of financial position in Illustration 12-18 includes, in one place, key topics from previous chapters: the issuance of par value ordinary shares, restrictions of retained earnings, and issuance of bonds. From this chapter, the statement includes (highlighted in red) short-term and long-term investments. The investments in short-term securities are considered trading securities. The long-term investments in shares of less than 20% owned companies are considered non-trading securities. Illustration 12-18 also includes a long-term investment reported at equity and descriptive notations within the statement, such as the cost flow method for valuing inventory and one note to the statement.

Illustration 12-18
Classified statement of financial position

PACE SA
Statement of Financial Position
December 31, 2017

Assets			
Intangible assets			
Goodwill			€ 270,000
Property, plant, and equipment			
Land		€200,000	
Buildings	€800,000		
Less: Accumulated depreciation—buildings	200,000	600,000	
Equipment	180,000		
Less: Accumulated depreciation—equipment	54,000	126,000	
Total property, plant, and equipment			926,000
Investments			
Investments in held-for-collection debt securities, at amortized cost		**20,000**	
Investment in shares of less than 20% owned companies, at fair value		**30,000**	
Investment in shares of 20–50% owned company, at equity		**150,000**	200,000
Current assets			
Prepaid insurance		23,000	
Inventory, at FIFO cost		43,000	
Accounts receivable	84,000		
Less: Allowance for doubtful accounts	4,000	80,000	
Short-term investments, at fair value		**147,000**	
Cash		21,000	314,000
Total assets			€1,710,000

Illustration 12-18
(continued)

Equity and Liabilities		
Equity		
Share capital—ordinary, €10 par value, 200,000 shares authorized, 80,000 shares issued and outstanding	€800,000	
Share premium—ordinary	100,000	
Retained earnings (Note 1)	255,000	
Accumulated other comprehensive income	**10,000**	€1,165,000
Non-current liabilities		
Bonds payable, 10%, due 2024		290,000
Current liabilities		
Accounts payable	185,000	
Income taxes payable	60,000	
Interest payable	10,000	255,000
Total equity and liabilities		€1,710,000

Note 1. Retained earnings of €100,000 is restricted for plant expansion.

> DO IT!

Financial Statement Presentation of Investments

Identify where each of the following items would be reported in the financial statements.

1. Interest earned on investments in bonds.
2. Fair value adjustment—non-trading.
3. Unrealized loss on non-trading securities.
4. Gain on sale of share investments.
5. Unrealized gain on trading securities.

Use the following possible categories:

Statement of financial position:

Intangible assets	Equity
Property, plant, and equipment	Non-current liabilities
Investments	Current liabilities
Current assets	

Income statement:

Other income and expense

Comprehensive income statement:

Other comprehensive income

Action Plan

✔ Classify investments as current assets if they will be held for less than one year.

✔ Report unrealized gains or losses on trading securities in income.

✔ Report unrealized gains or losses on non-trading securities in other comprehensive income.

✔ Report realized earnings on investments in the income statement as "Other income and expense."

Solution

Item	Financial Statement	Category
1. Interest earned on investments in bonds	Income statement	Other income and expense
2. Fair value adjustment—non-trading	Statement of financial position	Investments
3. Unrealized loss on non-trading securities	Comprehensive income statement	Other comprehensive income
4. Gain on sale of share investments	Income statement	Other income and expense
5. Unrealized gain on trading securities	Income statement	Other income and expense

Related exercise material: **BE12-7, BE12-8, E12-10, E12-11, E12-12, and DO IT! 12-4.**

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APPENDIX 12A Preparing Consolidated Financial Statements

Learning Objective *7

Describe the form and content of consolidated financial statements as well as how to prepare them.

Most of the large corporations are holding companies that own other corporations. They therefore prepare **consolidated** financial statements that combine the separate companies.

Consolidated Statement of Financial Position

Companies prepare consolidated statements of financial position from the individual statements of their affiliated companies. They do not prepare consolidated statements from ledger accounts kept by the consolidated entity because only the separate legal entities maintain accounting records.

All items in the individual statements of financial position are included in the consolidated statement except amounts that pertain to transactions between the affiliated companies. Transactions between the affiliated companies are identified as **intercompany transactions**. The process of excluding these transactions in preparing consolidated statements is referred to as **intercompany eliminations**. These eliminations are necessary to avoid overstating assets, liabilities, and equity in the consolidated statement of financial position. For example, amounts owed by a subsidiary to a parent company and the related receivable reported by the parent company would be eliminated. The objective in a consolidated statement is to show only obligations to and receivables from parties who are not part of the affiliated group of companies.

• HELPFUL HINT
Eliminations are aptly named because they eliminate duplicate data. They are not adjustments.

To illustrate, assume that on January 1, 2017, Powers plc pays £150,000 in cash for 100% of Serto plc's ordinary shares. Powers records the investment at cost. Illustration 12A-1 presents the separate statements of financial position of the two companies immediately after the purchase, together with combined and consolidated data.[5] Powers obtains the balances in the "combined" column by adding the items in the separate statements of the affiliated companies. The combined totals do not represent a consolidated statement of financial position because there has been a double-counting of assets and equity in the amount of £150,000.

Illustration 12A-1
Combined and consolidated data

POWERS plc AND SERTO plc
Statement of Financial Position
January 1, 2017

Assets	**Powers plc**	**Serto plc**	**Combined Data**	**Consolidated Data**
Plant and equipment (net)	£325,000	£145,000	£470,000	**£470,000**
Investment in Serto plc ordinary shares	150,000		150,000	**–0–**
Current assets	50,000	80,000	130,000	**130,000**
Total assets	£525,000	£225,000	£750,000	**£600,000**
Equity and Liabilities				
Share capital—ordinary	£300,000	£100,000	£400,000	**£300,000**
Retained earnings	175,000	50,000	225,000	**175,000**
Current liabilities	50,000	75,000	125,000	**125,000**
Total equity and liabilities	£525,000	£225,000	£750,000	**£600,000**

[5]We use condensed data throughout this material to keep details at a minimum.

The Investment in Serto ordinary shares that appears on the statement of financial position of Powers represents an interest in the net assets of Serto. As a result, there has been a double-counting of assets. Similarly, there has been a double-counting in equity because the ordinary shares of Serto are completely owned by the shareholders of Powers.

The balances in the consolidated data column are the amounts that should appear in the consolidated statement of financial position. The double-counting has been eliminated by showing Investment in Serto at zero and by reporting only the share capital and retained earnings of Powers as equity.

USE OF A WORKSHEET—COST EQUAL TO BOOK VALUE

The preparation of a consolidated statement of financial position is usually facilitated by the use of a worksheet. As shown in Illustration 12A-2, the worksheet for a consolidated statement of financial position contains columns for (1) the statement of financial position data for the separate legal entities, (2) intercompany eliminations, and (3) consolidated data. All data in the worksheet relate to the preceding example in which Powers plc acquires 100% ownership of Serto plc for £150,000. In this case, the cost of the investment, £150,000, is equal to the book value [£150,000 (£225,000 − £75,000)] of the subsidiary's net assets. The intercompany elimination results in a credit to the investment account maintained by Powers for its balance, £150,000, and debits to the Share Capital and Retained Earnings accounts of Serto for their respective balances, £100,000 and £50,000.

Illustration 12A-2
Worksheet—Cost equal to book value

Powers plc.xls

Home Insert Page Layout Formulas Data Review View

P18 fx

POWERS plc AND SUBSIDIARY
Worksheet—Consolidated Statement of Financial Position
January 1, 2017 (Acquisition Date)

	A	B	C	D	E	F
4		Powers	Serto	Eliminations		Consolidated
5	Assets	plc	plc	Dr.	Cr.	Data
6	Plant and equipment (net)	325,000	145,000			470,000
7	Investment in Serto plc ordinary					
8	shares	150,000			150,000	–0–
9	Current assets	50,000	80,000			130,000
10	Totals	525,000	225,000			600,000
11						
12						
13	**Equity and Liabilities**					
14	Share capital—Powers plc	300,000				300,000
15	Share capital—Serto plc		100,000	100,000		–0–
16	Retained earnings—Powers plc	175,000				175,000
17	Retained earnings—Serto plc		50,000	50,000		–0–
18	Current liabilities	50,000	75,000			125,000
19	Totals	525,000	225,000	150,000	150,000	600,000
20						

It is important to recognize that companies make intercompany eliminations solely on the worksheet to present correct consolidated data. Neither of the affiliated companies journalizes or posts the eliminations. Therefore, eliminations do not affect the ledger accounts. Powers' investment account and Serto's share capital and retained earnings accounts are reported by the separate entities in preparing their own financial statements.

• HELPFUL HINT
As in the case of the worksheets explained earlier in this textbook, consolidated worksheets are also optional.

USE OF A WORKSHEET—COST ABOVE BOOK VALUE

• HELPFUL HINT
The consolidated worksheet is another useful spreadsheet application. This is an easier worksheet to attempt since the required instructions are very straightforward.

The cost of acquiring the ordinary shares of another company may be above or below its book value. The management of the parent company may pay more than book value for the shares. Why? Because it believes the fair values of identifiable assets such as land, buildings, and equipment are higher than their recorded book values. Or, it may believe the subsidiary's future earnings prospects warrant a payment for goodwill.

To illustrate, assume the same data used above, except that Powers plc pays £165,000 in cash for 100% of Serto's ordinary shares. The excess of cost over book value is £15,000 (£165,000 − £150,000). Powers recognizes this amount separately in eliminating the parent company's investment account, as shown in Illustration 12A-3. Total assets and total equity and liabilities are the same as in the preceding example (£600,000). However, in this case, total assets include £15,000 of Excess of Cost Over Book Value of Subsidiary and current assets are £15,000 less due to the higher price paid to Serto. The disposition of the excess is explained in the next section.

Illustration 12A-3
Worksheet—Cost above book value

Powers plc.xls

Home Insert Page Layout Formulas Data Review View

P18 *fx*

	A	B	C	D	E	F
1	**POWERS plc AND SUBSIDIARY**					
2	**Worksheet—Consolidated Statement of Financial Position**					
3	**January 1, 2017 (Acquisition Date)**					
4		**Powers**	**Serto**	**Eliminations**		**Consolidated**
5	**Assets**	**plc**	**plc**	**Dr.**	**Cr.**	**Data**
6	Plant and equipment (net)	325,000	145,000			470,000
7	Investment in Serto plc ordinary					
8	shares	165,000			165,000	–0–
9	Current assets	35,000	80,000			115,000
10	Excess of cost over book value of					
11	subsidiary			15,000		15,000
12	Totals	525,000	225,000			600,000
13						
14						
15	**Equity and Liabilities**					
16	Share capital—Powers plc	300,000				300,000
17	Share capital—Serto plc		100,000	100,000		–0–
18	Retained earnings—Powers plc	175,000				175,000
19	Retained earnings—Serto plc		50,000	50,000		–0–
20	Current liabilities	50,000	75,000			125,000
21	Totals	525,000	225,000	165,000	165,000	600,000
22						
23						
24	Note that a separate line is added to the worksheet for the excess of cost over book value of subsidiary.					

CONTENT OF A CONSOLIDATED STATEMENT OF FINANCIAL POSITION

To illustrate a consolidated statement of financial position, we will use the worksheet shown in Illustration 12A-3. This worksheet shows an excess of cost over book value of £15,000. In the consolidated statement of financial position, Powers first allocates this amount to specific assets, such as plant and equipment and inventory, if their fair values on the acquisition date exceed their book values. Any remainder is considered to be goodwill. For Serto, assume that the fair value of the plant and equipment is £155,000. Thus, Powers allocates £10,000 of the excess of cost over book value to plant and equipment, and the remainder, £5,000, to goodwill. Illustration 12A-4 shows the condensed consolidated statement of financial position of Powers plc.

Illustration 12A-4
Consolidated statement of financial position

POWERS plc Consolidated Statement of Financial Position January 1, 2017		
Assets		
Goodwill		£ 5,000
Plant and equipment (net)		480,000
Current assets		115,000
Total assets		£600,000
Equity and Liabilities		
Equity		
Share capital—ordinary	£300,000	
Retained earnings	175,000	£475,000
Current liabilities		125,000
Total equity and liabilities		£600,000

Through innovative financial restructuring, The Coca-Cola Company (USA) at one time eliminated a substantial amount of non-intercompany debt. It sold to the public 51% of two bottling companies. The "49% solution," as insiders call the strategy, enabled Coca-Cola to keep effective control over the businesses. It also swept $3 billion of debt from its consolidated statement of financial position because it no longer consolidated the two bottling companies. Finally, the new companies obtained independent access to equity markets to satisfy their own large appetites for capital.

Consolidated Income Statement

Affiliated companies also prepare a consolidated income statement. This statement shows the results of operations of affiliated companies as though they are one economic unit. This means that the statement shows only revenue and expense transactions between the consolidated entity and companies and individuals who are outside the affiliated group.

Consequently, all intercompany revenue and expense transactions must be eliminated. Intercompany transactions such as sales between affiliates and interest on loans charged by one affiliate to another must be eliminated. A worksheet facilitates the preparation of consolidated income statements in the same manner as it does for the statement of financial position.

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Discuss why corporations invest in debt and share securities.** Corporations invest for three primary reasons: (a) They have excess cash. (b) They view investments as a significant revenue source. (c) They have strategic goals such as gaining control of a competitor or moving into a new line of business.

2 **Explain the accounting for debt investments.** Companies record investments in debt securities when they

purchase bonds, receive or accrue interest, and sell the bonds. They report gains or losses on the sale of bonds in the "Other income and expense" section of the income statement.

3 Explain the accounting for share investments. Companies record investments in shares when they purchase the shares, receive dividends, and sell the shares. When ownership is less than 20%, the cost method is used. When ownership is between 20% and 50%, the equity method should be used. When ownership is more than 50%, companies prepare consolidated financial statements.

4 Describe the use of consolidated financial statements. When a company owns more than 50% of the shares of another company, it usually prepares consolidated financial statements. These statements indicate the magnitude and scope of operations of the companies under common control.

5 Indicate how debt and share investments are reported in financial statements. Investments in debt securities are classified as trading or held-for-collection securities for valuation and reporting purposes. Share investments are classified either as trading or non-trading. Share investments have no maturity date and therefore are never classified as held-for-collection. Trading securities are reported as current assets at fair value, with changes from cost reported in net income. Non-trading securities are also reported at fair value, with the changes from cost reported in other comprehensive income. Non-trading securities and held-for-collection securities are classified as short-term or long-term, depending on their expected future sale date.

6 Distinguish between short-term and long-term investments. Short-term investments are securities that are (a) readily marketable and (b) intended to be converted to cash within the next year or operating cycle, whichever is longer. Investments that do not meet both criteria are classified as long-term investments.

***7 Describe the form and content of consolidated financial statements as well as how to prepare them.** Consolidated financial statements are similar in form and content to the financial statements of an individual corporation. A consolidated statement of financial position shows the assets and liabilities controlled by the parent company. A consolidated income statement shows the results of operations of affiliated companies as though they are one economic unit. The worksheet for a consolidated statement of financial position contains columns for (a) the statement of financial position data for the separate entities, (b) intercompany eliminations, and (c) consolidated data.

GLOSSARY REVIEW

Associate An investee company that an investor has significant influence over but not control. (p. 605)

Consolidated financial statements Financial statements that present the assets and liabilities controlled by the parent company and the total revenues and expenses of the subsidiary companies. (p. 606).

Controlling interest Ownership of more than 50% of the ordinary shares of another entity. (p. 606).

Cost method An accounting method in which the investment in ordinary shares is recorded at cost, and revenue is recognized only when cash dividends are received. (p. 604).

Debt investments Investments in government and corporation notes and bonds. (p. 601).

Equity method An accounting method in which the investment in ordinary shares is initially recorded at cost, and the investment account is then adjusted annually to show the investor's equity in the associate. (p. 605).

Fair value Amount for which a security could be sold in a normal market. (p. 608).

Held-for-collection securities Debt investments that a company intends to hold to collect the contractual cash flows. (p. 609).

***Intercompany eliminations** Eliminations made to exclude the effects of intercompany transactions in preparing consolidated statements. (p. 618).

***Intercompany transactions** Transactions between affiliated companies. (p. 618).

Investment portfolio A group of shares and/or debt securities in different corporations held for investment purposes. (p. 603).

Long-term investments Investments that are not readily marketable or that management does not intend to convert into cash within the next year or operating cycle, whichever is longer. (p. 614).

Non-trading securities Share investments that are held for purposes other than trading. (p. 609).

Parent company A company that owns more than 50% of the ordinary shares of another entity. (p. 606).

Share investments Investments in the shares of other corporations. (p. 603).

Short-term investments Investments that are readily marketable and intended to be converted into cash within the next year or operating cycle, whichever is longer. (p. 614).

Subsidiary (affiliated) company A company in which more than 50% of its shares is owned by another company. (p. 606).

Trading securities Securities bought and held primarily for sale in the near term to generate income on short-term price differences. (p. 609).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Which of the following is **not** a primary reason why corporations invest in debt and equity securities?
(a) They wish to gain control of a competitor.
(b) They have excess cash.
(c) They wish to move into a new line of business.
(d) They are required to by law.

(LO 2) **2.** Debt investments are initially recorded at:
(a) cost. (c) par value.
(b) cost plus dividends. (d) face value.

(LO 2) **3.** Hanes Company sells debt investments costing £26,000 for £28,000, plus accrued interest that has been recorded. In journalizing the sale, credits are to:
(a) Debt Investments and Loss on Sale of Debt Investments.
(b) Debt Investments, Gain on Sale of Debt Investments, and Interest Receivable.
(c) Share Investments and Interest Receivable.
(d) No correct answer is given.

(LO 3) **4.** Anatolian A.Ş. receives net proceeds of ₺42,000 on the sale of share investments that cost ₺39,500. This transaction will result in reporting in the income statement a:
(a) loss of ₺2,500 under "Other income and expense."
(b) loss of ₺2,500 under "Operating expenses."
(c) gain of ₺2,500 under "Other income and expense."
(d) gain of ₺2,500 under "Operating revenues."

(LO 3) **5.** The equity method of accounting for long-term investments in shares should be used when the investor has significant influence over an associate and owns:
(a) between 20% and 50% of the associate's ordinary shares.
(b) 30% or more of the associate's ordinary shares.
(c) more than 50% of the associate's ordinary shares.
(d) less than 20% of the associate's ordinary shares.

(LO 3) **6.** Assume that Horicon NV acquired 25% of the ordinary shares of Sheboygan NV on January 1, 2017, for €300,000. During 2017, Sheboygan reported net income of €160,000 and paid total dividends of €60,000. If Horicon uses the equity method to account for its investment, the balance in the investment account on December 31, 2017, will be:
(a) €300,000. (c) €400,000.
(b) €325,000. (d) €340,000.

(LO 3) **7.** Using the information in Question 6, what entry would Horicon make to record the receipt of the dividend from Sheboygan?
(a) Debit Cash and credit Revenue from Share Investments.
(b) Debit Cash Dividends and credit Revenue from Share Investments.
(c) Debit Cash and credit Share Investments.
(d) Debit Cash and credit Dividend Revenue.

(LO 3) **8.** You have a controlling interest if:
(a) you own more than 20% of a company's ordinary shares.
(b) you are the president of the company.
(c) you use the equity method.
(d) you own more than 50% of a company's ordinary shares.

9. Which of the following statements is **not true**? Consolidated financial statements are useful to: (LO 4)
(a) determine the profitability of specific subsidiaries.
(b) determine the total profitability of companies under common control.
(c) determine the breadth of a parent company's operations.
(d) determine the full extent of total obligations of companies under common control.

10. At the end of the first year of operations, the total cost of the trading securities portfolio is ₩120,000,000. Total fair value is ₩115,000,000. The financial statements should show: (LO 5)
(a) a reduction of an asset of ₩5,000,000 and a realized loss of ₩5,000,000.
(b) a reduction of an asset of ₩5,000,000 and an unrealized loss of ₩5,000,000 in the equity section.
(c) a reduction of an asset of ₩5,000,000 in the current assets section and an unrealized loss of ₩5,000,000 in "Other income and expense."
(d) a reduction of an asset of ₩5,000,000 in the current assets section and a realized loss of ₩5,000,000 in "Other income and expense."

11. At December 31, 2017, the fair value of non-trading securities is €41,300 and the cost is €39,800. At January 1, 2017, there was a credit balance of €900 in the Fair Value Adjustment—Non-Trading account. The required adjusting entry would be: (LO 5)
(a) Debit Fair Value Adjustment—Non-Trading for €1,500 and credit Unrealized Gain or Loss—Equity for €1,500.
(b) Debit Fair Value Adjustment—Non-Trading for €600 and credit Unrealized Gain or Loss—Equity for €600.
(c) Debit Fair Value Adjustment—Non-Trading for €2,400 and credit Unrealized Gain or Loss—Equity for €2,400.
(d) Debit Unrealized Gain or Loss—Equity for €2,400 and credit Fair Value Adjustment—Non-Trading for €2,400.

12. In the statement of financial position, a debit balance in Unrealized Gain or Loss—Equity results in a(n): (LO 5)
(a) increase to equity.
(b) decrease to equity.
(c) loss in the income statement.
(d) loss in the retained earnings statement.

13. Short-term debt investments must be readily marketable and expected to be sold within: (LO 6)
(a) 3 months from the date of purchase.
(b) the next year or operating cycle, whichever is shorter.
(c) the next year or operating cycle, whichever is longer.
(d) the operating cycle.

***14.** Pate Company pays £175,000 for 100% of Sinko's ordinary shares when Sinko's equity consists of Share Capital—Ordinary £100,000 and Retained Earnings (LO 7)

£60,000. In the worksheet for the consolidated statement of financial position, the eliminations will include a:

(a) credit to Investment in Sinko Share Capital—Ordinary £160,000.
(b) credit to Excess of Book Value over Cost of Subsidiary £15,000.
(c) debit to Retained Earnings £75,000.
(d) debit to Excess of Cost over Book Value of Subsidiary £15,000.

(LO 7) *15. Which of the following statements about intercompany eliminations is **true**?

(a) They are not journalized or posted by any of the subsidiaries.
(b) They do not affect the ledger accounts of any of the subsidiaries.
(c) They are made solely on the worksheet to arrive at correct consolidated data.
(d) All of these answer choices are correct.

*16. Which one of the following statements about consolidated income statements is **false**? (LO 7)

(a) A worksheet facilitates the preparation of the statement.
(b) The consolidated income statement shows the results of operations of affiliated companies as a single economic unit.
(c) All revenue and expense transactions between parent and subsidiary companies are eliminated.
(d) When a subsidiary is wholly owned, the form and content of the statement will differ from the income statement of an individual corporation.

Solutions

1. (d) Corporations are not required to by law to invest in debt and equity securities. The other choices are reasons why corporations invest in debt and equity securities.

2. (a) When debt investments are purchased, they are recorded at cost, not (b) cost plus dividends, (c) par value, or (d) face value.

3. (b) Credits are made to Debt Investments, Gain on Sale of Debt Investments, and Interest Receivable. The other choices are therefore incorrect.

4. (c) Because the cash received (₺42,000) is greater than the cost (₺39,500), this sale results in a gain, not a loss, which will be reported under "Other income and expense" in the income statement. The other choices are therefore incorrect.

5. (a) The equity method is used when the investor can exercise significant influence and owns between 20% and 50% of the associate's ordinary shares. The other choices are therefore incorrect.

6. (b) Horicon records the acquisition of the share investment by debiting Share Investments €300,000 and crediting Cash €300,000. Then, Horicon records (1) its share in Sheboygan's net income (€160,000 × .25) by debiting Share Investments €40,000 and crediting Revenue from Share Investments €40,000 and (2) the reduction in the investment account for the dividends received (€60,000 × .25) by debiting Cash €15,000 and crediting Share Investments €15,000. Thus, the balance in the investment account on December 31 will be €325,000 (€300,000 + €40,000 − €15,000), not (a) €300,000, (C) €400,000, or (d) €340,000.

7. (c) Horicon records the receipt of the dividend from Sheboygan by debiting Cash and crediting Share Investments. The other choices are therefore incorrect.

8. (d) You have a controlling interest if you own more than 50% of a company's shares, not (a) 20% of a company's shares, (b) are president of the company, or (c) use the equity method.

9. (a) Consolidated financial statements are not useful in determining the profitability of specific subsidiaries (legal entities) because consolidated financial statements represent the result of the single economic entity. The other choices are true statements.

10. (c) The difference between the fair value (₩115,000,000) and total cost (₩120,000,000) of trading securities at the end of the first year would result in a reduction of an asset of ₩5,000,000 through the valuation allowance account in the current assets section and an unrealized loss of ₩5,000,000 in "Other income and expense." The other choices are therefore incorrect.

11. (c) In this case, there is an unrealized gain of €1,500 because total fair value of €41,300 is €1,500 greater than the total cost of €39,800. The desired balance in the fair value adjustment account is €1,500 debit. The required adjusting entry considers the existing credit balance of €900 and is a debit to Fair Value Adjustment—Non-Trading for €2,400 (€1,500 + €900) and a credit to Unrealized Gain or Loss—Equity for €2,400 (€1,500 + €900). The other choices are therefore incorrect.

12. (b) A debit balance in Unrealized Gain or Loss—Equity decreases equity. The other choices are therefore incorrect.

13. (c) Short-term debt investments are current assets that are expected to be consumed, sold, or converted to cash within one year or the operating cycle, whichever is longer. The other choices are therefore incorrect.

***14. (d)** The eliminations will include a debit to Excess of Cost over Book Value of Subsidiary £15,000 (£175,000 − £160,000). The other choices are therefore incorrect.

***15. (d)** All of the statements in choices (a), (b), and (c) are correct, so (d) is the best answer.

***16. (d)** When a subsidiary is wholly owned, the form and content of the statement will be the same as, not different from, the income statement of an individual corporation. The other choices are true statements.

PRACTICE EXERCISES

Journalize debt investment transactions, accrue interest, and record sale.

(LO 2)

1. Chen Company purchased 70 Feng Company 6%, 10-year, NT$10,000 bonds on January 1, 2017, for NT$700,000. The bonds pay interest annually on January 1. On January 1, 2018, after receipt of interest, Chen Company sold 42 of the bonds for NT$391,000.

Instructions

Prepare the journal entries to record the transactions described above.

Solution

1.		
January 1, 2017		
Debt Investments	700,000	
Cash		700,000
December 31, 2017		
Interest Receivable	42,000	
Interest Revenue (NT$700,000 × 6%)		42,000
January 1, 2018		
Cash	42,000	
Interest Receivable		42,000
January 1, 2018		
Cash	391,000	
Loss on Sale of Debt Investments	29,000	
Debt Investments (42/70 × NT$700,000)		420,000

Journalize share investment transactions.

(LO 3)

2. Cannon AG had the following transactions in 2017 pertaining to share investments.

Feb. 1 Purchased 600 of Ronin ordinary shares (2%) for €6,000 cash.
July 1 Received cash dividends of €1 per share on Ronin shares.
Sept. 1 Sold 300 shares of Ronin shares for €4,200.
Dec. 1 Received cash dividends of €1 per share on Ronin shares.

Instructions

Journalize the transactions.

Solution

2.		
February 1, 2017		
Share Investments (600 × €10)	6,000	
Cash		6,000
July 1, 2017		
Cash (600 × €1)	600	
Dividend Revenue		600
September 1, 2017		
Cash	4,200	
Share Investments (€6,000 × 300/600)		3,000
Gain on Sale of Share Investments		1,200
December 1, 2017		
Cash (300 × €1)	300	
Dividend Revenue		300

Prepare adjusting entries for fair value, and indicate statement presentation for two classes of securities.

(LO 5)

3. Sunshine Ltd. started business on January 1, 2017, and has the following data at December 31, 2017.

Securities	Cost	Fair Value
Trading	£120,000	£125,000
Non-trading	100,000	96,000

The non-trading securities are held as a long-term investment.

Instructions

(a) Prepare the adjusting entries to report each class of securities at fair value.
(b) Indicate the statement presentation of each class of securities and the related unrealized gain (loss) accounts.

Solution

3. (a) **December 31, 2017**

Fair Value Adjustment—Trading		
(£125,000 − £120,000)	5,000	
Unrealized Gain—Income		5,000
Unrealized Gain or Loss—Equity		
(£100,000 − £96,000)	4,000	
Fair Value Adjustment—Non-Trading		4,000

(b) **Statement of Financial Position**

Current assets	
Short-term investments, at fair value	£125,000
Investments	
Investments in shares of less than 20% owned companies, at fair value	96,000
Equity	
Accumulated other comprehensive loss	£ 4,000

Income Statement

Other income and expense	
Unrealized gain on trading securities	£ 5,000

Comprehensive Income Statement

Other comprehensive income	
Unrealized loss on non-trading securities	£ 4,000

PRACTICE PROBLEM

Journalize transactions and prepare adjusting entry to record fair value.

(LO 3, 5)

In its first year of operations, DeMarco plc had the following selected transactions in share investments that are considered trading securities.

June 1 Purchased for cash 600 shares of Sanburg for £24.50 per share.
July 1 Purchased for cash 800 shares of Cey plc at £33.75 per share.
Sept. 1 Received a £1 per share cash dividend from Cey plc.
Nov. 1 Sold 200 shares of Sanburg for cash at £26.25 per share.
Dec. 15 Received a £0.50 per share cash dividend on Sanburg shares.

At December 31, the fair values per share were Sanburg £25 and Cey £30.

Instructions

(a) Journalize the transactions.
(b) Prepare the adjusting entry at December 31 to report the securities at fair value.

Solution

(a) June 1	Share Investments	14,700	
	Cash (600 × £24.50)		14,700
	(To record purchase of 600 shares of Sanburg)		
July 1	Share Investments	27,000	
	Cash (800 × £33.75)		27,000
	(To record purchase of 800 shares of Cey)		
Sept. 1	Cash (800 × £1.00)	800	
	Dividend Revenue		800
	(To record receipt of £1 per share cash dividend from Cey)		

			Debit	Credit
	Nov. 1	Cash (200 × £26.25)	5,250	
		Share Investments (£14,700 × 200/600)		4,900
		Gain on Sale of Share Investments		350
		(To record sale of 200 shares of Sanburg)		
	Dec. 15	Cash [(600 − 200) × £0.50]	200	
		Dividend Revenue		200
		(To record receipt of £0.50 per share dividend from Sanburg)		
(b)	Dec. 31	Unrealized Loss—Income	2,800	
		Fair Value Adjustment—Trading		2,800
		(To record unrealized loss on trading securities)		

Investment	Cost	Fair Value	Unrealized Gain (Loss)
Sanburg shares	£ 9,800	£10,000	£ 200
Cey shares	27,000	24,000	(3,000)
Total	£36,800	£34,000	£(2,800)

WileyPLUS Brief Exercises, DO IT! Review, Exercises, and Problems, and many additional resources are available for practice in WileyPLUS.

NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendix to the chapter.

QUESTIONS

1. What are the reasons that corporations invest in securities?
2. (a) What is the cost of an investment in bonds?
   (b) When is interest on bonds recorded?
3. Tino Martinez is confused about losses and gains on the sale of debt investments. Explain to Tino (a) how the gain or loss is computed, and (b) the statement presentation of the gains and losses.
4. Kolkata Ltd. sells Gish's bonds costing Rs40,000 for Rs45,000, including Rs500 of accrued interest. In recording the sale, Kolkata books a Rs5,000 gain. Is this correct? Explain.
5. What is the cost of an investment in shares?
6. To acquire Kinston plc shares, R. Neal pays £63,200. What entry should be made for this investment?
7. (a) When should a long-term investment in ordinary shares be accounted for by the equity method? (b) When is revenue recognized under this method?
8. Rijo SA uses the equity method to account for its ownership of 30% of the ordinary shares of Pippen Packing. During 2017, Pippen reported a net income of €80,000 and declares and pays cash dividends of €10,000. What recognition should Rijo give to these events?
9. What constitutes "significant influence" when an investor's financial interest is below the 50% level?
10. Distinguish between the cost and equity methods of accounting for investments in shares.
11. What are consolidated financial statements?
12. What are the classification guidelines for investments at a statement of financial position date?
13. Tina Eddings is the controller of Mendez SLU. At December 31, the company's investments in trading securities cost €74,000. They have a fair value of €70,000. Indicate how Tina would report these data in the financial statements prepared on December 31.
14. Using the data in Question 13, how would Tina report the data if the investment were long-term and the securities were classified as non-trading?
15. Hashmi Company's investments in non-trading securities at December 31 show total cost of £195,000 and total fair value of £205,000. Prepare the adjusting entry.
16. Using the data in Question 15, prepare the adjusting entry assuming the securities are classified as trading securities.
17. What is the year-end accounting treatment of the account Unrealized Loss—Equity?
18. What purposes are served by reporting Unrealized Gain or Loss—Equity in the equity section rather than including it in income?
19. Altoona Wholesale Supply owns shares in Key Ltd. Altoona intends to hold the shares indefinitely because of some negative tax consequences if sold. Should the investment in Key be classified as a short-term investment? Why or why not?

*20. (a) What asset and equity balances are eliminated in preparing a consolidated statement of financial position for a parent and a wholly owned subsidiary? (b) Why are they eliminated?

*21. Yinhu Company pays HK$318,000,000 to purchase all the outstanding ordinary shares of Lia Ltd. At the date of purchase, the net assets of Lia have a book value of HK$290,000,000. Yinhu's management allocates HK$20,000,000 of the excess cost to undervalued land on the books of Lia. What should be done with the rest of the excess?

BRIEF EXERCISES

Journalize entries for debt investments.
(LO 2)

BE12-1 Kimmel Industries AG purchased debt investments for CHF50,000 on January 1, 2017. On July 1, 2017, Kimmel received cash interest of CHF1,600. Journalize the purchase and the receipt of interest. Assume that no interest has been accrued.

Journalize entries for share investments.
(LO 3)

BE12-2 On August 1, Paul Company buys 1,000 ordinary shares of Merlynn for €35,700. On December 1, Paul sells the share investments for €40,000 in cash. Journalize the purchase and sale of the ordinary shares.

Record transactions under the equity method of accounting.
(LO 3)

BE12-3 Kayser Company owns 25% of Plano Company. For the current year, Plano reports net income of €190,000 and declares and pays a €40,000 cash dividend. Record Kayser's equity in Plano's net income and the receipt of dividends from Plano.

Prepare adjusting entry using fair value.
(LO 5)

BE12-4 The cost of the trading securities of Hardy Company at December 31, 2017, is £62,000. At December 31, 2017, the fair value of the securities is £59,000. Prepare the adjusting entry to record the securities at fair value. This is the company's first year of operations.

Indicate statement presentation using fair value.
(LO 5, 6)

BE12-5 For the data presented in BE12-4, show the financial statement presentation of the trading securities and related accounts.

Prepare adjusting entry using fair value.
(LO 5)

BE12-6 Amazonas SA holds as a long-term investment non-trading share securities costing R$72,000. At December 31, 2017, the fair value of the securities is R$66,000. Prepare the adjusting entry to record the securities at fair value. This is the company's first year of operations.

Indicate statement presentation using fair value.
(LO 5, 6)

BE12-7 For the data presented in BE12-6, show the financial statement presentation of the non-trading securities and related accounts. Assume the non-trading securities are non-current.

Prepare investments section of statement of financial position.
(LO 5, 6)

BE12-8 Gurnee Limited has the following long-term investments: (1) Ordinary shares of Kornas Co. (10% ownership) held as non-trading securities, cost £108,000, fair value £115,000. (2) Ordinary shares of Kozanecki OAO. (30% ownership), cost £210,000, equity £270,000. Prepare the investments section of the statement of financial position.

Prepare partial consolidated worksheet when cost equals book value.
(LO 7)

***BE12-9** Paula Company acquires 100% of the ordinary shares of Shannon Company for €190,000 cash. On the acquisition date, Shannon's ledger shows Share Capital—Ordinary €120,000 and Retained Earnings €70,000. Complete the worksheet for the following accounts: Paula—Investment in Shannon Ordinary Shares, Shannon—Share Capital—Ordinary, and Shannon—Retained Earnings.

Prepare partial consolidated worksheet when cost exceeds book value.
(LO 7)

***BE12-10** Data for the Paula and Shannon companies are given in BE12-9. Instead of paying €190,000, assume that Paula pays €200,000 to acquire the 100% interest in Shannon Company. Complete the worksheet for the accounts identified in BE12-9 and for the excess of cost over book value.

> DO IT! REVIEW

Make journal entry for bond purchase and adjusting entry for interest accrual.
(LO 2)

DO IT! 12-1 Kurtyka Ltd. had the following transactions relating to debt investments:

Jan. 1, 2017	Purchased 50, £1,000, 8% Nordica Company bonds for £50,000. Interest is payable annually on January 1.
Dec. 31, 2017	Accrued interest on the Nordica Company bonds.
Jan. 1, 2018	Received interest from Nordica Company bonds.
Jan. 1, 2018	Sold 30 Nordica Company bonds for £28,700.

(a) Journalize the transactions, and (b) prepare the adjusting entry for the accrual of interest on December 31, 2018.

Make journal entries for share investments.
(LO 3)

DO IT! 12-2 Presented below and on page 629 are two independent situations:

1. Lorfeld Ltd. acquired 10% of the 500,000 ordinary shares of Northbrook Enterprises at a total cost of €11 per share on June 17, 2017. On September 3, Northbrook declared and paid a €160,000 dividend. On December 31, Northbrook reported net income of €550,000 for the year.

2. Saa Ltd. obtained significant influence over McCarthy Company by buying 30% of McCarthy's 100,000 outstanding ordinary shares at a cost of €18 per share on January 1, 2017. On May 15, McCarthy declared and paid a cash dividend of €150,000. On December 31, McCarthy reported net income of €270,000 for the year.

Prepare all necessary journal entries for 2017 for (a) Lorfeld and (b) Saa.

DO IT! 12-3 Some of Quinghai Lake Limited's investment securities are classified as trading securities and some are classified as non-trading. The cost and fair value of each category at December 31, 2017, were as follows.

Make journal entries for trading and non-trading securities.

(LO 5)

	Cost	Fair Value	Unrealized Gain (Loss)
Trading securities	¥96,000	¥84,900	¥(11,100)
Non-trading securities	¥59,100	¥63,200	¥ 4,100

At December 31, 2016, the Fair Value Adjustment—Trading account had a debit balance of ¥2,200, and the Fair Value Adjustment—Non-Trading account had a credit balance of ¥7,750. Prepare the required journal entries for each group of securities for December 31, 2017.

DO IT! 12-4 Identify where each of the following items would be reported in the financial statements.

Indicate financial statement presentation of investments.

(LO 6)

1. Loss on sale of investments in shares.
2. Unrealized gain on non-trading securities.
3. Fair value adjustment—trading.
4. Interest earned on investments in bonds.
5. Unrealized loss on trading securities.

Use the following possible categories:

Statement of financial position:

Intangible assets	Equity
Property, plant, and equipment	Non-current liabilities
Investments	Current liabilities
Current assets	

Income statement:

Other income and expense

Comprehensive income statement:

Other comprehensive income

EXERCISES

E12-1 Mr. Wellington is studying for an accounting test and has developed the following questions about investments.

Understand debt and share investments.

(LO 1)

1. What are three reasons why companies purchase investments in debt or share securities?
2. Why would a corporation have excess cash that it does not need for operations?
3. What is the typical investment when investing cash for short periods of time?
4. What are the typical investments when investing cash to generate earnings?
5. Why would a company invest in securities that provide no current cash flows?
6. What is the typical share investment when investing cash for strategic reasons?

Instructions

Provide answers for Mr. Wellington.

E12-2 Floyd Limited had the following transactions pertaining to debt investments.

Journalize debt investment transactions and accrue interest.

(LO 2)

Jan. 1, 2017	Purchased 50 8%, £1,000 Petal Co. bonds for £50,000 cash. Interest is payable annually on January 1.
Dec. 31, 2017	Accrued interest on the Petal Co. bonds.
Jan. 1, 2018	Received interest on Petal Co. bonds.
Jan. 1, 2018	Sold 30 Petal Co. bonds for £33,500.

Instructions
(a) Journalize the transactions.
(b) Prepare the adjusting entry for the accrual of interest at December 31, 2018.

Journalize debt investment transactions, accrue interest, and record sale.
(LO 2)

E12-3 Brook Company Ltd. purchased 70 Meissner Company AG 9%, 10-year, €1,000 bonds on January 1, 2017, for €70,000. The bonds pay interest annually on January 1. On January 1, 2018, after receipt of interest, Brook Company sold 40 of the bonds for €40,300.

Instructions
Prepare the journal entries to record the transactions described above.

Journalize share investment transactions.
(LO 3)

E12-4 Diann Company Ltd. had the following transactions pertaining to share investments.

Feb. 1	Purchased 600 ordinary shares of Ronn (2%) for £6,200.
July 1	Received cash dividends of £1 per share on Ronn ordinary shares.
Sept. 1	Sold 300 ordinary shares of Ronn for £4,300.
Dec. 1	Received cash dividends of £1 per share on Ronn ordinary shares.

Instructions
(a) Journalize the transactions.
(b) Explain how dividend revenue and the gain (loss) on sale should be reported in the income statement.

Journalize transactions for investments in shares.
(LO 3)

E12-5 Spring Ltd. had the following transactions pertaining to investments in ordinary shares.

Jan. 1	Purchased 2,500 ordinary shares of Angeltide Limited (5%) for €142,100.
July 1	Received a cash dividend of €2.80 per share.
Dec. 1	Sold 500 ordinary shares of Angeltide Limited for €31,200.
Dec. 31	Received a cash dividend of €2.90 per share.

Instructions
Journalize the transactions.

Journalize transactions for investments in shares.
(LO 3)

E12-6 On February 1, Minitori Company SpA purchased 500 ordinary shares (2% ownership) of Becker Company for €30.80 per share. On March 20, Minitori Company sold 100 shares of Becker for €2,850. Minitori received a dividend of €1.00 per share on April 25. On June 15, Minitori sold 200 shares of Becker for €7,310. On July 28, Minitori received a dividend of €1.25 per share.

Instructions
Prepare the journal entries to record the transactions described above.

Journalize and post transactions under the equity method.
(LO 3)

E12-7 On January 1, Vince SpA purchased a 25% equity in Morelli SpA for £180,000. At December 31, Morelli declared and paid a £36,000 cash dividend and reported net income of £160,000.

Instructions
(a) Journalize the transactions.
(b) Determine the amount to be reported as an investment in Morelli at December 31.

Journalize entries under cost and equity methods.
(LO 3, 5)

E12-8 Presented below are two independent situations.

1. Chicory Cosmetics acquired 15% of the 200,000 ordinary shares of Racine Fashion at a total cost of €13 per share on March 18, 2017. On June 30, Racine declared and paid a €60,000 dividend. On December 31, Racine reported net income of €122,000 for the year. At December 31, the market price of Racine Fashion was €15 per share. The shares are classified as non-trading.
2. Frank, Ltd., obtained significant influence over Nowak Industries by buying 30% of Nowak's 30,000 outstanding ordinary shares at a total cost of €9 per share on January 1, 2017. On June 15, Nowak declared and paid a cash dividend of €30,000. On December 31, Nowak reported a net income of €80,000 for the year.

Instructions
Prepare all the necessary journal entries for 2017 for (a) Chicory Cosmetics and (b) Frank, Ltd.

Understand the usefulness of consolidated statements.

(LO 4)

E12-9 Edna Company purchased 70% of the outstanding ordinary shares of Damen Limited.

Instructions

(a) Explain the relationship between Edna Company and Damen Limited.
(b) How should Edna account for its investment in Damen?
(c) Why is the accounting treatment described in (b) useful?

Prepare adjusting entry to record fair value, and indicate statement presentation.

(LO 5, 6)

E12-10 At December 31, 2017, the end of its first year of operations, the trading securities for Geneva, AG are as follows.

Security	Cost	Fair Value
A	CHF17,500	CHF16,000
B	12,500	14,000
C	23,000	19,000
	CHF53,000	CHF49,000

Instructions

(a) Prepare the adjusting entry at December 31, 2017, to report the securities at fair value.
(b) Show the statement of financial position and income statement presentation at December 31, 2017, after adjustment to fair value.

Prepare adjusting entry to record fair value, and indicate statement presentation.

(LO 5, 6)

E12-11 Data for investments in shares classified as trading securities are presented in E12-10. Assume instead that the investments are classified as non-trading securities. They have the same cost and fair value. The securities are considered to be a long-term investment.

Instructions

(a) Prepare the adjusting entry at December 31, 2017, to report the securities at fair value.
(b) Show the statement of financial position presentation at December 31, 2017, after adjustment to fair value.
(c) E. Devonshire, a member of the board of directors, does not understand the reporting of the unrealized gains or losses. Write a letter to Ms. Devonshire explaining the reporting and the purposes that it serves.

Prepare adjusting entries for fair value, and indicate statement presentation for two classes of securities.

(LO 5, 6)

E12-12 Zippydah Company SE has the following data at December 31, 2017.

Securities	Cost	Fair Value
Trading	€120,000	€124,000
Non-trading	100,000	94,000

The non-trading securities are held as a long-term investment. This is the first year of the company's operations.

Instructions

(a) Prepare the adjusting entries to report each class of securities at fair value.
(b) Indicate the statement presentation of each class of securities and the related unrealized gain (loss) accounts.

Prepare consolidated worksheet when cost equals book value.

(LO 7)

***E12-13** On January 1, 2017, Lennon Enterprises acquires 100% of Ono Ltd. for £220,000 in cash. The condensed statements of financial position of the two corporations immediately following the acquisition are as follows.

	Lennon Enterprises	Ono Ltd.
Plant and equipment (net)	£300,000	£220,000
Investment in Ono Ltd. ordinary shares	220,000	
Current assets	60,000	50,000
	£580,000	£270,000
Share capital—ordinary	£230,000	£ 80,000
Retained earnings	170,000	140,000
Current liabilities	180,000	50,000
	£580,000	£270,000

Instructions

Prepare a worksheet for a consolidated statement of financial position.

Prepare consolidated worksheet when cost exceeds book value.

(LO 7)

***E12-14** Data for the Lennon and Ono corporations are presented in E12-13. Assume that instead of paying £220,000 in cash for Ono Ltd., Lennon Enterprises pays £225,000 in cash. Thus, at the acquisition date, the assets of Lennon Enterprises are current assets £55,000, investment in Ono Ltd. ordinary shares £225,000, and plant and equipment (net) £300,000.

Instructions

Prepare a worksheet for a consolidated statement of financial position.

PROBLEMS: SET A

Journalize debt investment transactions and show financial statement presentation.

(LO 2, 5, 6)

P12-1A Yuen Long Carecenters Ltd. provides financing and capital to the healthcare industry, with a particular focus on nursing homes for the elderly. The following selected transactions relate to bonds acquired as an investment by Yuen Long, whose fiscal year ends on December 31.

2017

Jan. 1 Purchased at face value HK$2,000,000 of Franco Nursing Centers, Inc., 10-year, 7% bonds dated January 1, 2017, directly from Franco. Interest is paid on January 1 of each year.

Dec. 31 Accrual of interest at year-end on the Franco bonds.

(Assume that all intervening transactions and adjustments have been properly recorded and that the number of bonds owned has not changed from December 31, 2017, to December 31, 2019.)

2020

Jan. 1 Received the annual interest on the Franco bonds.

Jan. 1 Sold HK$1,000,000 Franco bonds at 105.

Dec. 31 Accrual of interest at year-end on the Franco bonds.

Instructions

(a) Gain on sale of debt investments HK$50,000

(a) Journalize the listed transactions for the years 2017 and 2020.

(b) Show the statement of financial position presentation of the bonds and interest receivable at December 31, 2017. Assume the investments are considered long-term.

Journalize investment transactions, prepare adjusting entry, and show statement presentation.

(LO 2, 3, 5, 6)

P12-2A In January 2017, the management of Stefan Company SE concludes that it has sufficient cash to permit some short-term investments in debt and share securities. During the year, the following transactions occurred.

Feb. 1 Purchased 600 ordinary shares of Superior for €32,400.

Mar. 1 Purchased 800 ordinary shares of Pawlik for €20,400.

Apr. 1 Purchased 50 €1,000, 7% Venice bonds for €50,000. Interest is payable annually on October 1.

July 1 Received a cash dividend of €0.60 per share on the Superior ordinary shares.

Aug. 1 Sold 200 ordinary shares of Superior at €57 per share.

Sept. 1 Received a €1 per share cash dividend on the Pawlik ordinary shares.

Oct. 1 Received the interest on the Venice bonds.

Oct. 1 Sold the Venice bonds for €49,000.

At December 31, the fair value of the Superior ordinary shares was €55 per share. The fair value of the Pawlik ordinary shares was €24 per share.

Instructions

(a) Gain on sale of share investments €600

(a) Journalize the transactions and post to the accounts Debt Investments and Share Investments. (Use the T-account form.)

(b) Prepare the adjusting entry at December 31, 2017, to report the investment securities at fair value. All securities are considered to be trading securities.

(c) Show the statement of financial position presentation of investment securities at December 31, 2017.

(d) Identify the income statement accounts and give the statement classification of each account.

Journalize transactions and adjusting entry for share investments.

(LO 3, 5, 6)

P12-3A On December 31, 2016, Ogallala Associates owned the following securities, held as a long-term investment. The securities are not held for influence or control of the investee.

Ordinary Shares	Shares	Cost
Carlene Co.	2,000	£60,000
Riverdale Co.	5,000	45,000
Raczynski Co.	1,500	30,000

On December 31, 2016, the total fair value of the securities was equal to its cost. In 2017, the following transactions occurred.

Aug.	1	Received £0.70 per share cash dividend on Carlene Co. ordinary shares.
Sept.	1	Sold 2,000 ordinary shares of Riverdale Co. for cash at £8 per share.
Oct.	1	Sold 800 ordinary shares of Carlene Co. for cash at £33 per share.
Nov.	1	Received £1 per share cash dividend on Raczynski Co. ordinary shares.
Dec.	15	Received £0.70 per share cash dividend on Carlene Co. ordinary shares.
	31	Received £1 per share annual cash dividend on Riverdale Co. ordinary shares.

At December 31, the fair values per share of the ordinary shares were Carlene Co. £32, Riverdale Co. £8, and Raczynski Co. £18.

Instructions

(a) Journalize the 2017 transactions and post to the account Share Investments. (Use the T-account form.)

(b) Prepare the adjusting entry at December 31, 2017, to show the securities at fair value. The shares should be classified as non-trading securities.

(b) Unrealized loss £3,600

(c) Show the statement of financial position presentation of the investments at December 31, 2017. At this date, Ogallala Associates has share capital—ordinary £1,500,000 and retained earnings £1,000,000.

Prepare entries under the cost and equity methods, and tabulate differences.

(LO 3)

P12-4A Control Alt Design Ltd. acquired 30% of the outstanding ordinary shares of Walter Company on January 1, 2017, by paying £800,000 for the 45,000 shares. Walter declared and paid £0.30 per share cash dividends on March 15, June 15, September 15, and December 15, 2017. Walter reported net income of £320,000 for the year. At December 31, 2017, the market price of Walter ordinary shares was £24 per share.

Instructions

(a) Prepare the journal entries for Control Alt Design for 2017, assuming Control Alt Design cannot exercise significant influence over Walter. Use the cost method and assume that Walter ordinary shares should be classified as a trading security.

(a) Total dividend revenue £54,000

(b) Prepare the journal entries for Control Alt Design for 2017, assuming Control Alt Design can exercise significant influence over Walter. Use the equity method.

(b) Revenue from share investments £96,000

(c) Indicate the statement of financial position and income statement account balances at December 31, 2017, under each method of accounting.

Journalize share investment transactions and show statement presentation.

(LO 3, 5, 6)

P12-5A The following securities are in Pascual Company SA's portfolio of long-term non-trading securities at December 31, 2016.

	Cost
1,000 shares of Reginald SA ordinary shares	R$52,000
1,400 shares of Elderberry A/S ordinary shares	84,000
1,200 shares of Mattoon AG preference shares	33,600

On December 31, 2016, the total cost of the portfolio equaled total fair value. Pascual had the following transactions related to the securities during 2017.

Jan.	20	Sold all 1,000 ordinary shares of Reginald at R$54.80 per share.
	28	Purchased 400 R$70 par value ordinary shares of Hachito Ltd. at R$79.20 per share.
	30	Received a cash dividend of R$1.05 per share on Elderberry ordinary shares.
Feb.	8	Received cash dividends of R$0.40 per share on Mattoon preference shares.
	18	Sold all 1,200 preference shares of Mattoon at R$26.30 per share.
July	30	Received a cash dividend of R$1.00 per share on Elderberry ordinary shares.
Sept.	6	Purchased an additional 600 R$70 par value ordinary shares of Hachito at R$82 per share.
Dec.	1	Received a cash dividend of R$1.35 per share on Hachito ordinary shares.

At December 31, 2017, the fair values of the securities were:

Elderberry A/S ordinary shares	R$64 per share
Hachito Ltd. ordinary shares	R$72 per share

Instructions

(a) Gain on sale of share investments R$2,800
(c) Unrealized loss R$3,280

(a) Prepare journal entries to record the transactions.
(b) Post to the investment account. (Use T-account.)
(c) Prepare the adjusting entry at December 31, 2017 to report the portfolio at fair value. Also prepare the required closing entry related to the investment securities.
(d) Show the statement of financial position presentation at December 31, 2017, for the investment-related accounts.

Prepare a statement of financial position.
(LO 5, 6)

P12-6A The following data, presented in alphabetical order, are taken from the records of Radar Industries Ltd.

Accounts payable	€ 240,000
Accounts receivable	140,000
Accumulated depreciation—buildings	180,000
Accumulated depreciation—equipment	52,000
Allowance for doubtful accounts	6,000
Bonds payable (10%, due 2023)	540,000
Buildings	950,000
Cash	42,000
Dividends payable	80,000
Equipment	275,000
Fair value adjustment—non-trading securities (Dr)	8,000
Goodwill	200,000
Income taxes payable	120,000
Inventory	170,000
Investment in Mara ordinary shares (30% ownership), at equity	380,000
Investment in Sasse ordinary shares (10% ownership), at cost	278,000
Land	390,000
Notes payable (due 2018)	70,000
Prepaid insurance	16,000
Retained earnings	103,000
Share capital—ordinary (€10 par value; 500,000 shares authorized, 150,000 shares issued)	1,500,000
Share premium—ordinary	130,000
Short-term investments, at fair value (and cost)	180,000
Unrealized gain—non-trading securities	8,000

The investment in Sasse ordinary shares is considered to be a long-term non-trading security.

Instructions

Total assets €2,791,000

Prepare a classified statement of financial position at December 31, 2017.

Prepare consolidated worksheet and statement of financial position when cost exceeds book value.
(LO 7)

***P12-7A** Liu Limited purchased all the outstanding ordinary shares of Yang Plastics, Ltd. on December 31, 2017. Just before the purchase, the condensed statements of financial position of the two companies appeared as follows.

	Liu Limited	Yang Plastics, Ltd.
Plant and equipment (net)	¥2,100,000	¥ 676,000
Current assets	1,480,000	435,500
	¥3,580,000	¥1,111,500
Share capital—ordinary	¥1,950,000	¥ 525,000
Retained earnings	1,052,000	494,000
Current liabilities	578,000	92,500
	¥3,580,000	¥1,111,500

Liu used current assets of ¥1,218,000 to acquire the shares of Yang Plastics. The excess of this purchase price over the book value of Yang Plastics' net assets is determined to be attributable ¥84,000 to Yang Plastics' plant and equipment and the remainder to goodwill.

Instructions

(a) Prepare the entry for Liu Limited's acquisition of Yang Plastics, Ltd. shares.
(b) Prepare a consolidated worksheet at December 31, 2017.
(c) Prepare a consolidated statement of financial position at December 31, 2017.

(b) Excess of cost over book value ¥115,000

PROBLEMS: SET B

P12-1B Cheese Farms is a grower of hybrid seed corn for Steenbergen Genetics Limited. It has had two exceptionally good years and has elected to invest its excess funds in bonds. The selected transactions, shown below, relate to bonds acquired as an investment by Cheese Farms, whose fiscal year ends on December 31.

Journalize debt investment transactions and show financial statement presentation.

(LO 2, 5, 6)

2017

Jan. 1 Purchased at face value £400,000 of Stombaugh Corporation 10-year, 6% bonds dated January 1, 2017, directly from the issuing corporation.
Dec. 31 Accrual of interest at year-end on the Stombaugh bonds. Interest is paid on January 1 of each year.

(Assume that all intervening transactions and adjustments have been properly recorded and the number of bonds owned has not changed from December 31, 2017, to December 31, 2019.)

2020

Jan. 1 Received the annual interest on the Stombaugh bonds.
Jan. 1 Sold £240,000 of Stombaugh bonds at 112.
Dec. 31 Accrual of interest at year-end on the Stombaugh bonds.

Instructions

(a) Journalize the listed transactions for the years 2017 and 2020.
(b) Show the statement of financial position presentation of the bonds and interest receivable at December 31, 2017. Assume the investments are considered long-term.

(a) 2017: Gain on sale of debt investments £28,800

P12-2B In January 2017, the management of Izmir A.Ş. concludes that it has sufficient cash to purchase some short-term investments in debt and share securities. During the year, the following transactions occurred.

Journalize investment transactions, prepare adjusting entry, and show statement presentation.

(LO 2, 3, 5, 6)

Feb. 1 Purchased 500 ordinary shares of Joy for ₺30,800.
Mar. 1 Purchased 600 ordinary shares of Aurelius for ₺20,300.
Apr. 1 Purchased 40 ₺1,000, 9% Sikich bonds for ₺40,000. Interest is payable annually on October 1.
July 1 Received a cash dividend of ₺0.60 per share on the Joy ordinary shares.
Aug. 1 Sold 300 ordinary shares of Joy at ₺69 per share.
Sept. 1 Received a ₺1 per share cash dividend on the Aurelius ordinary shares.
Oct. 1 Received the interest on the Sikich bonds.
Oct. 1 Sold the Sikich bonds for ₺44,000.

At December 31, the fair value of the Joy ordinary shares was ₺66 per share. The fair value of the Aurelius ordinary shares was ₺29 per share.

Instructions

(a) Journalize the transactions and post to the accounts Debt Investments and Share Investments. (Use the T-account form.)
(b) Prepare the adjusting entry at December 31, 2017, to report the investments at fair value. All securities are considered to be trading securities.
(c) Show the statement of financial position presentation of investment securities at December 31, 2017.
(d) Identify the income statement accounts and give the statement classification of each account.

(b) Unrealized loss ₺2,020

P12-3B On December 31, 2016, Eli Associates owned the following long-term investments.

Journalize transactions and adjusting entry for share investments.

(LO 3, 5, 6)

Ordinary Shares	Shares	Cost
Trowbridge Co.	4,000	€96,000
Holly Co.	5,000	30,000
Oriental Motors Co.	3,000	60,000

On this date, the total fair value of the securities was equal to its cost. The securities are not held for influence or control over the associates. In 2017, the following transactions occurred.

Aug.	1	Received €0.50 per share cash dividend on Trowbridge Co. ordinary shares.
Sept.	1	Sold 1,500 ordinary shares of Holly Co. for cash at €8.50 per share.
Oct.	1	Sold 600 ordinary shares of Trowbridge Co. for cash at €30 per share.
Nov.	1	Received €1 per share cash dividend on Oriental Motor Co. ordinary shares.
Dec.	15	Received €0.60 per share cash dividend on Trowbridge Co. ordinary shares.
	31	Received €1 per share annual cash dividend on Holly Co. ordinary shares.

At December 31, the fair values per share of the ordinary shares were Trowbridge Co. €23, Holly Co. €7, and Oriental Motors Co. €19.

Instructions

(a) Gain on sale, €3,750 and €3,600

(a) Journalize the 2017 transactions and post to the account Share Investments. (Use the T-account form.)
(b) Prepare the adjusting entry at December 31, 2017, to show the securities at fair value. The shares should be classified as non-trading securities.
(c) Show the statement of financial position presentation of the investment-related accounts at December 31, 2017. At this date, Eli Associates has share capital—ordinary €2,000,000 and retained earnings €1,200,000.

Prepare entries under the cost and equity methods, and tabulate differences.
(LO 3)

P12-4B Tuecke's Concrete acquired 20% of the outstanding ordinary shares of Drew, Ltd. on January 1, 2017, by paying £1,100,000 for 40,000 shares. Drew declared and paid a £0.50 per share cash dividend on June 30 and again on December 31, 2014. Drew reported net income of £600,000 for the year. At December 31, 2017, the market price of Drew's ordinary shares was £30 per share.

Instructions

(a) Total dividend revenue £40,000

(b) Revenue from share investment £120,000

(a) Prepare the journal entries for Tuecke's Concrete for 2017, assuming Tuecke's cannot exercise significant influence over Drew. Use the cost method and assume Drew ordinary shares should be classified as non-trading.
(b) Prepare the journal entries for Tuecke's Concrete for 2017, assuming Tuecke's can exercise significant influence over Drew. Use the equity method.
(c) Indicate the statement of financial position and income statement account balances at December 31, 2017, under each method of accounting.

Journalize share investment transactions and show statement presentation.
(LO 3, 5, 6)

P12-5B The following are in Verbitsky's Company's portfolio of long-term non-trading securities at December 31, 2016.

	Cost
700 shares of Sasha OAO ordinary shares	€35,000
900 shares of Ukraine OAO ordinary shares	42,000
800 shares of Zaba OAO preference shares	22,400

On December 31, the total cost of the portfolio equaled total fair value. Verbitsky's Company had the following transactions related to the securities during 2017.

Jan.	7	Sold all 700 ordinary shares of Sasha at €56 per share.
	10	Purchased 300 €70 par value ordinary shares of Vanucci SpA at €78.50 per share.
	26	Received a cash dividend of €1.15 per share on Ukraine ordinary shares.
Feb.	2	Received cash dividends of €0.40 per share on Zaba preference shares.
	10	Sold all 800 preference shares of Zaba at €26 per share.
July	1	Received a cash dividend of €1.05 per share on Ukraine ordinary shares.
Sept.	1	Purchased an additional 800 €70 par value ordinary shares of Vanucci SpA at €75 per share.
Dec.	15	Received a cash dividend of €1.50 per share on Vanucci SpA ordinary shares.

At December 31, 2017, the fair values of the securities were:

Ukraine OAO ordinary shares	€48 per share
Vanucci SpA ordinary shares	€72 per share

Instructions

(a) Prepare journal entries to record the transactions.
(b) Post to the investment account. (Use T-account.)
(c) Prepare the adjusting entry at December 31, 2017, to report the portfolio at fair value. Also prepare the closing entry required for the investment accounts.
(d) Show the statement of financial position presentation at December 31, 2017, for the investment-related accounts.

(a) Loss on sale €1,600
(c) Unrealized loss €3,150

P12-6B The following data, presented in alphabetical order, are taken from the records of Redlands Enterprises AG.

Prepare a statement of financial position.

(LO 5, 6)

Accounts payable	CHF 375,000
Accounts receivable	135,000
Accumulated depreciation—buildings	270,000
Accumulated depreciation—equipment	80,000
Allowance for doubtful accounts	10,000
Bonds payable (10%, due 2027)	570,000
Buildings	1,350,000
Cash	210,000
Dividends payable	75,000
Equipment	415,000
Goodwill	300,000
Income taxes payable	180,000
Inventory	255,000
Investment in Bonita AG shares (30% ownership), at equity	900,000
Land	780,000
Notes payable (due 2018)	110,000
Prepaid insurance	25,000
Retained earnings	480,000
Share capital—ordinary (CHF5 par value; 500,000 shares authorized, 440,000 shares issued)	2,200,000
Share premium—ordinary	300,000
Short-term investments, at fair value (and cost)	280,000

Instructions

Prepare a classified statement of financial position at December 31, 2017.

Total assets CHF4,290,000

***P12-7B** Patel Company Ltd. purchased all the outstanding ordinary shares of Singh Company Ltd. on December 31, 2017. Just before the purchase, the condensed statements of financial position of the two companies were as follows.

Prepare consolidated worksheet and statement of financial position when cost exceeds book value.

(LO 7)

	Patel Company	Singh Company
Plant and equipment (net)	€1,882,000	€351,000
Current assets	1,478,000	379,000
	€3,360,000	€730,000
Share capital—ordinary	€1,947,000	€360,000
Retained earnings	543,000	280,000
Current liabilities	870,000	90,000
	€3,360,000	€730,000

Patel used current assets of €700,000 to acquire the shares of Singh. The excess of this purchase price over the book value of Patel's net assets is determined to be attributable €25,000 to Singh's plant and equipment and the remainder to goodwill.

Instructions

(a) Prepare the entry for Patel Company's acquisition of Singh Company shares.
(b) Prepare a consolidated worksheet at December 31, 2017.
(c) Prepare a consolidated statement of financial position at December 31, 2017.

(b) Excess of cost over book value €35,000

COMPREHENSIVE PROBLEM: CHAPTERS 11 TO 12

CP12 **Part I** Mindy Feldkamp and her two colleagues, Oscar Lopez and Lori Melton, are personal trainers at an upscale health spa/resort in Madrid. They want to start a health club that specializes in health plans for people in the 50+ age range. The growing population in this age range and strong consumer interest in the health benefits of physical activity have convinced them they can profitably operate their own club. In addition to many other decisions, they need to determine what type of business organization they want. Oscar believes there are more advantages to the corporate form than a partnership, but he hasn't yet convinced Mindy and Lori. They have come to you, a small-business consulting specialist, seeking information and advice regarding the choice of starting a partnership versus a corporation.

Instructions

(a) Prepare a memo (dated May 26, 2016) that describes the advantages and disadvantages of both partnerships and corporations. Advise Mindy, Oscar, and Lori regarding which organizational form you believe would better serve their purposes. Make sure to include reasons supporting your advice.

Part II After deciding to incorporate, each of the three investors receives 20,000 €2 par ordinary shares on June 12, 2016, in exchange for their co-owned building (€200,000 fair value) and €100,000 total cash they contributed to the business. The next decision that Mindy, Oscar, and Lori need to make is how to obtain financing for renovation and equipment. They understand the difference between equity securities and debt securities, but do not understand the tax, net income, and earnings per share consequences of equity versus debt financing on the future of their business.

Instructions

(b) Prepare notes for a discussion with the three entrepreneurs in which you will compare the consequences of using equity versus debt financing. As part of your notes, show the differences in interest and tax expense assuming €1,400,000 is financed with ordinary shares, and then alternatively with debt. Assume that when ordinary shares are used, 140,000 shares will be issued. When debt is used, assume the interest rate on debt is 9%, the tax rate is 32%, and income before interest and taxes is €300,000. (You may want to use an electronic spreadsheet.)

Part III During the discussion about financing, Lori mentions that one of her clients, Roberto Marino, has approached her about buying a significant interest in the new club. Having an interested investor sways the three to issue equity securities to provide the financing they need. On July 21, 2016, Mr. Marino buys 90,000 shares at a price of €10 per share.

The club, LifePath Fitness, opens on January 12, 2017, and after a slow start begins to produce the revenue desired by the owners. The owners decide to pay themselves a share dividend since cash has been less than abundant since they opened their doors. The 10% share dividend is declared by the owners on July 27, 2017. The market price of the shares is €3 on the declaration date. The date of record is July 31, 2017 (there have been no changes in share ownership since the initial issuance), and the issue date is August 15, 2017. By the middle of the fourth quarter of 2017, the cash flow of LifePath Fitness has improved to the point that the owners feel ready to pay themselves a cash dividend. They declare a €0.05 cash dividend per share on December 4, 2017. The record date is December 14, 2017, and the payment date is December 24, 2017.

Instructions

(c) (1) Record all of the transactions related to the ordinary shares of LifePath Fitness during the years 2016 and 2017. (2) Indicate how many shares are issued and outstanding after the share dividend is issued.

Part IV Since the club opened, a major concern has been the pool facilities. Although the existing pool is adequate, Mindy, Oscar, and Lori all desire to make LifePath a cutting-edge facility. Until the end of 2017, financing concerns prevented this improvement. However, because there has been steady growth in clientele, revenue, and income since the third quarter of 2017, the owners have explored possible financing options. They are hesitant to issue shares and change the ownership mix because they have been able to work together as a team with great effectiveness. They have formulated a plan to issue secured term bonds to raise the needed €600,000 for the pool facilities. By the end of December 2017, everything was in place for the bond issue to go ahead. On January 1, 2018, the bonds were issued for €548,000. The bonds pay annual interest of 6% on January 1 of each year. The bonds mature in 10 years, and amortization is computed using the straight-line method.

Instructions

(d) Record (1) the issuance of the secured bonds, (2) the adjusting entry required on December 31, 2018, (3) the interest payment made on January 1, 2019, and (4) the interest accrual on December 31, 2019.

Part V Mr. Marino's purchase of the shares of LifePath Fitness was done through his business. The share investment has always been accounted for using the cost method on his firm's books. However, early in 2019 he decided to take his company public. He is preparing an IPO (initial public offering), and he needs to have the firm's financial statements audited. One of the issues to be resolved is to restate the share investment in LifePath Fitness using the equity method, since Mr. Marino's ownership percentage is greater than 20%.

Instructions

(e) (1) Give the entries that would have been made on Marino's books if the equity method of accounting for investments had been used from the initial investment through 2018. Assume the following data for LifePath.

	2016	2017	2018
Net income	€30,000	€70,000	€105,000
Total cash dividends	€ 2,100	€20,000	€ 50,000

(2) Compute the balance in the Share Investments account (as it relates to LifePath Fitness) at the end of 2018.

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–11.)

MC12 Mei-ling has been approached by Ken Thornton, a shareholder of The Beanery Coffee. Ken wants to retire and would like to sell his 1,000 shares in The Beanery Coffee, which represents 30% of all shares issued. The Beanery is currently operated by Ken's twin daughters, who each own 35% of the ordinary shares. The Beanery not only operates a coffee shop but also roasts and sells beans to retailers, under the name "Rocky Mountain Beanery."

Ken has met with Curtis and Mei-ling to discuss the business operation. All have concluded that there would be many advantages for Matcha & Coffee Creations to acquire an interest in The Beanery Coffee. Despite the apparent advantages, however, Mei-ling and Curtis are still not convinced that they should participate in this business venture.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP12-1 The financial statements of TSMC are presented in Appendix A. The complete annual report, including the notes to the financial statements, is available in the Investors section of the company's website at *www.tsmc.com*.

Instructions

(a) See Note 4 to the financial statements and indicate what the consolidated financial statements include.

(b) Using TSMC's consolidated statement of cash flows, determine how much was spent for capital acquisitions during the current year.

Comparative Analysis Problem:
Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP12-2 Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C. Complete annual reports, including notes to the financial statements, are available in the Investor Relations sections at *www.nestle.com* and *www.petrafoods.com*.

Instructions

(a) Based on the information contained in these financial statements, determine the following for each company.
  (1) Net cash provided (used) for investing (investment) activities for the current year (from the statement of cash flows).
  (2) Cash used for capital expenditures during the current year.

(b) Each of Nestlé's financial statements is labeled "consolidated." What has been consolidated? That is, from the contents of Nestlé's annual report, identify by name the divisions that have been consolidated.

Real-World Focus

BYP12-3 Most publicly traded companies are examined by numerous analysts. These analysts often don't agree about a company's future prospects. In this exercise, you will find analysts' ratings about companies and make comparisons over time and across companies in the same industry. You will also see to what extent the analysts experienced "earnings surprises." Earnings surprises can cause changes in share prices.

Address: **biz.yahoo.com/i/** or go to **www.wiley.com/college/weygandt**

Steps

1. Choose a company.
2. Use the index to find the company's name.
3. Choose **Research**.

Instructions

(a) How many analysts rated the company?
(b) What percentage rated it a strong buy?
(c) What was the average rating for the week?
(d) Did the average rating improve or decline relative to the previous week?
(e) What was the amount of the earnings surprise percentage during the last quarter?

Critical Thinking

Decision-Making Across the Organization

BYP12-4 At the beginning of the question-and-answer portion of the annual shareholders' meeting of Kemper Ltd., shareholder Mike Kerwin asks, "Why did management sell the holdings in UMW Company at a loss when this company has been very profitable during the period Kemper held its shares?"

Since president Tony Chavez has just concluded his speech on the recent success and bright future of Kemper, he is taken aback by this question and responds, "I remember we paid £1,300,000 for those shares some years ago. I am sure we sold these shares at a much higher price. You must be mistaken."

Kerwin retorts, "Well, right here in footnote number 7 to the annual report it shows that 240,000 shares, a 30% interest in UMW, were sold on the last day of the year. Also, it states that UMW earned £520,000 this year and paid out £160,000 in cash dividends. Further, a summary statement indicates that in past years, while Kemper held UMW shares, UMW earned £1,240,000 and paid out £440,000 in dividends. Finally, the income statement for this year shows a loss on the sale of UMW shares of £180,000. So, I doubt that I am mistaken."

Red-faced, president Chavez turns to you.

Instructions

With the class divided into groups, answer the following.

(a) What dollar amount did Kemper receive upon the sale of the UMW shares?
(b) Explain why both shareholder Kerwin and president Chavez are correct.

Communication Activity

BYP12-5 Bunge Company Ltd. has purchased two securities for its portfolio. The first is a share investment in Longley Industries, one of its suppliers. Bunge purchased 10% of Longley with the intention of holding it for a number of years but has no intention of purchasing more shares. The second investment was a purchase of debt securities. Bunge purchased the debt securities because its analysts believe that changes in market interest rates will cause these securities to increase in value in a short period of time. Bunge intends to sell the debt securities as soon as they have increased in value.

Instructions

Write a memo to Max Scholes, the chief financial officer, explaining how to account for each of these investments. Explain what the implications for reported income are from this accounting treatment.

Ethics Case

BYP12-6 Bartlet Financial Services Company holds a large portfolio of debt and share securities as an investment. The total fair value of the portfolio at December 31, 2017, is greater than total cost. Some securities have increased in value and others have decreased. Deb Faust, the financial vice president, and Jan McCabe, the controller, are in the process of classifying for the first time the securities in the portfolio.

Faust suggests classifying the securities that have increased in value as trading securities in order to increase net income for the year. She wants to classify the securities that have decreased in value as long-term non-trading securities, so that the decreases in value will not affect 2017 net income.

McCabe disagrees. She recommends classifying the securities that have decreased in value as trading securities and those that have increased in value as long-term non-trading securities. McCabe argues that the company is having a good earnings year and that recognizing the losses now will help to smooth income for this year. Moreover, for future years, when the company may not be as profitable, the company will have built-in gains.

Instructions

(a) Will classifying the securities as Faust and McCabe suggest actually affect earnings as each says it will?

(b) Is there anything unethical in what Faust and McCabe propose? Who are the stakeholders affected by their proposals?

(c) Assume that Faust and McCabe properly classify the portfolio. At year-end, Faust proposes to sell the securities that will increase 2017 net income, and McCabe proposes to sell the securities that will decrease 2017 net income. Is this unethical?

Answers to Insight and Accounting Across the Organization Questions

p. 602 Hey, I Thought It Was Safe! Q: Why is the fluctuating value of bonds of concern if a company intends to hold them until maturity? **A:** If a company has to sell its investment in bonds before maturity, the sale proceeds may be substantially less than the original purchase price due to rising interest rates, thus causing an investment loss.

p. 607 Who's in Control? Q: Where on adidas's statement of financial position will you find its investment in Rockport? **A:** Because adidas owns Rockport, adidas does not report Rockport in the investment section of its statement of financial position. Instead, Rockport's assets and liabilities are included and commingled with the assets and liabilities of adidas.

A Look at U.S. GAAP

Learning Objective 8

Compare the accounting for investments under IFRS and U.S. GAAP.

The accounting and reporting for investments under IFRS and GAAP are very similar.

Key Points

- The basic accounting entries to record the acquisition of debt securities, the receipt of interest, and the sale of debt securities are the same under IFRS and GAAP.
- The basic accounting entries to record the acquisition of share investments, the receipt of dividends, and the sale of share securities are the same under IFRS and GAAP.

- Both IFRS and GAAP require that companies determine how to measure their financial assets based on two criteria:
  - ♦ The company's business model for managing their financial assets; and
  - ♦ The contractual cash flow characteristics of the financial asset.

  If a company has (1) a business model whose objective is to hold assets in order to collect contractual cash flows and (2) the contractual terms of the financial asset gives specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, then the company should use cost (often referred to as amortized cost).

  For example, assume that Mitsubishi (JPN) purchases a bond investment that it intends to hold to maturity (held-for-collection). Its business model for this type of investment is to collect interest and then principal at maturity. The payment dates for the interest rate and principal are stated on the bond. In this case, Mitsubishi accounts for the investment at cost. If, on the other hand, Mitsubishi purchased the bonds as part of a trading strategy to speculate on interest rate changes (a trading investment), then the debt investment is reported at fair value. As a result, only debt investments such as receivables, loans, and bond investments that meet the two criteria above are recorded at amortized cost. All other debt investments are recorded and reported at fair value.

Similarities

- Both IFRS and GAAP use the same criteria to determine whether the equity method of accounting should be used—that is, significant influence with a general guide of over 20% ownership. IFRS uses the term **associate investment** rather than equity investment to describe its investment under the equity method.
- Under IFRS, both the investor and an associate company should follow the same accounting policies. As a result, in order to prepare financial information, adjustments are made to the associate's policies to conform to the investor's books. GAAP does not have that requirement.
- Both IFRS and GAAP use held-for-collection (debt investments), trading (both debt and equity investments), and non-trading equity investment classifications. These classifications are based on the business model used to manage the investments and the type of security.
- The accounting for trading investments is the same between GAAP and IFRS. Also, held-for-collection investments are accounted for at amortized cost. Gains and losses on non-trading equity investments (IFRS) are reported in other comprehensive income.
- Unrealized gains and losses related to non-trading securities are reported in other comprehensive income under GAAP and IFRS. These gains and losses that accumulate are then reported in the statement of financial position.

Differences

- The basis for consolidation under IFRS is control. Under GAAP, a bipolar approach is used, which is a risk-and-reward model (often referred to as a variable-entity approach) and a voting-interest approach. However, under both systems, for consolidation to occur, the investor company must generally own 50% of another company.
- Under GAAP, companies use Other Revenues and Gains or Other Expenses and Losses in its income statement presentation. Under IFRS, companies will generally classify these items as unusual items or financial items.

■ Looking to the Future

As indicated earlier, both the FASB and IASB have indicated (conceptually) that they believe that all financial instruments should be reported at fair value and that changes in fair value should be reported as part of net income. However, both the FASB and IASB have decided to permit amortized cost for debt investments held-for-collection. Hopefully, they will eventually arrive at fair value measurement for all financial instruments.

GAAP Practice

GAAP Self-Test Questions

1. The following asset is **not** considered a financial asset under both GAAP and IFRS:
(a) trading securities.
(b) equity securities.
(c) held-for-collection securities.
(d) inventories.

2. Under GAAP, the equity method of accounting for long-term investments in ordinary shares should be used when the investor has significant influence over an investee and owns:
(a) between 20% and 50% of the investee's ordinary shares.
(b) 30% or more of the investee's ordinary shares.
(c) more than 50% of the investee's ordinary shares.
(d) less than 20% of the investee's ordinary shares.

3. At the end of the first year of operations, the total cost of the trading investments portfolio is \$120,000. Total fair value is \$115,000. The financial statements under GAAP should show:
(a) a reduction in the carrying value of the asset of \$5,000 in current assets and an unrealized loss of \$5,000 in other expenses and losses.
(b) a reduction in the carrying value of the asset of \$5,000 in current assets and an unrealized loss of \$5,000 in the equity section of the balance sheet.
(c) a reduction in the carrying value of the asset of \$5,000 in current assets and an unrealized loss of \$5,000 in other comprehensive income.
(d) a reduction in the carrying value of the asset \$5,000 in current assets and a realized loss of \$5,000 in other expenses and losses.

4. Under GAAP, unrealized gains on non-trading share investments should:
(a) be reported as other revenues and gains in the income statement as part of net income.
(b) be reported as other gains on the income statement as part of net income.
(c) not be reported on the income statement or statement of financial position.
(d) be reported as other comprehensive income.

5. Under GAAP, the unrealized loss on trading investments should be reported:
(a) as part of other comprehensive loss reducing net income.
(b) on the income statement reducing net income.
(c) as part of other comprehensive loss not affecting net income.
(d) directly to equity bypassing the income statement.

GAAP Financial Reporting Problem: Apple Inc.

GAAP12-1 The financial statements of Apple are available in Appendix D. The complete annual report, including the notes to the financial statements, is available at *http://investor.apple.com*.

Instructions

(a) Determine the percentage increase for (1) short-term marketable securities from 2012 to 2013, and (2) long-term marketable securities from 2012 to 2013.
(b) Using Apple's consolidated statement of cash flows, determine:
  (1) Purchases of marketable securities during the current year.
  (2) How much was spent for business acquisitions, net of cash acquired during the current year.

Answers to GAAP Self-Test Questions

1. d **2.** a **3.** a **4.** d **5.** b

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✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER 13 Statement of Cash Flows

FEATURE STORY What Should We Do with This Cash?

In today's environment, companies must be ready to respond to changes quickly in order to survive and thrive. This requires that they manage their cash very carefully. A company's cash needs, and how it addresses them, depend on many factors. For example, many high-tech companies need significant cash in order to grow, especially in their early years. To conserve cash, some young companies pay their employees with company shares, or share options. Not only does this conserve cash, but it creates an incentive for employees to work hard. If the company succeeds, then the value of its company shares will increase.

Successful mature companies frequently generate lots of cash—often exceeding their immediate needs. This excess cash is often referred to as "free cash flow." A company with significant free cash flow must decide what to do with this cash. If it doesn't want to expand its capacity in its existing product lines, it might decide to acquire businesses in other industries. Or, it might increase its dividend payments, buy back shares, or pay down its debt.

In some instances, management will simply accumulate mass amounts of cash, which can result in shareholder criticism. For example, Keyence (JPN), a manufacturer of sensors and measuring instruments, generated significant amounts of cash for many years. The company is debt-free and not inclined toward acquisitions. But, it also has been reluctant to pay out dividends. Some have suggested that its aversion to dividend payments is due to the fact that the company's chairman and largest shareholder does not want to incur the personal income tax that would result if he received dividends on his 25% share ownership. At a recent shareholder meeting, many of the company's other shareholders complained loudly that the company's returns were being dragged down because it was accumulating so much cash and investing it in low-paying government securities. They demanded that the company increase its dividend.

It appears that there is a general movement in Japan and other maturing Asian economies to begin to pay higher dividends. Many suffer from excess productive capacity, so it makes sense for them to use their excess cash to either pay higher dividends or buy back shares. As this occurs, the percentage of cash flow paid out in dividends may well begin to approach about 50%, which is common in mature markets such as Europe.

After the financial crisis of 2007–2008, emerging-market companies and developed-market companies had quite different philosophies regarding cash flows. Companies in developed countries accumulated cash and paid down debt. In contrast, companies in developing countries continued to spend cash to expand operations as well as borrow it to finance their expansion.

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- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 679–686
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problems
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1 Indicate the usefulness of the statement of cash flows.

2 Distinguish among operating, investing, and financing activities.

3 Prepare a statement of cash flows using the indirect method.

4 Analyze the statement of cash flows.

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PREVIEW OF CHAPTER 13

The statement of financial position, income statement, and retained earnings statement do not always show the whole picture of the financial condition of a company or institution. In fact, looking at the financial statements of some well-known companies, a thoughtful investor might ask questions like these: How did Anheuser-Busch InBev (BEL) finance cash dividends of €2.1 billion in a year? How could Cathay Pacific Airways (HKG) purchase new assets that cost HK$9.2 billion in a year in which it reported a net loss of over HK$8.6 billion? How did the companies that spent a combined fantastic $3.4 trillion on mergers and acquisitions in a recent year finance those deals? Answers to these and similar questions can be found in this chapter, which presents the statement of cash flows.

The content and organization of this chapter are as follows.

STATEMENT OF CASH FLOWS

Statement of Cash Flows: Usefulness and Format	Preparing the Statement of Cash Flows—Indirect Method	Using Cash Flows to Evaluate a Company
• Usefulness • Classifications • Significant non-cash activities • Format • Preparation • Indirect and direct methods	• Step 1: Operating activities • Summary of conversion to net cash provided by operating activities • Step 2: Investing and financing activities • Step 3: Net change in cash	• Free cash flow

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Statement of Cash Flows: Usefulness and Format

Learning Objective 1

Indicate the usefulness of the statement of cash flows.

The statement of financial position, income statement, and retained earnings statement provide only limited information about a company's cash flows (cash receipts and cash payments). For example, comparative statements of financial position show the increase in property, plant, and equipment during the year. But, they do not show how the additions were financed or paid for. The income statement shows net income. But, it does not indicate the amount of cash generated by operating activities. The retained earnings statement shows cash dividends declared but not the cash dividends paid during the year. None of these statements presents a detailed summary of where cash came from and how it was used.

Usefulness of the Statement of Cash Flows

The **statement of cash flows** reports the cash receipts, cash payments, and net change in cash resulting from operating, investing, and financing activities during a period. The information in a statement of cash flows should help investors, creditors, and others assess the following.

1. **The entity's ability to generate future cash flows.** By examining relationships between items in the statement of cash flows, investors can make predictions of the amounts, timing, and uncertainty of future cash flows better than they can from accrual-basis data.
2. **The entity's ability to pay dividends and meet obligations.** If a company does not have adequate cash, it cannot pay employees, settle debts, or pay dividends. Employees, creditors, and shareholders should be particularly interested in this statement because it alone shows the flows of cash in a business.
3. **The reasons for the difference between net income and net cash provided (used) by operating activities.** Net income provides information on the success or failure of a business. However, some financial statement users are critical of accrual-basis net income because it requires many estimates. As a result, users often challenge the reliability of the number. Such is not the case with cash. Many readers of the statement of cash flows want to know the reasons for the difference between net income and net cash provided by operating activities. Then, they can assess for themselves the reliability of the income number.
4. **The cash investing and financing transactions during the period.** By examining a company's investing and financing transactions, a financial statement reader can better understand why assets and liabilities changed during the period.

Ethics Note

Though we would discourage reliance on cash flows to the exclusion of accrual accounting, comparing net cash provided by operating activities to net income can reveal important information about the "quality" of reported net income. Such a comparison can reveal the extent to which net income provides a good measure of actual performance.

Classification of Cash Flows

Learning Objective 2

Distinguish among operating, investing, and financing activities.

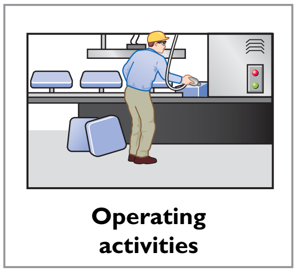
The statement of cash flows classifies cash receipts and cash payments as operating, investing, and financing activities. Transactions and other events characteristic of each kind of activity are as follows.

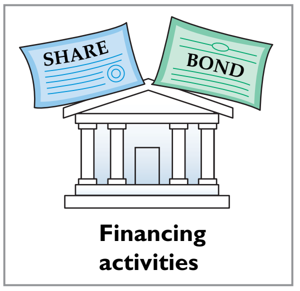
1. **Operating activities** include the cash effects of transactions that create revenues and expenses. They thus enter into the determination of net income.
2. **Investing activities** include (a) acquiring and disposing of investments and property, plant, and equipment, and (b) lending money and collecting the loans.
3. **Financing activities** include (a) obtaining cash from issuing debt and repaying the amounts borrowed, and (b) obtaining cash from shareholders, repurchasing shares, and paying dividends.

The operating activities category is the most important. It shows the cash provided by company operations. This source of cash is generally considered to be the best measure of a company's ability to generate sufficient cash to continue as a going concern.

Illustration 13-1 lists typical cash receipts and cash payments within each of the three classifications. **Study the list carefully.** It will prove very useful in solving homework exercises and problems.[1]

Illustration 13-1
Typical receipt and payment classifications





TYPES OF CASH INFLOWS AND OUTFLOWS

Operating activities—Income statement items
- Cash inflows:
  - From sale of goods or services.
  - From interest received and dividends received.
- Cash outflows:
  - To suppliers for inventory.
  - To employees for wages.
  - To government for taxes.
  - To lenders for interest.
  - To others for expenses.

Investing activities—Changes in investments and non-current assets
- Cash inflows:
  - From sale of property, plant, and equipment.
  - From sale of investments in debt or equity securities of other entities.
  - From collection of principal on loans to other entities.
- Cash outflows:
  - To purchase property, plant, and equipment.
  - To purchase investments in debt or equity securities of other entities.
  - To make loans to other entities.

Financing activities—Changes in non-current liabilities and equity
- Cash inflows:
  - From sale of ordinary shares.
  - From issuance of long-term debt (bonds and notes).
- Cash outflows:
  - To shareholders as dividends.
  - To redeem long-term debt or reacquire ordinary shares (treasury shares).

Note the following general guidelines:

1. Operating activities involve income statement items.
2. Investing activities involve cash flows resulting from changes in investments and non-current asset items.
3. Financing activities involve cash flows resulting from changes in non-current liability and equity items.

IFRS requires that the amount of cash paid for taxes, as well as cash flows from interest and dividends received and paid, be disclosed. The category (operating, investing, or financing) that each item was included in must be disclosed as well.

[1]IFRS allows companies some flexibility regarding the classification of certain items. Interest and dividends paid can be classified as either operating or financing, depending on what treatment the company thinks is most appropriate. Similarly, interest and dividends received can be classified as either operating or investing. Taxes paid are classified as operating except in circumstances where they can be identified with specific investing or financing activities. In order to limit the complexity of our presentation and to avoid ambiguity in assignment material, in Illustration 13-1 we have identified specific treatment for each of these items rather than allowing choices. *All assignment and testing material is based on this treatment.*

An example of such a disclosure from the notes to Daimler's (DEU) financial statements is provided in Illustration 13-2.

Illustration 13-2
Daimler's statement of cash flows note

Real World

DAIMLER
Annual Report

Cash provided by operating activities includes the following cash flows:

(in millions of €)	2013	2012	2011
Interest paid	(385)	(561)	(489)
Interest received	172	192	234
Income taxes paid, net	(1,309)	(2,102)	(2,817)
Dividends received	144	192	140

Significant Non-Cash Activities

Not all of a company's significant activities involve cash. Examples of significant non-cash activities are as follows.

1. Direct issuance of ordinary shares to purchase assets.
2. Conversion of bonds into ordinary shares.
3. Direct issuance of debt to purchase assets.
4. Exchanges of plant assets.

• HELPFUL HINT
Do not include non-cash investing and financing activities in the body of the statement of cash flows. Report this information in a separate schedule.

Companies do not report in the body of the statement of cash flows significant financing and investing activities that do not affect cash. Instead, they report these activities in either a **separate note or supplementary schedule** to the financial statements.

In solving homework assignments, you should present significant non-cash investing and financing activities in a separate note to the financial statements. (See the last entry in Illustration 13-3, on page 649, for an example.)

Accounting Across the Organization **Net *What*?**

Bloomberg/Getty Images, Inc.

Net income is not the same as net cash provided by operating activities. Below are some results from recent annual reports (currencies in millions). Note the wide disparity among these companies, all of which engage in retail merchandising.

Company	Net Income	Net Cash Provided by Operating Activities
Lenovo (CHN)	$632	$20
BP (GBR)	£23,758	£21,100
Anheuser-Busch InBev (BEL)	$16,518	$17,451
Carrefour (FRA)	€1,364	€2,039

Q In general, why do differences exist between net income and net cash provided by operating activities? (See page 706.)

Format of the Statement of Cash Flows

The general format of the statement of cash flows presents the results of the three activities discussed previously—operating, investing, and financing—plus the significant non-cash investing and financing activities. Illustration 13-3 shows a widely used form of the statement of cash flows.

Illustration 13-3
Format of statement of cash flows

COMPANY NAME Statement of Cash Flows For the Period Covered		
Cash flows from operating activities		
(List of individual items)	XX	
Net cash provided (used) by operating activities		XXX
Cash flows from investing activities		
(List of individual inflows and outflows)	XX	
Net cash provided (used) by investing activities		XXX
Cash flows from financing activities		
(List of individual inflows and outflows)	XX	
Net cash provided (used) by financing activities		XXX
Net increase (decrease) in cash		XXX
Cash at beginning of period		XXX
Cash at end of period		XXX
Note xx		
Non-cash investing and financing activities		
(List of individual non-cash transactions)		XXX

The cash flows from operating activities section always appears first, followed by the investing activities section, and then the financing activities section. The sum of the operating, investing, and financing sections equals the net increase or decrease in cash for the period. This amount is added to the beginning cash balance to arrive at the ending cash balance—the same amount reported on the statement of financial position.

> DO IT!

Classification of Cash Flows

Action Plan

✔ Identify the three types of activities used to report all cash inflows and outflows.

✔ Report as operating activities the cash effects of transactions that create revenues and expenses and enter into the determination of net income.

✔ Report as investing activities transactions that (a) acquire and dispose of investments and non-current assets and (b) lend money and collect loans.

During its first week, Hu Na Company had these transactions.

1. Issued 100,000 HK$50 par value ordinary shares for HK$8,000,000 cash.
2. Borrowed HK$2,000,000 from Castle Bank, signing a 5-year note bearing 8% interest.
3. Purchased two semi-trailer trucks for HK$1,700,000 cash.
4. Paid employees HK$120,000 for salaries and wages.
5. Collected HK$200,000 cash for services performed.

Classify each of these transactions by type of cash flow activity.

Action Plan (cont'd.)

✔ Report as financing activities transactions that (a) obtain cash from issuing debt and repay the amounts borrowed and (b) obtain cash from shareholders and pay them dividends.

Solution

1. Financing activity	4. Operating activity
2. Financing activity	5. Operating activity
3. Investing activity	

Related exercise material: **BE13-1, BE13-2, BE13-3, E13-1, E13-2, E13-3, and DO IT! 13-1.**

✔ The Navigator

Preparing the Statement of Cash Flows

Companies prepare the statement of cash flows differently from the three other basic financial statements. First, it is not prepared from an adjusted trial balance. It requires detailed information concerning the changes in account balances that occurred between two points in time. An adjusted trial balance will not provide the necessary data. Second, the statement of cash flows deals with cash receipts and payments. As a result, the company **adjusts** the effects of the use of accrual accounting **to determine cash flows**.

The information to prepare this statement usually comes from three sources:

- **Comparative statements of financial position.** Information in the comparative statements of financial position indicates the amount of the changes in assets, liabilities, and equities from the beginning to the end of the period.
- **Current income statement.** Information in this statement helps determine the amount of net cash provided or used by operating activities during the period.
- **Additional information.** Such information includes transaction data that are needed to determine how cash was provided or used during the period.

Preparing the statement of cash flows from these data sources involves three major steps as explained in Illustration 13-4.

Illustration 13-4
Three major steps in preparing the statement of cash flows

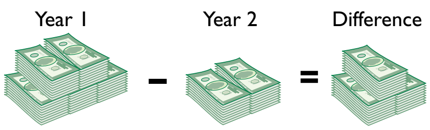
STEP 1: Determine net cash provided/used by operating activities by converting net income from an accrual basis to a cash basis.

This step involves analyzing not only the current year's income statement but also comparative statements of financial position and selected additional data.

STEP 2: Analyze changes in non-current asset and liability accounts and record as investing and financing activities, or disclose as non-cash transactions.

This step involves analyzing comparative statement of financial position data and selected additional information for their effects on cash.

STEP 3: Compare the net change in cash on the statement of cash flows with the change in the Cash account reported on the statement of financial position to make sure the amounts agree.



The difference between the beginning and ending cash balances can be easily computed from comparative statements of financial position.

Indirect and Direct Methods

In order to perform Step 1, a company **must convert net income from an accrual basis to a cash basis**. This conversion may be done by either of two methods: (1) the indirect method or (2) the direct method. **Both methods arrive at the same amount** for "Net cash provided by operating activities." They differ in **how** they arrive at the amount.

The **indirect method** adjusts net income for items that do not affect cash. A great majority of companies use this method. Companies favor the indirect method for two reasons: (1) it is easier and less costly to prepare, and (2) it focuses on the differences between net income and net cash flow from operating activities.

The **direct method** shows operating cash receipts and payments, making it more consistent with the objective of a statement of cash flows. The IASB has expressed a preference for the direct method but allows the use of either method.

The next section illustrates the more popular indirect method. Appendix 13A illustrates the direct method.

Preparing the Statement of Cash Flows—Indirect Method

Learning Objective 3

Prepare a statement of cash flows using the indirect method.

To explain how to prepare a statement of cash flows using the indirect method, we use financial information from Computer Services Company. Illustration 13-5 presents Computer Services' current- and previous-year statements of financial position, its current-year income statement, and related financial information for the current year.

Illustration 13-5
Comparative statements of financial position, income statement, and additional information for Computer Services Company

COMPUTER SERVICES COMPANY
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**	**Change in Account Balance Increase/Decrease**
Property, plant, and equipment			
Land	€130,000	€ 20,000	€110,000 Increase
Buildings	160,000	40,000	120,000 Increase
Accumulated depreciation—buildings	(11,000)	(5,000)	6,000 Increase
Equipment	27,000	10,000	17,000 Increase
Accumulated depreciation—equipment	(3,000)	(1,000)	2,000 Increase
Current assets			
Prepaid expenses	5,000	1,000	4,000 Increase
Inventory	15,000	10,000	5,000 Increase
Accounts receivable	20,000	30,000	10,000 Decrease
Cash	55,000	33,000	22,000 Increase
Total assets	€398,000	€138,000	
Equity and Liabilities			
Equity			
Share capital—ordinary	€ 70,000	€ 50,000	€ 20,000 Increase
Retained earnings	164,000	48,000	116,000 Increase
Non-current liabilities			
Bonds payable	130,000	20,000	110,000 Increase
Current liabilities			
Accounts payable	28,000	12,000	16,000 Increase
Income taxes payable	6,000	8,000	2,000 Decrease
Total equity and liabilities	€398,000	€138,000	

Illustration 13-5
(cont'd.)

COMPUTER SERVICES COMPANY
Income Statement
For the Year Ended December 31, 2017

Sales revenue		€507,000
Cost of goods sold	€150,000	
Operating expenses (excluding depreciation)	111,000	
Depreciation expense	9,000	
Loss on disposal of plant assets	3,000	
Interest expense	42,000	315,000
Income before income tax		192,000
Income tax expense		47,000
Net income		€145,000

Additional information for 2017:
1. Depreciation expense was comprised of €6,000 for building and €3,000 for equipment.
2. The company sold equipment with a book value of €7,000 (cost €8,000, less accumulated depreciation €1,000) for €4,000 cash.
3. Issued €110,000 of long-term bonds in direct exchange for land.
4. A building costing €120,000 was purchased for cash. Equipment costing €25,000 was also purchased for cash.
5. Issued ordinary shares for €20,000 cash.
6. The company declared and paid a €29,000 cash dividend.

We will now apply the three steps for preparing a statement of cash flows to the information provided for Computer Services Company. *(Appendix 13C demonstrates an approach that employs T-accounts to prepare the statement of cash flows. Many students find this approach helpful. We encourage you to give it a try as you walk through the Computer Services example.)*

Step 1: Operating Activities

DETERMINE NET CASH PROVIDED/USED BY OPERATING ACTIVITIES BY CONVERTING NET INCOME FROM AN ACCRUAL BASIS TO A CASH BASIS

To determine net cash provided by operating activities under the indirect method, companies **adjust net income in numerous ways**. A useful starting point is to understand **why** net income must be converted to net cash provided by operating activities.

Under IFRS, companies use the accrual basis of accounting. This basis requires that companies record revenue when their performance obligation is satisfied and record expenses when incurred. Revenues may include credit sales for which the company has not yet collected cash. Expenses incurred may include some items that the company has not yet paid in cash. Thus, under the accrual basis, net income is not the same as net cash provided by operating activities.

Therefore, under the indirect method, companies must adjust net income to convert certain items to the cash basis. The indirect method (or reconciliation method) starts with net income and converts it to net cash provided by operating activities. Illustration 13-6 lists the three types of adjustments.

Net Income	+/−	Adjustments	=	Net Cash Provided/ Used by Operating Activities
		• **Add back non-cash expenses**, such as depreciation expense and amortization expense. • **Deduct gains and add losses** that resulted from investing and financing activities. • **Analyze changes** to non-cash current asset and current liability accounts.		

Illustration 13-6
Three types of adjustments to convert net income to net cash provided by operating activities

We explain the three types of adjustments in the next three sections.

DEPRECIATION EXPENSE

Computer Services' income statement reports depreciation expense of €9,000. Although depreciation expense reduces net income, it does not reduce cash. In other words, depreciation expense is a non-cash charge. The company must add it back to net income to arrive at net cash provided by operating activities. Computer Services reports depreciation expense in the statement of cash flows as shown below.

• HELPFUL HINT
Depreciation is similar to any other expense in that it reduces net income. It differs in that it does not involve a current cash outflow. That is why it must be *added back* to net income to arrive at net cash provided by operating activities.

Illustration 13-7
Adjustment for depreciation

Cash flows from operating activities	
Net income	€145,000
Adjustments to reconcile net income to net cash provided by operating activities:	
Depreciation expense	**9,000**
Net cash provided by operating activities	€154,000

As the first adjustment to net income in the statement of cash flows, companies frequently list depreciation and similar non-cash charges such as amortization of intangible assets and bad debt expense.

LOSS ON DISPOSAL OF PLANT ASSETS

Illustration 13-1 (page 647) states that cash received from the sale (disposal) of plant assets should be reported in the investing activities section. Because of this, **companies must eliminate from net income all gains and losses related to the disposal of plant assets, to arrive at net cash provided by operating activities**.

In our example, Computer Services' income statement reports a €3,000 loss on disposal of plant assets (book value €7,000, less €4,000 cash received from disposal of plant assets). The company's loss of €3,000 should not be included in the operating activities section of the statement of cash flows. Illustration 13-8 shows that the €3,000 loss is eliminated by adding €3,000 back to net income to arrive at net cash provided by operating activities.

Illustration 13-8
Adjustment for loss on disposal of plant assets

Cash flows from operating activities		
Net income		€145,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	€9,000	
Loss on disposal of plant assets	**3,000**	12,000
Net cash provided by operating activities		€157,000

If a gain on disposal occurs, the company deducts the gain from its net income in order to determine net cash provided by operating activities. **In the case of either a gain or a loss, companies report as a source of cash in the investing activities section of the statement of cash flows the actual amount of cash received from the sale.**

CHANGES TO NON-CASH CURRENT ASSET AND CURRENT LIABILITY ACCOUNTS

A final adjustment in reconciling net income to net cash provided by operating activities involves examining all changes in current asset and current liability accounts. The accrual-accounting process records revenues in the period in which the performance obligation is satisfied and expenses incurred. For example, companies use Accounts Receivable to record amounts owed to the company for sales that have been made but for which cash collections have not yet been received. They use the Prepaid Insurance account to reflect insurance that has been paid for but which has not yet expired and therefore has not been expensed. Similarly, the Salaries and Wages Payable account reflects salaries and wages expense that has been incurred by the company but has not been paid.

As a result, companies need to adjust net income for these accruals and prepayments to determine net cash provided by operating activities. Thus, they must analyze the change in each current asset and current liability account to determine its impact on net income and cash.

CHANGES IN NON-CASH CURRENT ASSETS.

The adjustments required for changes in non-cash current asset accounts are as follows. **Deduct from net income increases in current asset accounts, and add to net income decreases in current asset accounts, to arrive at net cash provided by operating activities.** We observe these relationships by analyzing the accounts of Computer Services.

DECREASE IN ACCOUNTS RECEIVABLE Computer Services' accounts receivable decreased by €10,000 (from €30,000 to €20,000) during the period. For Computer Services, this means that cash receipts were €10,000 higher than sales revenue. The Accounts Receivable account in Illustration 13-9 shows that Computer Services had €507,000 in sales revenue (as reported on the income statement), but it collected €517,000 in cash.

Illustration 13-9
Analysis of accounts receivable

Accounts Receivable

1/1/17	Balance	30,000	**Receipts from customers**	**517,000**
	Sales revenue	**507,000**		
12/31/17	Balance	20,000		

As shown in Illustration 13-10 (on the next page), to adjust net income to net cash provided by operating activities, the company adds to net income the decrease of €10,000 in accounts receivable. When the Accounts Receivable balance increases, cash receipts are lower than sales revenue recognized under the accrual basis. Therefore, the company deducts from net income the amount of the increase in accounts receivable, to arrive at net cash provided by operating activities.

INCREASE IN INVENTORY Computer Services' inventory increased €5,000 (from €10,000 to €15,000) during the period. The change in the Inventory account reflects the difference between the amount of inventory purchased and the amount sold. For Computer Services, this means that the cost of merchandise purchased exceeded the cost of goods sold by €5,000. As a result, cost of goods sold does not reflect €5,000 of cash payments made for merchandise. The company deducts from net income this inventory increase of €5,000 during the period, to arrive at net cash provided by operating activities (see Illustration 13-10). If inventory decreases, the company adds to net income the amount of the change, to arrive at net cash provided by operating activities.

INCREASE IN PREPAID EXPENSES Computer Services' prepaid expenses increased during the period by €4,000. This means that cash paid for expenses is higher than expenses reported on an accrual basis. In other words, the company has made cash payments in the current period but will not charge expenses to income until future periods (as charges to the income statement). To adjust net income to net cash provided by operating activities, the company deducts from net income the €4,000 increase in prepaid expenses (see Illustration 13-10).

Illustration 13-10
Adjustments for changes in current asset accounts

Cash flows from operating activities		
Net income		€145,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	€ 9,000	
Loss on disposal of plant assets	3,000	
Decrease in accounts receivable	**10,000**	
Increase in inventory	**(5,000)**	
Increase in prepaid expenses	**(4,000)**	13,000
Net cash provided by operating activities		€158,000

If prepaid expenses decrease, reported expenses are higher than the expenses paid. Therefore, the company adds to net income the decrease in prepaid expenses, to arrive at net cash provided by operating activities.

CHANGES IN CURRENT LIABILITIES. The adjustments required for changes in current liability accounts are as follows. **Add to net income increases in current liability accounts, and deduct from net income decreases in current liability accounts, to arrive at net cash provided by operating activities.**

INCREASE IN ACCOUNTS PAYABLE For Computer Services, Accounts Payable increased by €16,000 (from €12,000 to €28,000) during the period. That means the company received €16,000 more in goods than it actually paid for. As shown in Illustration 13-11 (page 656), to adjust net income to determine net cash provided by operating activities, the company adds to net income the €16,000 increase in Accounts Payable.

DECREASE IN INCOME TAXES PAYABLE When a company incurs income tax expense but has not yet paid its taxes, it records income taxes payable. A change in the Income Taxes Payable account reflects the difference between income tax expense incurred and income tax actually paid. Computer Services' Income Taxes Payable account decreased by €2,000. That means the €47,000 of income tax expense reported on the income statement was €2,000 less than the amount of taxes paid during the period of €49,000. As shown in Illustration 13-11, to adjust net income to a cash basis, the company must reduce net income by €2,000.

Illustration 13-11
Adjustments for changes in current liability accounts

Cash flows from operating activities		
Net income		€145,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	€ 9,000	
Loss on disposal of plant assets	3,000	
Decrease in accounts receivable	10,000	
Increase in inventory	(5,000)	
Increase in prepaid expenses	(4,000)	
Increase in accounts payable	**16,000**	
Decrease in income taxes payable	**(2,000)**	27,000
Net cash provided by operating activities		€172,000

Illustration 13-11 shows that, after starting with net income of €145,000, the sum of all of the adjustments to net income was €27,000. This resulted in net cash provided by operating activities of €172,000.

Summary of Conversion to Net Cash Provided by Operating Activities—Indirect Method

As shown in the previous illustrations, the statement of cash flows prepared by the indirect method starts with net income. It then adds or deducts items to arrive at net cash provided by operating activities. The required adjustments are of three types:

1. Non-cash charges such as depreciation and amortization.
2. Gains and losses on the disposal of plant assets.
3. Changes in non-cash current asset and current liability accounts.

Illustration 13-12 provides a summary of these changes.

Illustration 13-12
Adjustments required to convert net income to net cash provided by operating activities

		Adjustments Required to Convert Net Income to Net Cash Provided by Operating Activities
Non-Cash Charges	Depreciation expense	Add
	Patent amortization expense	Add
Gains and Losses	Loss on disposal of plant assets	Add
	Gain on disposal of plant assets	Deduct
Changes in Current Assets and Current Liabilities	Increase in current asset account	Deduct
	Decrease in current asset account	Add
	Increase in current liability account	Add
	Decrease in current liability account	Deduct

Ethics Insight Cash Flow Isn't Always What It Seems

WorldCom, Inc. (USA)

Svetlana Tebenkova/iStockphoto

Some managers have taken actions that artificially increase cash flow from operating activities. They do this by moving negative amounts out of the operating section and into the investing or financing section.

For example, WorldCom, Inc. (USA) disclosed that it had improperly capitalized expenses: It had moved $3.8 billion of cash outflows from the "Cash from operating activities" section of the statement of cash flows to the "Investing activities" section, thereby greatly enhancing cash provided by operating activities. Similarly, Dynegy, Inc. (USA) restated its statement of cash flows because it had improperly included in operating activities, instead of in financing activities, $300 million from natural gas trading. The restatement resulted in a drop of 37% in cash flow from operating activities.

Source: Henny Sender, "Sadly, These Days Even Cash Flow Isn't Always What It Seems to Be," *Wall Street Journal* (May 8, 2002).

Q For what reasons might managers at WorldCom and at Dynegy take the actions noted above? (See page 706.)

DO IT!

Cash from Operating Activities

Josh's PhotoPlus reported net income of £73,000 for 2017. Included in the income statement were depreciation expense of £7,000 and a gain on disposal of plant assets of £2,500. Josh's comparative statements of financial position show the following balances.

	12/31/16	12/31/17
Accounts receivable	£17,000	£21,000
Accounts payable	6,000	2,200

Calculate net cash provided by operating activities for Josh's PhotoPlus.

Action Plan

- ✔ Add non-cash charges such as depreciation back to net income to compute net cash provided by operating activities.
- ✔ Deduct from net income gains on the disposal of plant assets, or add losses back to net income, to compute net cash provided by operating activities.
- ✔ Use changes in non-cash current asset and current liability accounts to compute net cash provided by operating activities.

Solution

Cash flows from operating activities		
Net income		£73,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	£ 7,000	
Gain on disposal of plant assets	(2,500)	
Increase in accounts receivable	(4,000)	
Decrease in accounts payable	(3,800)	(3,300)
Net cash provided by operating activities		£69,700

Related exercise material: **BE13-4, BE13-5, BE13-6, E13-4, E13-5, E13-6, E13-7, E13-8, and DO IT! 13-2.**

✔ The Navigator

Step 2: Investing and Financing Activities

ANALYZE CHANGES IN NON-CURRENT ASSET AND LIABILITY ACCOUNTS AND RECORD AS INVESTING AND FINANCING ACTIVITIES, OR DISCLOSE AS NON-CASH TRANSACTIONS

INCREASE IN LAND As indicated from the change in the Land account and the additional information, the company purchased land of €110,000 through the issuance of long-term bonds. The issuance of bonds payable for land has no effect on cash. But, it is a significant non-cash investing and financing activity that merits disclosure in a separate schedule. (See Illustration 13-14 on pages 659–660.)

INCREASE IN BUILDINGS As the additional data indicate, Computer Services acquired a building for €120,000 cash. This is a cash outflow reported in the investing section. (See Illustration 13-14 on pages 659–660.)

INCREASE IN EQUIPMENT The Equipment account increased €17,000. The additional information explains that this net increase resulted from two transactions: (1) a purchase of equipment of €25,000, and (2) the sale for €4,000 of equipment costing €8,000. These transactions are investing activities. The company should report each transaction separately. Thus, it reports the purchase of equipment as an outflow of cash for €25,000. It reports the sale as an inflow of cash for €4,000. The T-account below shows the reasons for the change in this account during the year.

Illustration 13-13
Analysis of equipment

Equipment				
1/1/17	Balance	10,000	Cost of equipment sold	8,000
	Purchase of equipment	**25,000**		
12/31/17	Balance	27,000		

A	=	L	+	E
+4,000				
+1,000				
				−3,000 Exp
−8,000				

Cash Flows
+4,000

The following entry shows the details of the equipment sale transaction.

Cash	4,000	
Accumulated Depreciation—Equipment	1,000	
Loss on Disposal of Plant Assets	3,000	
Equipment		8,000

INCREASE IN BONDS PAYABLE The Bonds Payable account increased €110,000. As indicated in the additional information, the company acquired land from the issuance of these bonds. It reports this non-cash transaction in a separate schedule at the bottom of the statement.

• HELPFUL HINT
When companies issue shares or bonds for cash, the actual proceeds will appear in the statement of cash flows as a financing inflow (rather than the par value of the shares or face value of bonds).

INCREASE IN SHARE CAPITAL—ORDINARY The statement of financial position reports an increase in Share Capital—Ordinary of €20,000. The additional information section notes that this increase resulted from the issuance of new shares. This is a cash inflow reported in the financing section.

INCREASE IN RETAINED EARNINGS Retained earnings increased €116,000 during the year. This increase can be explained by two factors: (1) net income of €145,000 increased retained earnings, and (2) dividends of €29,000 decreased retained earnings. The company adjusts net income to net cash provided by operating activities in the operating activities section. Payment of the dividends (not the declaration) is a **cash outflow that the company reports as a financing activity**.

ANATOMY OF A FRAUD

For more than a decade, the top executives at the Italian dairy products company Parmalat (ITA) engaged in multiple frauds which overstated cash and other assets by more than €1 billion while understating liabilities by between €8 and €12 billion. Much of the fraud involved creating fictitious sources and uses of cash. Some of these activities incorporated sophisticated financial transactions with subsidiaries created with the help of large international financial institutions. However, much of the fraud employed very basic, even sloppy, forgery of documents. For example, when outside auditors requested confirmation of bank accounts (such as a fake €4.8 billion account in the Cayman Islands), documents were created on scanners, with signatures that were cut and pasted from other documents. These were then passed through a fax machine numerous times to make them look real (if difficult to read). Similarly, fictitious bills were created in order to divert funds to other businesses owned by the Tanzi family (who controlled Parmalat).

Total take: Billions of euros

THE MISSING CONTROL

Independent internal verification. Internal auditors at the company should have independently verified bank accounts and major transfers of cash to outside companies that were controlled by the Tanzi family.

STATEMENT OF CASH FLOWS—2017

Using the previous information, we can now prepare a statement of cash flows for 2017 for Computer Services Company as shown in Illustration 13-14.

Step 3: Net Change in Cash

COMPARE THE NET CHANGE IN CASH ON THE STATEMENT OF CASH FLOWS WITH THE CHANGE IN THE CASH ACCOUNT REPORTED ON THE STATEMENT OF FINANCIAL POSITION TO MAKE SURE THE AMOUNTS AGREE

Illustration 13-14 indicates that the net change in cash during the period was an increase of €22,000. This agrees with the change in the Cash account reported on the statement of financial position in Illustration 13-5 (page 651).

Illustration 13-14
Statement of cash flows, 2017—indirect method

COMPUTER SERVICES COMPANY
Statement of Cash Flows—Indirect Method
For the Year Ended December 31, 2017

Cash flows from operating activities		
Net income		€145,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	€ 9,000	
Loss on disposal of plant assets	3,000	
Decrease in accounts receivable	10,000	
Increase in inventory	(5,000)	
Increase in prepaid expenses	(4,000)	
Increase in accounts payable	16,000	
Decrease in income taxes payable	(2,000)	27,000
Net cash provided by operating activities		172,000
Cash flows from investing activities		
Purchase of building	(120,000)	
Purchase of equipment	(25,000)	
Disposal of plant assets	4,000	
Net cash used by investing activities		(141,000)

• HELPFUL HINT
Note that in the investing and financing activities sections, positive numbers indicate cash inflows (receipts), and negative numbers indicate cash outflows (payments).

Illustration 13-14
(cont'd.)

Cash flows from financing activities		
Issuance of ordinary shares	20,000	
Payment of cash dividends	(29,000)	
Net cash used by financing activities		(9,000)
Net increase in cash		22,000
Cash at beginning of period		33,000
Cash at end of period		€ 55,000
Note 1		
Non-cash investing and financing activities		
Issuance of bonds payable to purchase land		€110,000

DO IT!

Indirect Method

Use the information below and on the next page to prepare a statement of cash flows using the indirect method.

DRAGON LTD.
Comparative Statements of Financial Position
December 31
(NT$ in thousands)

Assets	**2017**	**2016**	**Change Increase/Decrease**
Land	NT$ 75,000	NT$ 70,000	NT$ 5,000 Increase
Buildings	200,000	200,000	–0–
Accumulated depreciation—buildings	(21,000)	(11,000)	10,000 Increase
Equipment	193,000	68,000	125,000 Increase
Accumulated depreciation—equipment	(28,000)	(10,000)	18,000 Increase
Prepaid expenses	4,000	6,000	2,000 Decrease
Inventory	54,000	–0–	54,000 Increase
Accounts receivable	68,000	26,000	42,000 Increase
Cash	54,000	37,000	17,000 Increase
Totals	NT$599,000	NT$386,000	
Equity and Liabilities			
Share capital—ordinary (NT$1 par)	NT$220,000	NT$ 60,000	NT$160,000 Increase
Retained earnings	206,000	136,000	70,000 Increase
Bonds payable	140,000	150,000	10,000 Decrease
Accounts payable	23,000	40,000	17,000 Decrease
Accrued expenses payable	10,000	–0–	10,000 Increase
Totals	NT$599,000	NT$386,000	

DRAGON LTD.
Income Statement
For the Year Ended December 31, 2017
(NT$ in thousands)

Sales revenue		NT$890,000
Cost of goods sold	NT$465,000	
Operating expenses	221,000	
Interest expense	12,000	
Loss on disposal of plant assets	2,000	700,000
Income before income taxes		190,000
Income tax expense		65,000
Net income		NT$125,000

• **HELPFUL HINT**

1. Determine net cash provided/used by operating activities, recognizing that operating activities generally relate to changes in current assets and current liabilities.
2. Determine net cash provided/used by investing activities, recognizing that investing activities generally relate to changes in non-current assets.
3. Determine net cash provided/used by financing activities, recognizing that financing activities generally relate to changes in non-current liabilities and equity accounts.

Additional information (all amounts in thousands of NT$):

1. Operating expenses include depreciation expense of NT$33,000.
2. Equipment with a cost of NT$41,000 and a book value of NT$36,000 was sold for NT$34,000 cash.
3. Land was sold at its book value for cash.
4. Interest expense of NT$12,000 was paid in cash.
5. Equipment with a cost of NT$166,000 was purchased for cash.
6. Bonds of NT$10,000 were redeemed at their face value for cash.
7. Ordinary shares (NT$1 par) of NT$130,000 were issued for cash.
8. Cash dividends of NT$55,000 were declared and paid in 2017.
9. Ordinary shares of NT$30,000 were issued in exchange for land.

Solution

Action Plan

✔ Determine net cash provided/used by operating activities by adjusting net income for items that did not affect cash.

✔ Determine net cash provided/used by investing activities and financing activities.

✔ Determine the net increase/decrease in cash.

DRAGON LTD.
Statement of Cash Flows—Indirect Method
For the Year Ended December 31, 2017
(NT$ in thousands)

Cash flows from operating activities		
Net income		NT$125,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	NT$ 33,000	
Loss on disposal of plant assets	2,000	
Increase in accounts receivable	(42,000)	
Increase in inventory	(54,000)	
Decrease in prepaid expenses	2,000	
Decrease in accounts payable	(17,000)	
Increase in accrued expenses payable	10,000	(66,000)
Net cash provided by operating activities		59,000
Cash flows from investing activities		
Sale of land	25,000	
Disposal of plant assets	34,000	
Purchase of equipment	(166,000)	
Net cash used by investing activities		(107,000)
Cash flows from financing activities		
Redemption of bonds	(10,000)	
Sale of ordinary shares	130,000	
Payment of dividends	(55,000)	
Net cash provided by financing activities		65,000
Net increase in cash		17,000
Cash at beginning of period		37,000
Cash at end of period		NT$ 54,000
Note 1		
Non-cash investing and financing activities		
Issued ordinary shares in exchange for land		NT$ 30,000

Related exercise material: **BE13-4, BE13-5, BE13-6, BE13-7, E13-4, E13-5, E13-6, E13-7, E13-8, and E13-9.**

✔ The Navigator

Using Cash Flows to Evaluate a Company

Learning Objective 4
Analyze the statement of cash flows.

Traditionally, investors and creditors used ratios based on accrual accounting. These days, cash-based ratios are gaining increased acceptance among analysts.

Free Cash Flow

In the statement of cash flows, net cash provided by operating activities is intended to indicate the cash-generating capability of a company. Analysts have noted, however, that **net cash provided by operating activities fails to take into account that a company must invest in new fixed assets** just to maintain its current level of operations. Companies also must at least **maintain dividends at current levels** to satisfy investors. The measurement of free cash flow provides additional insight regarding a company's cash-generating ability. **Free cash flow** describes the net cash provided by operating activities after adjustment for capital expenditures and dividends.

Consider the following example. Suppose that MPC produced and sold 10,000 personal computers this year. It reported HK$1,000,000 net cash provided by operating activities. In order to maintain production at 10,000 computers, MPC invested HK$150,000 in equipment. It chose to pay HK$50,000 in dividends. Its free cash flow was HK$800,000 (HK$1,000,000 − HK$150,000 − HK$50,000). The company could use this HK$800,000 either to purchase new assets to expand the business or to pay an HK$800,000 dividend and continue to produce 10,000 computers. In practice, free cash flow is often calculated with the formula in Illustration 13-15. (Alternative definitions also exist.)

Illustration 13-15
Free cash flow

Free Cash Flow = Net Cash Provided by Operating Activities − Capital Expenditures − Cash Dividends

Illustration 13-16 provides basic information (in millions) excerpted from a recent statement of cash flows of Anheuser-Busch InBev (BEL).

Illustration 13-16
Anheuser-Busch InBev cash flow information ($ in millions)

Real World

ANHEUSER-BUSCH InBev
Statement of Cash Flows (partial)

Cash provided by operating activities		$ 17,451
Cash flows from investing activities		
Additions to property and equipment and intangibles	$ (3,869)	
Purchases of non-controlling interests	(99)	
Sale of property, plant, and equipment	4,002	
Acquisitions of companies	(17,439)	
Other	7,124	
Cash used by investing activities		(10,281)
Cash paid for dividends		(6,253)

Anheuser-Busch InBev's free cash flow is calculated as shown in Illustration 13-17.

Illustration 13-17
Calculation of Anheuser-Busch InBev's free cash flow ($ in millions)

Cash provided by operating activities	$17,451
Less: Expenditures on property and equipment	3,869
Dividends paid	6,253
Free cash flow	**$ 7,329**

The company generates a significant amount of cash from its operations, but it spent most of it to buy property, plant, and equipment, and to pay dividends.

DO IT!

Free Cash Flow

Luó Ltd. issued the following statement of cash flows for 2017.

LUÓ LTD.
Statement of Cash Flows—Indirect Method
For the Year Ended December 31, 2017
(¥ in thousands)

Cash flows from operating activities		
Net income		¥19,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	¥ 8,100	
Loss on disposal of plant assets	1,300	
Decrease in accounts receivable	6,900	
Increase in inventory	(4,000)	
Decrease in accounts payable	(2,000)	10,300
Net cash provided by operating activities		29,300
Cash flows from investing activities		
Sale of investments	1,100	
Purchase of equipment	(19,000)	
Net cash used by investing activities		(17,900)
Cash flows from financing activities		
Issuance of ordinary shares	10,000	
Payment on long-term note payable	(5,000)	
Payment for dividends	(9,000)	
Net cash used by financing activities		(4,000)
Net increase in cash		7,400
Cash at beginning of year		10,000
Cash at end of year		¥17,400

(a) Compute free cash flow for Luó. (b) Explain why free cash flow often provides better information than "Net cash provided by operating activities."

Action Plan

✔ Compute free cash flow as Net cash provided by operating activities − Capital expenditures − Cash dividends.

Solution

(a) Free cash flow (¥ in thousands) = ¥29,300 − ¥19,000 − ¥9,000 = ¥1,300

(b) Net cash provided by operating activities fails to take into account that a company must invest in new plant assets just to maintain the current level of operations. Companies must also maintain dividends at current levels to satisfy investors. The measurement of free cash flow provides additional insight regarding a company's cash-generating ability.

Related exercise material: BE13-8, BE13-9, BE13-10, BE13-11, E13-7, E13-9, and DO IT! 13-3.

✔ The Navigator

APPENDIX 13A Statement of Cash Flows—Direct Method

Learning Objective *5

Prepare a statement of cash flows using the direct method.

To explain and illustrate the direct method for preparing a statement of cash flows, we will use the transactions of Computer Services Company for 2017. Illustration 13A-1 presents information related to 2017 for the company.

Illustration 13A-1
Comparative statements of financial position, income statement, and additional information for Computer Services Company

COMPUTER SERVICES COMPANY
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**	**Change in Account Balance Increase/Decrease**
Property, plant, and equipment			
Land	€130,000	€ 20,000	€110,000 Increase
Buildings	160,000	40,000	120,000 Increase
Accumulated depreciation—buildings	(11,000)	(5,000)	6,000 Increase
Equipment	27,000	10,000	17,000 Increase
Accumulated depreciation—equipment	(3,000)	(1,000)	2,000 Increase
Current assets			
Prepaid expenses	5,000	1,000	4,000 Increase
Inventory	15,000	10,000	5,000 Increase
Accounts receivable	20,000	30,000	10,000 Decrease
Cash	55,000	33,000	22,000 Increase
Total assets	€398,000	€138,000	
Equity and Liabilities			
Equity			
Share capital—ordinary	€ 70,000	€ 50,000	€ 20,000 Increase
Retained earnings	164,000	48,000	116,000 Increase
Non-current liabilities			
Bonds payable	130,000	20,000	110,000 Increase
Current liabilities			
Accounts payable	28,000	12,000	16,000 Increase
Income taxes payable	6,000	8,000	2,000 Decrease
Total equity and liabilities	€398,000	€138,000	

COMPUTER SERVICES COMPANY
Income Statement
For the Year Ended December 31, 2017

Sales revenue		€507,000
Cost of goods sold	€150,000	
Operating expenses (excluding depreciation)	111,000	
Depreciation expense	9,000	
Loss on disposal of plant assets	3,000	
Interest expense	42,000	315,000
Income before income tax		192,000
Income tax expense		47,000
Net income		€145,000

Illustration 13A-1
(cont'd.)

Additional information for 2017:

1. Depreciation expense was comprised of €6,000 for building and €3,000 for equipment.
2. The company sold equipment with a book value of €7,000 (cost €8,000, less accumulated depreciation €1,000) for €4,000 cash.
3. Issued €110,000 of long-term bonds in direct exchange for land.
4. A building costing €120,000 was purchased for cash. Equipment costing €25,000 was also purchased for cash.
5. Issued ordinary shares for €20,000 cash.
6. The company declared and paid a €29,000 cash dividend.

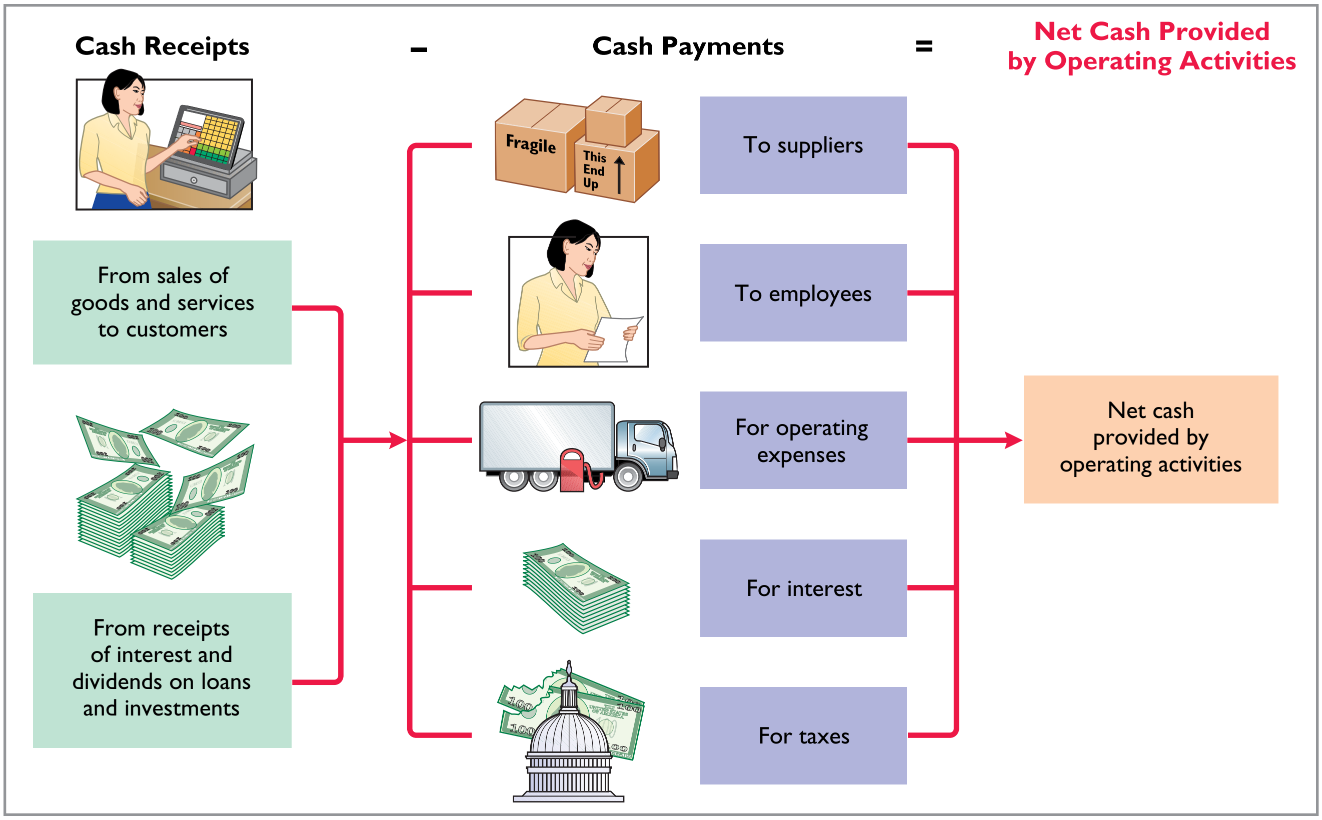
To prepare a statement of cash flows under the direct approach, we will apply the three steps outlined in Illustration 13-4 (page 650).

Step 1: Operating Activities

DETERMINE NET CASH PROVIDED/USED BY OPERATING ACTIVITIES BY CONVERTING NET INCOME FROM AN ACCRUAL BASIS TO A CASH BASIS

Under the **direct method**, companies compute net cash provided by operating activities by **adjusting each item in the income statement** from the accrual basis to the cash basis. To simplify and condense the operating activities section, companies **report only major classes of operating cash receipts and cash payments**. For these major classes, the difference between cash receipts and cash payments is the net cash provided by operating activities. These relationships are as shown in Illustration 13A-2.

Illustration 13A-2
Major classes of cash receipts and payments



An efficient way to apply the direct method is to analyze the items reported in the income statement in the order in which they are listed. We then determine cash receipts and cash payments related to these revenues and expenses. The following presents the adjustments required to prepare a statement of cash flows for Computer Services using the direct approach.

CASH RECEIPTS FROM CUSTOMERS The income statement for Computer Services reported revenue from customers of €507,000. How much of that was cash receipts? To answer that, a company needs to consider the change in accounts receivable during the year. When accounts receivable increase during the year, revenues on an accrual basis are higher than cash receipts from customers. Operations led to revenues, but not all of those revenues resulted in cash receipts.

To determine the amount of cash receipts, a company deducts from sales revenue the increase in accounts receivable. On the other hand, there may be a decrease in accounts receivable. That would occur if cash receipts from customers exceeded sales revenue. In that case, a company adds to sales revenue the decrease in accounts receivable. For Computer Services, accounts receivable decreased €10,000. Thus, cash receipts from customers were €517,000, computed as shown in Illustration 13A-3.

Illustration 13A-3
Computation of cash receipts from customers

Sales revenue	€ 507,000
Add: Decrease in accounts receivable	10,000
Cash receipts from customers	**€517,000**

Computer Services can also determine cash receipts from customers from an analysis of the Accounts Receivable account, as shown in Illustration 13A-4.

Illustration 13A-4
Analysis of accounts receivable

• HELPFUL HINT
The T-account shows that revenue plus decrease in receivables equals cash receipts.

Accounts Receivable

1/1/17	Balance	30,000	**Receipts from customers**	**517,000**
	Sales revenue	507,000		
12/31/17	Balance	20,000		

Illustration 13A-5 shows the relationships among cash receipts from customers, sales revenue, and changes in accounts receivable.

Illustration 13A-5
Formula to compute cash receipts from customers—direct method

$$\text{Cash Receipts from Customers} = \text{Sales Revenue} \begin{cases} + \text{ Decrease in Accounts Receivable} \\ \text{or} \\ - \text{ Increase in Accounts Receivable} \end{cases}$$

CASH PAYMENTS TO SUPPLIERS Computer Services reported cost of goods sold of €150,000 on its income statement. How much of that was cash payments to suppliers? To answer that, it is first necessary to find purchases for the year. To find purchases, a company adjusts cost of goods sold for the change in inventory. When inventory increases during the year, purchases for the year have exceeded cost of goods sold. As a result, to determine the amount of purchases, a company adds to cost of goods sold the increase in inventory.

In 2017, Computer Services' inventory increased €5,000. It computes purchases as follows.

Cost of goods sold	€ 150,000
Add: Increase in inventory	5,000
Purchases	**€155,000**

Illustration 13A-6
Computation of purchases

After computing purchases, a company can determine cash payments to suppliers. This is done by adjusting purchases for the change in accounts payable. When accounts payable increase during the year, purchases on an accrual basis are higher than they are on a cash basis. As a result, to determine cash payments to suppliers, a company deducts from purchases the increase in accounts payable. On the other hand, if cash payments to suppliers exceed purchases, there will be a decrease in accounts payable. In that case, a company adds to purchases the decrease in accounts payable. For Computer Services, cash payments to suppliers were €139,000, computed as follows.

Purchases	€ 155,000
Deduct: Increase in accounts payable	16,000
Cash payments to suppliers	**€139,000**

Illustration 13A-7
Computation of cash payments to suppliers

Computer Services also can determine cash payments to suppliers from an analysis of the Accounts Payable account, as shown in Illustration 13A-8.

Accounts Payable

Payments to suppliers	**139,000**	1/1/17	Balance	12,000
			Purchases	155,000
		12/31/17	Balance	28,000

Illustration 13A-8
Analysis of accounts payable

• HELPFUL HINT
The T-account shows that purchases less increase in accounts payable equal payments to suppliers.

Illustration 13A-9 shows the relationships among cash payments to suppliers, cost of goods sold, changes in inventory, and changes in accounts payable.

$$\text{Cash Payments to Suppliers} = \text{Cost of Goods Sold} \left\{ \begin{array}{c} +\ \text{Increase in Inventory} \\ \text{or} \\ -\ \text{Decrease in Inventory} \end{array} \right\} \left\{ \begin{array}{c} +\ \text{Decrease in Accounts Payable} \\ \text{or} \\ -\ \text{Increase in Accounts Payable} \end{array} \right.$$

Illustration 13A-9
Formula to compute cash payments to suppliers—direct method

CASH PAYMENTS FOR OPERATING EXPENSES Computer Services reported on its income statement operating expenses of €111,000. How much of that amount was cash paid for operating expenses? To answer that, we need to adjust this amount for any changes in prepaid expenses and accrued expenses payable. For example, if prepaid expenses increased during the year, cash paid for operating expenses is higher than operating expenses reported on the income statement. To convert operating expenses to cash payments for operating expenses, a company adds the increase in prepaid expenses to operating expenses. On the other hand, if prepaid expenses decrease during the year, it deducts the decrease from operating expenses.

Companies must also adjust operating expenses for changes in accrued expenses payable. When accrued expenses payable increase during the year, operating expenses on an accrual basis are higher than they are on a cash basis.

As a result, to determine cash payments for operating expenses, a company deducts from operating expenses an increase in accrued expenses payable. On the other hand, a company adds to operating expenses a decrease in accrued expenses payable because cash payments exceed operating expenses.

Computer Services' cash payments for operating expenses were €115,000, computed as follows.

Illustration 13A-10
Computation of cash payments for operating expenses

Operating expenses	€ 111,000
Add: Increase in prepaid expenses	4,000
Cash payments for operating expenses	**€115,000**

Illustration 13A-11 shows the relationships among cash payments for operating expenses, changes in prepaid expenses, and changes in accrued expenses payable.

Illustration 13A-11
Formula to compute cash payments for operating expenses—direct method

Cash Payments for Operating Expenses	=	Operating Expenses	+ Increase in Prepaid Expenses or − Decrease in Prepaid Expenses	+ Decrease in Accrued Expenses Payable or − Increase in Accrued Expenses Payable

DEPRECIATION EXPENSE AND LOSS ON DISPOSAL OF PLANT ASSETS Computer Services' depreciation expense in 2017 was €9,000. Depreciation expense is not shown on a statement of cash flows under the direct method because it is a non-cash charge. If the amount for operating expenses includes depreciation expense, operating expenses must be reduced by the amount of depreciation to determine cash payments for operating expenses.

The loss on disposal of plant assets of €3,000 is also a non-cash charge. The loss on disposal of plant assets reduces net income, but it does not reduce cash. Thus, the loss on disposal of plant assets is not shown on the statement of cash flows under the direct method.

Other charges to expense that do not require the use of cash, such as the amortization of intangible assets and bad debt expense, are treated in the same manner as depreciation.

CASH PAYMENTS FOR INTEREST Computer Services reported on the income statement interest expense of €42,000. Since the statement of financial position did not include an accrual for interest payable for 2016 or 2017, the amount reported as expense is the same as the amount of interest paid.

CASH PAYMENTS FOR INCOME TAXES Computer Services reported income tax expense of €47,000 on the income statement. Income taxes payable, however, decreased €2,000. This decrease means that income taxes paid were more than income taxes reported in the income statement. Cash payments for income taxes were therefore €49,000, as the following shows.

Illustration 13A-12
Computation of cash payments for income taxes

Income tax expense	€ 47,000
Add: Decrease in income taxes payable	2,000
Cash payments for income taxes	**€49,000**

Illustration 13A-13 shows the relationships among cash payments for income taxes, income tax expense, and changes in income taxes payable.

Cash Payments for Income Taxes	=	**Income Tax Expense**	{ + **Decrease in Income Taxes Payable** or − **Increase in Income Taxes Payable**

Illustration 13A-13
Formula to compute cash payments for income taxes—direct method

The operating activities section of the statement of cash flows of Computer Services is shown in Illustration 13A-14.

Cash flows from operating activities		
Cash receipts from customers		€517,000
Less: Cash payments:		
To suppliers	€139,000	
For operating expenses	115,000	
For interest expense	42,000	
For income taxes	49,000	345,000
Net cash provided by operating activities		€172,000

Illustration 13A-14
Operating activities section of the statement of cash flows

When a company uses the direct method, it must also provide in a **separate schedule** (not shown here) the net cash flows from operating activities as computed under the indirect method.

Step 2: Investing and Financing Activities

ANALYZE CHANGES IN NON-CURRENT ASSET AND LIABILITY ACCOUNTS AND RECORD AS INVESTING AND FINANCING ACTIVITIES, OR DISCLOSE AS NON-CASH TRANSACTIONS

• HELPFUL HINT
The investing and financing activities are measured and reported the same under both the direct and indirect methods.

INCREASE IN LAND As indicated from the change in the Land account and the additional information, the company purchased land of €110,000 by directly exchanging bonds for land. The exchange of bonds payable for land has no effect on cash. But, it is a significant non-cash investing and financing activity that merits its disclosure in a note to the financial statements. (See Illustration 13A-16 on page 670.)

INCREASE IN BUILDINGS As the additional data indicate, Computer Services acquired a building for €120,000 cash. This is a cash outflow reported in the investing activities section. (See Illustration 13A-16 on page 670.)

INCREASE IN EQUIPMENT The Equipment account increased €17,000. The additional information explains that this was a net increase that resulted from two transactions: (1) a purchase of equipment of €25,000, and (2) the sale for €4,000 of equipment costing €8,000. These transactions are investing activities. The company should report each transaction separately. The statement in Illustration 13A-16 reports the purchase of equipment as an outflow of cash for €25,000. It reports the sale as an inflow of cash for €4,000. The following T-account shows the reasons for the change in this account during the year.

Equipment				
1/1/17	Balance	10,000	Cost of equipment sold	8,000
	Purchase of equipment	**25,000**		
12/31/17	Balance	27,000		

Illustration 13A-15
Analysis of equipment

A	=	L	+	E
+4,000				
+1,000				
				−3,000 Exp
−8,000				

Cash Flows
+4,000

The following entry shows the details of the equipment sale transaction.

Cash	4,000	
Accumulated Depreciation—Equipment	1,000	
Loss on Disposal of Plant Assets	3,000	
Equipment		8,000

INCREASE IN BONDS PAYABLE The Bonds Payable account increased €110,000. As indicated in the additional information, the company acquired land by directly exchanging bonds for land. Illustration 13A-16 reports this non-cash transaction in a separate note at the bottom of the statement.

• HELPFUL HINT
When companies issue shares or bonds for cash, the actual proceeds will appear in the statement of cash flows as a financing inflow (rather than the par value of the shares or face value of bonds).

INCREASE IN SHARE CAPITAL—ORDINARY The statement of financial position reports an increase in Share Capital—Ordinary of €20,000. The additional information section notes that this increase resulted from the issuance of new shares. This is a cash inflow reported in the financing section in Illustration 13A-16.

INCREASE IN RETAINED EARNINGS Retained earnings increased €116,000 during the year. This increase can be explained by two factors: (1) net income of €145,000 increased retained earnings, and (2) dividends of €29,000 decreased retained earnings. The company adjusts net income to net cash provided by operating activities in the operating activities section. **Payment** of the dividends (not the declaration) is a **cash outflow that the company reports as a financing activity in Illustration 13A-16**.

STATEMENT OF CASH FLOWS—2017

Illustration 13A-16 shows the statement of cash flows for Computer Services.

Illustration 13A-16
Statement of cash flows, 2017—direct method

COMPUTER SERVICES COMPANY
Statement of Cash Flows—Direct Method
For the Year Ended December 31, 2017

Cash flows from operating activities		
Cash receipts from customers		€517,000
Less: Cash payments:		
To suppliers	€ 139,000	
For operating expenses	115,000	
For income taxes	49,000	
For interest expense	42,000	345,000
Net cash provided by operating activities		172,000
Cash flows from investing activities		
Purchase of building	(120,000)	
Purchase of equipment	(25,000)	
Disposal of plant assets	4,000	
Net cash used by investing activities		(141,000)
Cash flows from financing activities		
Issuance of ordinary shares	20,000	
Payment of cash dividends	(29,000)	
Net cash used by financing activities		(9,000)
Net increase in cash		22,000
Cash at beginning of period		33,000
Cash at end of period		€ 55,000
Note 1		
Non-cash investing and financing activities		
Issuance of bonds payable to purchase land		€110,000

Step 3: Net Change in Cash

COMPARE THE NET CHANGE IN CASH ON THE STATEMENT OF CASH FLOWS WITH THE CHANGE IN THE CASH ACCOUNT REPORTED ON THE STATEMENT OF FINANCIAL POSITION TO MAKE SURE THE AMOUNTS AGREE

Illustration 13A-16 indicates that the net change in cash during the period was an increase of €22,000. This agrees with the change in balances in the Cash account reported on the statements of financial position in Illustration 13A-1 (page 664).

APPENDIX 13B Using a Worksheet to Prepare the Statement of Cash Flows—Indirect Method

Learning Objective *6

Explain how to use a worksheet to prepare the statement of cash flows using the indirect method.

When preparing a statement of cash flows, companies may need to make numerous adjustments of net income. In such cases, they often use **a worksheet to assemble and classify the data that will appear on the statement**. The worksheet is merely an aid in preparing the statement. Its use is optional. Illustration 13B-1 shows the skeleton format of the worksheet for preparation of the statement of cash flows.

Illustration 13B-1
Format of worksheet

XYZ Company.xls

Home Insert Page Layout Formulas Data Review View

P18 *fx*

	A	B	C	D	E
1					
2	**XYZ COMPANY**				
3	**Worksheet**				
4	**Statement of Cash Flows for the Year Ended . . .**				
5					
6		**End of**			**End of**
7	**Statement of Financial**	**Last Year**	**Reconciling Items**		**Current Year**
8	**Position Accounts**	**Balances**	**Debit**	**Credit**	**Balances**
9	Debit balance accounts	XX	XX	XX	XX
10		XX	XX	XX	XX
11	Totals	XXX			XXX
12	Credit balance accounts	XX	XX	XX	XX
13		XX	XX	XX	XX
14	Totals	XXX			XXX
15					
16	**Statement of Cash**				
17	**Flows Effects**				
18	Operating activities				
19	Net income		XX		
20	Adjustments to net income		XX	XX	
21	Investing activities				
22	Receipts and payments		XX	XX	
23	Financing activities				
24	Receipts and payments		XX	XX	
25	Totals		XXX	XXX	
26	Increase (decrease) in cash		(XX)	XX	
27	Totals		XXX	XXX	
28					

The following guidelines are important in preparing a worksheet.

1. In the statement of financial position accounts section, **list accounts with debit balances separately from those with credit balances**. This means, for example, that Accumulated Depreciation appears under credit balances and not as a contra account under debit balances. Enter the beginning and ending balances of each account in the appropriate columns. Enter as reconciling items in the two middle columns the transactions that caused the change in the account balance during the year.

   After all reconciling items have been entered, each line pertaining to a statement of financial position account should "foot across." That is, the beginning balance plus or minus the reconciling item(s) must equal the ending balance. When this agreement exists for all statement of financial position accounts, all changes in account balances have been reconciled.
2. The bottom portion of the worksheet consists of the operating, investing, and financing activities sections. It provides the information necessary to prepare the formal statement of cash flows. **Enter inflows of cash as debits in the reconciling columns. Enter outflows of cash as credits in the reconciling columns.** Thus, in this section, the sale of equipment for cash at book value appears as a debit under investing activities. Similarly, the purchase of land for cash appears as a credit under investing activities.
3. **The reconciling items shown in the worksheet are not entered in any journal or posted to any account.** They do not represent either adjustments or corrections of the statement of financial position accounts. They are used only to facilitate the preparation of the statement of cash flows.

Preparing the Worksheet

As in the case of worksheets illustrated in earlier chapters, preparing a worksheet involves a series of prescribed steps. The steps in this case are as follows.

1. Enter in the statement of financial position accounts section the statement of financial position accounts and their beginning and ending balances.
2. Enter in the reconciling columns of the worksheet the data that explain the changes in the statement of financial position accounts other than cash and their effects on the statement of cash flows.
3. Enter on the cash line and at the bottom of the worksheet the increase or decrease in cash. This entry should enable the totals of the reconciling columns to be in agreement.

To illustrate the preparation of a worksheet, we will use the 2017 data for Computer Services Company. Your familiarity with these data (from the chapter) should help you understand the use of a worksheet. For ease of reference, the comparative statements of financial position, income statement, and selected data for 2017 are presented in Illustration 13B-2.

DETERMINING THE RECONCILING ITEMS

Companies can use one of several approaches to determine the reconciling items. For example, they can first complete the changes affecting net cash provided by operating activities, and then can determine the effects of financing and investing transactions. Or, they can analyze the statement of financial position accounts in the order in which they are listed on the worksheet. We will follow this latter approach for Computer Services, except for cash. As indicated in Step 3, **cash is handled last**.

ACCOUNTS RECEIVABLE The decrease of €10,000 in accounts receivable means that cash collections from sales revenue are higher than the sales revenue reported in the income statement. To convert net income to net cash provided by

Illustration 13B-2
Comparative statements of financial position, income statement, and additional information for Computer Services Company

Computer Services Company.xls

COMPUTER SERVICES COMPANY
Comparative Statements of Financial Position
December 31

Assets	2017	2016	Change in Account Balance Increase/Decrease	
Property, plant, and equipment				
Land	€130,000	€ 20,000	€110,000	Increase
Buildings	160,000	40,000	120,000	Increase
Accumulated depreciation—buildings	(11,000)	(5,000)	6,000	Increase
Equipment	27,000	10,000	17,000	Increase
Accumulated depreciation—equipment	(3,000)	(1,000)	2,000	Increase
Current assets				
Prepaid expenses	5,000	1,000	4,000	Increase
Inventory	15,000	10,000	5,000	Increase
Accounts receivable	20,000	30,000	10,000	Decrease
Cash	55,000	33,000	22,000	Increase
Total assets	€398,000	€138,000		
Equity and Liabilities				
Equity				
Share capital—ordinary	€ 70,000	€ 50,000	€ 20,000	Increase
Retained earnings	164,000	48,000	116,000	Increase
Non-current liabilities				
Bonds payable	130,000	20,000	110,000	Increase
Current liabilities				
Accounts payable	28,000	12,000	16,000	Increase
Income taxes payable	6,000	8,000	2,000	Decrease
Total equity and liabilities	€398,000	€138,000		

Computer Services Company.xls

COMPUTER SERVICES COMPANY
Income Statement
For the Year Ended December 31, 2017

Sales revenue		€507,000
Cost of goods sold	€150,000	
Operating expenses (excluding depreciation)	111,000	
Depreciation expense	9,000	
Loss on disposal of plant assets	3,000	
Interest expense	42,000	315,000
Income before income tax		192,000
Income tax expense		47,000
Net income		€145,000

Additional information for 2017:

1. Depreciation expense was comprised of €6,000 for building and €3,000 for equipment.
2. The company sold equipment with a book value of €7,000 (cost €8,000, less accumulated depreciation €1,000) for €4,000 cash.
3. Issued €110,000 of long-term bonds in direct exchange for land.
4. A building costing €120,000 was purchased for cash. Equipment costing €25,000 was also purchased for cash.
5. Issued ordinary shares for €20,000 cash.
6. The company declared and paid a €29,000 cash dividend.

operating activities, we add the decrease of €10,000 to net income. The entry in the reconciling columns of the worksheet is:

(a)	Operating—Decrease in Accounts Receivable	10,000	
	Accounts Receivable		10,000

INVENTORY Computer Services' inventory balance increases €5,000 during the period. The Inventory account reflects the difference between the amount of inventory that the company purchased and the amount that it sold. For Computer Services, this means that the cost of merchandise purchased exceeds the cost of goods sold by €5,000. As a result, cost of goods sold does not reflect €5,000 of cash payments made for merchandise. We deduct this inventory increase of €5,000 during the period from net income to arrive at net cash provided by operating activities. The worksheet entry is:

(b)	Inventory	5,000	
	Operating—Increase in Inventory		5,000

PREPAID EXPENSES An increase of €4,000 in prepaid expenses means that expenses deducted in determining net income are less than expenses that were paid in cash. We deduct the increase of €4,000 from net income in determining net cash provided by operating activities. The worksheet entry is:

(c)	Prepaid Expenses	4,000	
	Operating—Increase in Prepaid Expenses		4,000

• HELPFUL HINT
These amounts are asterisked in the worksheet to indicate that they result from a significant non-cash transaction.

LAND The increase in land of €110,000 resulted from a purchase through the issuance of long-term bonds. The company should report this transaction as a significant non-cash investing and financing activity. The worksheet entry is:

(d)	Land	110,000	
	Bonds Payable		110,000

BUILDINGS The cash purchase of a building for €120,000 is an investing activity cash outflow. The entry in the reconciling columns of the worksheet is:

(e)	Buildings	120,000	
	Investing—Purchase of Building		120,000

EQUIPMENT The increase in equipment of €17,000 resulted from a cash purchase of €25,000 and the sale of equipment costing €8,000. The book value of the equipment was €7,000, the cash proceeds were €4,000, and a loss of €3,000 was recorded. The worksheet entries are:

(f)	Equipment	25,000	
	Investing—Purchase of Equipment		25,000
(g)	Investing—Disposal of Plant Assets	4,000	
	Operating—Loss on Disposal of Plant Assets	3,000	
	Accumulated Depreciation—Equipment	1,000	
	Equipment		8,000

ACCOUNTS PAYABLE We must add the increase of €16,000 in accounts payable to net income to determine net cash provided by operating activities. The worksheet entry is:

(h)	Operating—Increase in Accounts Payable	16,000	
	Accounts Payable		16,000

INCOME TAXES PAYABLE When a company incurs income tax expense but has not yet paid its taxes, it records income taxes payable. A change in the Income

Taxes Payable account reflects the difference between income tax expense incurred and income tax actually paid. Computer Services' Income Taxes Payable account decreases by €2,000. That means the €47,000 of income tax expense reported on the income statement was €2,000 less than the amount of taxes paid during the period of €49,000. To adjust net income to a cash basis, we must reduce net income by €2,000. The worksheet entry is:

(i)	Income Taxes Payable	2,000	
	Operating—Decrease in Income Taxes Payable		2,000

BONDS PAYABLE The increase of €110,000 in this account resulted from the issuance of bonds for land. This is a significant non-cash investing and financing activity. Worksheet entry (d) above is the only entry necessary.

SHARE CAPITAL—ORDINARY The statement of financial position reports an increase in Share Capital—Ordinary of €20,000. The additional information section notes that this increase resulted from the issuance of new shares. This is a cash inflow reported in the financing section. The worksheet entry is:

(j)	Financing—Issuance of Ordinary Shares	20,000	
	Share Capital—Ordinary		20,000

ACCUMULATED DEPRECIATION—BUILDINGS, AND ACCUMULATED DEPRECIATION—EQUIPMENT Increases in these accounts of €6,000 and €3,000, respectively, resulted from depreciation expense. Depreciation expense is a **non-cash charge that we must add to net income** to determine net cash provided by operating activities. The worksheet entries are:

(k)	Operating—Depreciation Expense	6,000	
	Accumulated Depreciation—Buildings		6,000
(l)	Operating—Depreciation Expense	3,000	
	Accumulated Depreciation—Equipment		3,000

RETAINED EARNINGS The €116,000 increase in retained earnings resulted from net income of €145,000 and the declaration and payment of a €29,000 cash dividend. Net income is included in net cash provided by operating activities, and the dividends are a financing activity cash outflow. The entries in the reconciling columns of the worksheet are:

(m)	Operating—Net Income	145,000	
	Retained Earnings		145,000
(n)	Retained Earnings	29,000	
	Financing—Payment of Dividends		29,000

DISPOSITION OF CHANGE IN CASH The company's cash increased €22,000 in 2017. The final entry on the worksheet, therefore, is:

(o)	Cash	22,000	
	Increase in Cash		22,000

As shown in the worksheet, we enter the increase in cash in the reconciling credit column as a **balancing** amount. This entry should complete the reconciliation of the changes in the statement of financial position accounts. Also, it should permit the totals of the reconciling columns to be in agreement. When all changes have been explained and the reconciling columns are in agreement, the reconciling columns are ruled to complete the worksheet. The completed worksheet for Computer Services is shown in Illustration 13B-3 (page 676).

Illustration 13B-3
Completed worksheet—indirect method

Computer Services Company.xls

COMPUTER SERVICES COMPANY
Worksheet
Statement of Cash Flows for the Year Ended December 31, 2017

Statement of Financial Position Accounts	Balance 12/31/16	Reconciling Items Debit	Reconciling Items Credit	Balance 12/31/17
Debits				
Land	20,000	(d) 110,000*		130,000
Buildings	40,000	(e) 120,000		160,000
Equipment	10,000	(f) 25,000	(g) 8,000	27,000
Prepaid Expenses	1,000	(c) 4,000		5,000
Inventory	10,000	(b) 5,000		15,000
Accounts Receivable	30,000		(a) 10,000	20,000
Cash	33,000	(o) 22,000		55,000
Total	144,000			412,000
Credits				
Share Capital—Ordinary	50,000		(j) 20,000	70,000
Retained Earnings	48,000	(n) 29,000	(m) 145,000	164,000
Bonds Payable	20,000		(d) 110,000*	130,000
Accumulated Depreciation—Buildings	5,000		(k) 6,000	11,000
Accumulated Depreciation—Equipment	1,000	(g) 1,000	(l) 3,000	3,000
Accounts Payable	12,000		(h) 16,000	28,000
Income Taxes Payable	8,000	(i) 2,000		6,000
Total	144,000			412,000
Statement of Cash Flows Effects				
Operating activities				
Net income		(m) 145,000		
Decrease in accounts receivable		(a) 10,000		
Increase in inventory			(b) 5,000	
Increase in prepaid expenses			(c) 4,000	
Increase in accounts payable		(h) 16,000		
Decrease in income taxes payable			(i) 2,000	
Depreciation expense		(k) 6,000		
		(l) 3,000		
Loss on disposal of plant assets		(g) 3,000		
Investing activities				
Purchase of building			(e) 120,000	
Purchase of equipment			(f) 25,000	
Disposal of plant assets		(g) 4,000		
Financing activities				
Issuance of ordinary shares		(j) 20,000		
Payment of dividends			(n) 29,000	
Totals		525,000	503,000	
Increase in cash			(o) 22,000	
Totals		525,000	525,000	

*Significant non-cash investing and financing activity.

APPENDIX 13C Statement of Cash Flows—T-Account Approach

Learning Objective *7

Use the T-account approach to prepare a statement of cash flows.

Many people like to use T-accounts to provide structure to the preparation of a statement of cash flows. The use of T-accounts is based on the accounting equation that you learned in Chapter 1. The basic equation is:

Assets = Liabilities + Equity

Now, let's rewrite the left-hand side as:

Cash + Non-Cash Assets = Liabilities + Equity

Next, rewrite the equation by subtracting Non-Cash Assets from each side to isolate Cash on the left-hand side:

Cash = Liabilities + Equity − Non-Cash Assets

Finally, if we insert the Δ symbol (which means "change in"), we have:

Δ Cash = Δ Liabilities + Δ Equity − Δ Non-Cash Assets

What this means is that the change in cash is equal to the change in all of the other statement of financial position accounts. Another way to think about this is that if we analyze the changes in all of the non-cash statement of financial position accounts, we will explain the change in the Cash account. This, of course, is exactly what we are trying to do with the statement of cash flows.

To implement this approach, first prepare a large Cash T-account, with sections for operating, investing, and financing activities. Then, prepare smaller T-accounts for all of the other non-cash statement of financial position accounts. Insert the beginning and ending balances for each of these accounts. Once you have done this, then walk through the steps outlined in Illustration 13-4 (page 650). As you walk through the steps, enter debit and credit amounts into the affected accounts. When all of the changes in the T-accounts have been explained, you are done. To demonstrate, we will apply this approach to the example of Computer Services Company that is presented in the chapter. Each of the adjustments in Illustration 13C-1 (page 678) is numbered so you can follow them through the T-accounts.

1. Post net income as a debit to the operating section of the Cash T-account and a credit to Retained Earnings. Make sure to label all adjustments to the Cash T-account. It also helps to number each adjustment so you can trace all of them if you make an error.
2. Post depreciation expense as a debit to the operating section of Cash and a credit to each of the appropriate accumulated depreciation accounts.
3. Post any gains or losses on the sale of property, plant, and equipment. To do this, it is best to first prepare the journal entry that was recorded at the time of the sale and then post each element of the journal entry. For example, for Computer Services the entry was as follows.

Cash	4,000	
Accumulated Depreciation—Equipment	1,000	
Loss on Disposal of Plant Assets	3,000	
Equipment		8,000

The €4,000 cash entry is a source of cash in the investing section of the Cash account. Accumulated Depreciation—Equipment is debited for €1,000. The Loss on Disposal of Plant Assets is a debit to the operating section of the Cash T-account. Finally, Equipment is credited for €8,000.

Cash

Operating			
(1) Net income	145,000	5,000	Inventory (5)
(2) Depreciation expense	9,000	4,000	Prepaid expenses (6)
(3) Loss on disposal of plant assets	3,000	2,000	Income taxes payable (8)
(4) Accounts receivable	10,000		
(7) Accounts payable	16,000		
Net cash provided by operating activities	172,000		
Investing			
(3) Disposal of plant assets	4,000	120,000	Purchased building (10)
		25,000	Purchased equipment (11)
		141,000	Net cash used by investing activities
Financing			
(12) Issued ordinary shares	20,000	29,000	Dividend paid (13)
		9,000	Net cash used by financing activities
	22,000		

Accounts Receivable

30,000	
	10,000 (4)
20,000	

Inventory

10,000	
(5) 5,000	
15,000	

Prepaid Expenses

1,000	
(6) 4,000	
5,000	

Land

20,000	
(9) 110,000	
130,000	

Buildings

40,000	
(10) 120,000	
160,000	

Accumulated Depreciation—Buildings

	5,000
	6,000 (2)
	11,000

Equipment

10,000	
(11) 25,000	8,000 (3)
27,000	

Accumulated Depreciation—Equipment

	1,000
(3) 1,000	3,000 (2)
	3,000

Accounts Payable

	12,000
	16,000 (7)
	28,000

Income Taxes Payable

	8,000
(8) 2,000	
	6,000

Bonds Payable

	20,000
	110,000 (9)
	130,000

Share Capital—Ordinary

	50,000
	20,000 (12)
	70,000

Retained Earnings

	48,000
	145,000 (1)
(13) 29,000	
	164,000

Illustration 13C-1
T-account approach

4–8. Next, post each of the changes to the non-cash current asset and current liability accounts. For example, to explain the €10,000 decline in Computer Services' Accounts Receivable, credit Accounts Receivable for €10,000 and debit the operating section of the Cash T-account for €10,000.

9. Analyze the changes in the non-current accounts. Land was purchased by issuing Bonds Payable. This requires a debit to Land for €110,000 and a credit to Bonds Payable for €110,000. Note that this is a significant non-cash event that requires disclosure in a note at the bottom of the statement of cash flows.

10. Buildings is debited for €120,000, and the investing section of the Cash T-account is credited for €120,000 as a use of cash from investing.

11. Equipment is debited for €25,000 and the investing section of the Cash T-account is credited for €25,000 as a use of cash from investing.

12. Share Capital—Ordinary is credited for €20,000 for the issuance of ordinary shares, and the financing section of the Cash T-account is debited for €20,000.

13. Retained Earnings is debited to reflect the payment of the €29,000 dividend, and the financing section of the Cash T-account is credited to reflect the use of Cash.

At this point, all of the changes in the non-cash accounts have been explained. All that remains is to subtotal each section of the Cash T-account and agree the total change in cash with the change shown on the statement of financial position. Once this is done, the information in the Cash T-account can be used to prepare a statement of cash flows.

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Indicate the usefulness of the statement of cash flows.** The statement of cash flows provides information about the cash receipts, cash payments, and net change in cash resulting from the operating, investing, and financing activities of a company during the period.

2 **Distinguish among operating, investing, and financing activities.** Operating activities include the cash effects of transactions that enter into the determination of net income. Investing activities involve cash flows resulting from changes in investments and non-current asset items. Financing activities involve cash flows resulting from changes in non-current liability and equity items.

3 **Prepare a statement of cash flows using the indirect method.** The preparation of a statement of cash flows involves three major steps. (1) Determine net cash provided/used by operating activities by converting net income from an accrual basis to a cash basis. (2) Analyze changes in non-current asset and liability accounts and record as investing and financing activities, or disclose as non-cash transactions. (3) Compare the net change in cash on the statement of cash flows with the change in the Cash account reported on the statement of financial position to make sure the amounts agree.

4 **Analyze the statement of cash flows.** Free cash flow indicates the amount of cash a company generated during the current year that is available for the payment of additional dividends or for expansion.

*5 **Prepare a statement of cash flows using the direct method.** The preparation of the statement of cash flows involves three major steps. (1) Determine net cash provided/used by operating activities by converting net income from an accrual basis to a cash basis. (2) Analyze changes in non-current asset and liability accounts and record as investing and financing activities, or disclose as non-cash transactions. (3) Compare the net change in cash on the statement of cash flows with the change in the Cash account reported on the statement of financial position to make sure the amounts agree. The direct method reports cash receipts less cash payments to arrive at net cash provided by operating activities.

*6 **Explain how to use a worksheet to prepare the statement of cash flows using the indirect method.** When there are numerous adjustments, a worksheet can be a helpful tool in preparing the statement of cash flows. Key guidelines for using a worksheet are as follows. (1) List accounts with debit balances separately from those with credit balances. (2) In the reconciling columns in the bottom portion of the worksheet, show cash inflows as debits and cash outflows as credits. (3) Do not enter reconciling items in any journal or account, but use them only to help prepare the statement of cash flows.

The steps in preparing the worksheet are as follows. (1) Enter beginning and ending balances of statement of financial position accounts. (2) Enter debits and credits in reconciling columns. (3) Enter the increase or decrease in cash in two places as a balancing amount.

*7 **Use the T-account approach to prepare a statement of cash flows.** To use T-accounts to prepare the statement of cash flows: (1) prepare a large Cash T-account with sections for operating, investing, and financing activities; (2) prepare smaller T-accounts for all other non-cash accounts; (3) insert beginning and ending balances for all accounts; and (4) follows the steps in Illustration 13-4 (page 650), entering debit and credit amounts as needed.

GLOSSARY REVIEW

***Direct method** A method of preparing a statement of cash flows that shows operating cash receipts and payments, making it more consistent with the objective of the statement of cash flows. (pp. 651, 665).

Financing activities Cash flow activities that include (a) obtaining cash from issuing debt and repaying the amounts borrowed, and (b) obtaining cash from shareholders, repurchasing shares, and paying dividends. (p. 646).

Free cash flow Net cash provided by operating activities adjusted for capital expenditures and dividends paid. (p. 662).

Indirect method A method of preparing a statement of cash flows in which net income is adjusted for items that do not affect cash, to determine net cash provided by operating activities. (p. 651).

Investing activities Cash flow activities that include (a) purchasing and disposing of investments and property, plant, and equipment using cash, and (b) lending money and collecting the loans. (p. 646).

Operating activities Cash flow activities that include the cash effects of transactions that create revenues and expenses and thus enter into the determination of net income. (p. 646).

Statement of cash flows A basic financial statement that provides information about the cash receipts, cash payments, and net change in cash during a period, resulting from operating, investing, and financing activities. (p. 646).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Which of the following is **incorrect** about the statement of cash flows?
(a) It is a fourth basic financial statement.
(b) It provides information about cash receipts and cash payments of an entity during a period.
(c) It reconciles the ending Cash account balance to the balance per the bank statement.
(d) It provides information about the operating, investing, and financing activities of the business.

(LO 1) **2.** Which of the following will **not** be reported in the statement of cash flows?
(a) The net change in plant assets during the year.
(b) Cash payments for plant assets during the year.
(c) Cash receipts from sales of plant assets during the year.
(d) Cash payments for dividends.

(LO 2) **3.** The statement of cash flows classifies cash receipts and cash payments by these activities:
(a) operating and non-operating.
(b) investing, financing, and operating.
(c) financing, operating, and non-operating.
(d) investing, financing, and non-operating.

(LO 2) **4.** Which is an example of a cash flow from an operating activity?
(a) Payment of cash to lenders for interest.
(b) Receipt of cash from the issuance of ordinary shares.
(c) Payment of cash dividends to the company's shareholders.
(d) None of the above.

(LO 2) **5.** Which is an example of a cash flow from an investing activity?
(a) Receipt of cash from the issuance of bonds payable.
(b) Payment of cash to repurchase outstanding ordinary shares.
(c) Receipt of cash from the sale of equipment.
(d) Payment of cash to suppliers for inventory.

(LO 2) **6.** Cash dividends paid to shareholders are classified on the statement of cash flows as:
(a) an operating activity.
(b) an investing activity.
(c) a combination of (a) and (b).
(d) a financing activity.

(LO 2) **7.** Which is an example of a cash flow from a financing activity?
(a) Receipt of cash from sale of land.
(b) Issuance of debt for cash.
(c) Purchase of equipment for cash.
(d) Receipt of interest.

(LO 2) **8.** Which of the following is **incorrect** about the statement of cash flows?
(a) The direct method may be used to report net cash provided by operating activities.
(b) The statement shows the net cash provided (used) for three categories of activity.
(c) The operating section is the last section of the statement.
(d) The indirect method may be used to report net cash provided by operating activities.

Use the indirect method to solve Questions 9 through 11.

9. Net income is £132,000, accounts payable increased £10,000 during the year, inventory decreased £6,000 during the year, and accounts receivable increased £12,000 during the year. Under the indirect method, what is net cash provided by operating activities? (LO 3)
(a) £102,000. (c) £124,000.
(b) £112,000. (d) £136,000.

10. Items that are added back to net income in determining net cash provided by operating activities under the indirect method do **not** include: (LO 3)
(a) depreciation expense.
(b) an increase in inventory.
(c) amortization expense.
(d) loss on disposal of equipment.

11. The following data are available for Allen Clapp Ltd. (LO 3)

Net income	HK$2,000,000
Depreciation expense	400,000
Dividends paid	600,000
Gain on disposal of land	100,000
Decrease in accounts receivable	200,000
Decrease in accounts payable	300,000

Net cash provided by operating activities is:
(a) HK$1,600,000. (c) HK$2,400,000.
(b) HK$2,200,000. (d) HK$2,800,000.

12. The following data are available for Orange Peels Ltd. (LO 3)

Sale of land	NT$1,000,000
Sale of equipment	500,000
Issuance of ordinary shares	700,000
Purchase of equipment	300,000
Payment of cash dividends	600,000

Net cash provided by investing activities is:
(a) NT$1,200,000. (c) NT$1,500,000.
(b) NT$1,300,000. (d) NT$1,900,000.

13. The following data are available for Something Strange! (LO 3)

Increase in accounts payable	€ 40,000
Increase in bonds payable	100,000
Sale of investment	50,000
Issuance of ordinary shares	60,000
Payment of cash dividends	30,000

Net cash provided by financing activities is:
(a) €90,000. (c) €160,000.
(b) €130,000. (d) €170,000.

14. The statement of cash flows should **not** be used to evaluate an entity's ability to: (LO 4)
(a) earn net income.
(b) generate future cash flows.
(c) pay dividends.
(d) meet obligations.

15. Free cash flow provides an indication of a company's ability to: (LO 4)
(a) generate net income.
(b) generate cash to pay dividends.

(c) generate cash to invest in new capital expenditures.
(d) Both (b) and (c).

Use the direct method to solve Questions 16 and 17.

(LO 5) ***16.** The beginning balance in accounts receivable is €44,000, the ending balance is €42,000, and sales during the period are €129,000. What are cash receipts from customers?
(a) €127,000.
(b) €129,000.
(c) €131,000.
(d) €141,000.

(LO 5) ***17.** Which of the following items is reported on a statement of cash flows prepared by the direct method?
(a) Loss on disposal of building.
(b) Increase in accounts receivable.
(c) Depreciation expense.
(d) Cash payments to suppliers.

***18.** In a worksheet for the statement of cash flows, a decrease in accounts receivable is entered in the reconciling columns as a credit to Accounts Receivable and a debit in the: (LO 6)
(a) investing activities section.
(b) operating activities section.
(c) financing activities section.
(d) None of the choices is correct.

***19.** In a worksheet for the statement of cash flows, a worksheet entry that includes a credit to accumulated depreciation will also include a: (LO 6)
(a) credit in the operating activities section and a debit in another section.
(b) debit in the operating activities section.
(c) debit in the investing activities section.
(d) debit in the financing activities section.

Solutions

1. (c) The statement of cash flows does not reconcile the ending cash balance to the balance per the bank statement. The other choices are true statements.

2. (a) The net change in plant assets during the year is not reported in the statement of cash flows. The other choices are true statements.

3. (b) Operating, investing, and financing activities are the three classifications of cash receipts and cash payments used in the statement of cash flows. The other choices are therefore incorrect.

4. (a) Payment of cash to lenders for interest is an operating activity. The other choices are incorrect because (b) receipt of cash from the issuance of ordinary shares is a financing activity, (c) payment of cash dividends to the company's shareholders is a financing activity, and (d) there is a correct answer.

5. (c) Receipt of cash from the sale of equipment is an investing activity. The other choices are incorrect because (a) the receipt of cash from the issuance of bonds payable is a financing activity, (b) payment of cash to repurchase outstanding ordinary shares is a financing activity, and (d) payment of cash to suppliers for inventory is an operating activity.

6. (d) Cash dividends paid to shareholders are classified as a financing activity, not (a) an operating activity, (b) an investing activity, or (c) a combination of (a) and (b).

7. (b) Issuance of debt for cash is a financing activity. The other choices are incorrect because (a) the receipt of cash for the sale of land is an investing activity, (c) the purchase of equipment for cash is an investing activity, and (d) receipt of interest is an operating activity.

8. (c) The operating section of the statement of cash flows is the first, not the last, section of the statement. The other choices are true statements.

9. (d) Net cash provided by operating activities is computed by adjusting net income for the changes in the three current asset/current liability accounts listed. An increase in accounts payable (£10,000) and a decrease in inventory (£6,000) are added to net income (£132,000), while an increase in accounts receivable (£12,000) is subtracted from net income, or £132,000 + £10,000 + £6,000 − £12,000 = £136,000, not (a) £102,000, (b) £112,000, or (c) £124,000.

10. (b) An increase in inventory is subtracted, not added, to net income in determining net cash provided by operating activities. The other choices are incorrect because (a) depreciation expense, (c) amortization expense, and (d) loss on disposal of equipment are all added back to net income in determining net cash provided by operating activities.

11. (b) Net cash provided by operating activities is HK$2,200,000 (Net income HK$2,000,000 + Depreciation expense HK$400,000 − Gain on disposal of land HK$100,000 + Decrease in accounts receivable HK$200,000 − Decrease in accounts payable HK$300,000), not (a) HK$1,600,000, (c) HK$2,400,000, or (d) HK$2,800,000.

12. (a) Net cash provided by investing activities is NT$1,200,000 (Sale of land NT$1,000,000 + Sale of equipment NT$500,000 − Purchase of equipment NT$300,000), not (b) NT$1,300,000, (c) NT$1,500,000, or (d) NT$1,900,000. Issuance of ordinary shares and payment of cash dividends are financing activities.

13. (b) Net cash provided by financing activities is €130,000 (Increase in bonds payable €100,000 + Issuance of ordinary shares €60,000 − Payment of cash dividends €30,000), not (a) €90,000, (c) €160,000, or (d) €170,000. Increase in accounts payable is an operating activity and sale of investment is an investing activity.

14. (a) The statement of cash flows is not used to evaluate an entity's ability to earn net income. The other choices are true statements.

15. (d) Free cash flow provides an indication of a company's ability to generate cash to pay dividends and to invest in new capital expenditures. Choice (a) is incorrect because other measures besides free cash flow provide the best measure of a company's ability to earn net income. Choices (b) and (c) are true statements, but (d) is the better answer.

***16. (c)** Cash collections from customers amount to €131,000 (€129,000 + €2,000). The other choices are therefore incorrect.

***17. (d)** Cash payments to suppliers are reported on a statement of cash flows prepared by the direct method. The other choices are incorrect because (a) loss on disposal of building, (b) increase in accounts receivable, and (c) depreciation expense are reported in the operating activities section of the statement of cash flows when the indirect, not direct, method is used.

***18. (b)** Because accounts receivable is a current asset, the debit belongs in the operating activities section of the worksheet, not in the (a) investing activities or (c) financing activities section. Choice (d) is incorrect as there is a right answer.

***19. (b)** A worksheet entry that includes a credit to accumulated depreciation will also include a debit to depreciation expense. This debit in the operating activities section of the statement of cash flows will be added to the net income to determine net cash provided by operating activities. The other choices are therefore incorrect.

PRACTICE EXERCISES

Prepare journal entries to determine effect on statement of cash flows.

(LO 2, 3)

1. Furst Ltd. had the following transactions.

1. Paid salaries of NT$140,000.
2. Issued 1,000 shares of NT$10 par value ordinary shares for equipment worth NT$160,000.
3. Sold equipment (cost NT$100,000, accumulated depreciation NT$60,000) for NT$30,000.
4. Sold land (cost NT$120,000) for NT$160,000.
5. Issued another 1,000 shares of NT$10 par ordinary shares for NT$180,000.
6. Recorded depreciation of NT$200,000.

Instructions

For each transaction above, (a) prepare the journal entry, and (b) indicate how it would affect the statement of cash flows. Assume the indirect method.

Solution

1. 1. (a)	Salaries and Wages Expense	140,000	
	Cash		140,000

(b) Salaries and wages expense is not reported separately on the statement of cash flows. It is part of the computation of net income in the income statement and is included in the net income amount on the statement of cash flows (operating section).

2. (a)	Equipment	160,000	
	Ordinary Shares		10,000
	Share Premium—Ordinary		150,000

(b) The issuance of ordinary shares for equipment (NT$160,000) is reported as a non-cash financing and investing activity at the bottom of the statement of cash flows.

3. (a)	Cash	30,000	
	Loss on Disposal of Plant Assets	10,000	
	Accumulated Depreciation—Equipment	60,000	
	Equipment		100,000

(b) The cash receipt (NT$30,000) is reported in the investing section. The loss (NT$10,000) is added to net income in the operating section.

4. (a)	Cash	160,000	
	Land		120,000
	Gain on Disposal of Plant Assets		40,000

(b) The cash receipt (NT$160,000) is reported in the investing section. The gain (NT$40,000) is deducted from net income in the operating section.

5. (a)	Cash	180,000	
	Ordinary Shares		10,000
	Share Premium—Ordinary		170,000

(b) The cash receipt (NT$180,000) is reported in the financing section.

6. (a)	Depreciation Expense	200,000	
	Accumulated Depreciation—Equipment		200,000

(b) Depreciation expense (NT$200,000) is added to net income in the operating section.

Prepare statement of cash flows and compute free cash flow.

(LO 3, 4)

2. Strong AG's comparative statements of financial position are presented below.

STRONG AG
Comparative Statements of Financial Position
December 31

	2017	**2016**
Investments	€ 23,000	€ 16,000
Equipment	60,000	70,000
Accumulated depreciation—equipment	(14,000)	(10,000)
Accounts receivable	24,200	22,300
Cash	28,200	17,700
Total	€121,400	€116,000
Ordinary shares	€ 60,000	€ 45,000
Retained earnings	31,800	29,900
Bonds payable	10,000	30,000
Accounts payable	19,600	11,100
Total	€121,400	€116,000

Additional information:

1. Net income was €28,300. Dividends declared and paid were €26,400.
2. Equipment which cost €10,000 and had accumulated depreciation of €1,200 was sold for €4,300.
3. All other changes in non-current account balances had a direct effect on cash flows, except the change in accumulated depreciation.

Instructions

(a) Prepare a statement of cash flows for 2017 using the indirect method.
(b) Compute free cash flow.

Solution

2. (a)

STRONG AG
Statement of Cash Flows
For the Year Ended December 31, 2017

Cash flows from operating activities		
Net income		€ 28,300
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	€ 5,200*	
Loss on sale of equipment	4,500**	
Increase in accounts payable	8,500	
Increase in accounts receivable	(1,900)	16,300
Net cash provided by operating activities		44,600
Cash flows from investing activities		
Sale of equipment	4,300	
Purchase of investments	(7,000)	
Net cash used by investing activities		(2,700)
Cash flows from financing activities		
Issuance of ordinary shares	15,000	
Retirement of bonds	(20,000)	
Payment of dividends	(26,400)	
Net cash used by financing activities		(31,400)
Net increase in cash		10,500
Cash at beginning of period		17,700
Cash at end of period		€ 28,200

*[€14,000 − (€10,000 − €1,200)]; **[€4,300 − (€10,000 − €1,200)]

(b) €44,600 − €0 − €26,400 = €18,200

PRACTICE PROBLEMS

Prepare statement of cash flows using indirect method.
(LO 3)

1. The income statement for the year ended December 31, 2017, for Kosinski AG contains the following condensed information.

KOSINSKI AG
Income Statement
For the Year Ended December 31, 2017

Sales revenue		€6,583,000
Operating expenses (excluding depreciation)	€4,920,000	
Depreciation expense	880,000	5,800,000
Income before income taxes		783,000
Income tax expense		353,000
Net income		€ 430,000

Included in operating expenses is a €24,000 loss resulting from the sale of machinery for €270,000 cash. Machinery was purchased at a cost of €750,000.

The following balances are reported on Kosinski's comparative statements of financial position at December 31.

KOSINSKI AG
Comparative Statements of Financial Position (partial)

	2017	2016
Inventory	€834,000	€867,000
Accounts receivable	775,000	610,000
Cash	672,000	130,000
Accounts payable	521,000	501,000

Income tax expense of €353,000 represents the amount paid in 2017. Dividends declared and paid in 2017 totaled €200,000.

Instructions

Prepare the statement of cash flows using the indirect method.

Solution

1.

KOSINSKI AG
Statement of Cash Flows—Indirect Method
For the Year Ended December 31, 2017

Cash flows from operating activities		
Net income		€ 430,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	€ 880,000	
Loss on disposal of plant assets	24,000	
Increase in accounts receivable	(165,000)	
Decrease in inventory	33,000	
Increase in accounts payable	20,000	792,000
Net cash provided by operating activities		1,222,000

Cash flows from investing activities		
Disposal of plant assets	270,000	
Purchase of machinery	(750,000)	
Net cash used by investing activities		(480,000)
Cash flows from financing activities		
Payment of cash dividends		(200,000)
Net increase in cash		542,000
Cash at beginning of period		130,000
Cash at end of period		€ 672,000

***2.** The income statement for Taipei Ltd. contains the following condensed information.

Prepare statement of cash flows using direct method.
(LO 5)

TAIPEI LTD.
Income Statement
For the Year Ended December 31, 2017

Sales revenue		NT$6,583,000
Operating expenses, excluding depreciation	NT$4,920,000	
Depreciation expense	880,000	5,800,000
Income before income taxes		783,000
Income tax expense		353,000
Net income		NT$ 430,000

Included in operating expenses is a NT$24,000 loss resulting from the sale of machinery for NT$270,000 cash. Machinery was purchased at a cost of NT$750,000. The following balances are reported on Taipei's comparative statements of financial position at December 31.

TAIPEI LTD.
Comparative Statements of Financial Position (partial)

	2017	2016
Inventory	NT$834,000	NT$867,000
Accounts receivable	775,000	610,000
Cash	672,000	130,000
Accounts payable	521,000	501,000

Income tax expense of NT$353,000 represents the amount paid in 2017. Dividends declared and paid in 2017 totaled NT$200,000.

Instructions

Prepare the statement of cash flows using the direct method.

Solution

*2.

TAIPEI LTD.
Statement of Cash Flows—Direct Method
For the Year Ended December 31, 2017

Cash flows from operating activities		
Cash collections from customers		NT$6,418,000*
Cash payments:		
For operating expenses	NT$4,843,000**	
For income taxes	353,000	5,196,000
Net cash provided by operating activities		1,222,000

Cash flows from investing activities		
Disposal of plant assets	270,000	
Purchase of machinery	(750,000)	
Net cash used by investing activities		(480,000)
Cash flows from financing activities		
Payment of cash dividends	(200,000)	
Net cash used by financing activities		(200,000)
Net increase in cash		542,000
Cash at beginning of period		130,000
Cash at end of period		NT$ 672,000

Direct-Method Computations:

*Computation of cash collections from customers:	
Sales revenue	NT$6,583,000
Deduct: Increase in accounts receivable	165,000
Cash collections from customers	NT$6,418,000

**Computation of cash payments for operating expenses:	
Operating expenses	NT$4,920,000
Deduct: Loss on disposal of plant assets	24,000
Deduct: Decrease in inventories	33,000
Deduct: Increase in accounts payable	20,000
Cash payments for operating expenses	NT$4,843,000

NOTE: Asterisked Questions, Exercises, and Problems relate to material in the appendices to the chapter.

QUESTIONS

1. (a) What is a statement of cash flows?
   (b) Nick Johns maintains that the statement of cash flows is an optional financial statement. Do you agree? Explain.
2. What questions about cash are answered by the statement of cash flows?
3. Distinguish among the three types of activities reported in the statement of cash flows.
4. (a) What are the major sources (inflows) of cash in a statement of cash flows?
   (b) What are the major uses (outflows) of cash?
5. Why is it important to disclose certain non-cash transactions? How should they be disclosed?
6. Wilma Flintstone and Barny Rublestone were discussing the format of the statement of cash flows of Saltwater Candy Co. At the bottom of Saltwater Candy's statement of cash flows was a note entitled "Non-cash investing and financing activities." Give three examples of significant non-cash transactions that would be reported in this manner.
7. Why is it necessary to use comparative statements of financial position, a current income statement, and certain transaction data in preparing a statement of cash flows?
8. Contrast the advantages and disadvantages of the direct and indirect methods of preparing the statement of cash flows. Are both methods acceptable? Which method is preferred by the IASB? Which method is more popular?
9. When the total cash inflows exceed the total cash outflows in the statement of cash flows, how and where is this excess identified?
10. Describe the indirect method for determining net cash provided (used) by operating activities.
11. Why is it necessary to convert accrual-based net income to cash-basis income when preparing a statement of cash flows?
12. The president of Ferneti A/S is puzzled. During the last year, the company experienced a net loss of £800,000, yet its cash increased £300,000 during the same period of time. Explain to the president how this could occur.
13. Identify five items that are adjustments to convert net income to net cash provided by operating activities under the indirect method.
14. Why and how is depreciation expense reported in a statement prepared using the indirect method?
15. Why is the statement of cash flows useful?

***16.** Describe the direct method for determining net cash provided by operating activities.

***17.** Give the formulas under the direct method for computing (a) cash receipts from customers and (b) cash payments to suppliers.

***18.** Aloha Ltd. reported sales revenue of NT$2 million for 2017. Accounts receivable decreased NT$140,000 and accounts payable increased NT$300,000. Compute cash receipts from customers, assuming that the receivable and payable transactions related to operations.

***19.** In the direct method, why is depreciation expense not reported in the cash flows from operating activities section?

***20.** Why is it advantageous to use a worksheet when preparing a statement of cash flows? Is a worksheet required to prepare a statement of cash flows?

BRIEF EXERCISES

BE13-1 Each of the items below must be considered in preparing a statement of cash flows for Aksu A.Ş. for the year ended December 31, 2017. For each item, state how it should be shown in the statement of cash flows for 2017.

Indicate statement presentation of selected transactions.

(LO 2)

(a) Issued bonds for ₺150,000 cash.
(b) Purchased equipment for ₺200,000 cash.
(c) Sold land costing ₺50,000 for ₺50,000 cash.
(d) Declared and paid a ₺18,000 cash dividend.

BE13-2 Classify each item as an operating, investing, or financing activity. Assume all items involve cash unless there is information to the contrary.

Classify items by activities.

(LO 2)

(a) Purchase of equipment.
(b) Proceeds from sale of building.
(c) Redemption of bonds.
(d) Depreciation.
(e) Payment of dividends.
(f) Issuance of ordinary shares.

BE13-3 The following T-account is a summary of the Cash account of Wiegman Ltd.

Identify financing activity transactions.

(LO 2)

Cash (Summary Form)

Balance, Jan. 1	8,000		
Receipts from customers	364,000	Payments for goods	200,000
Dividends on share investments	6,000	Payments for operating expenses	140,000
Proceeds from sale of equipment	36,000	Interest paid	10,000
Proceeds from issuance of		Taxes paid	8,000
bonds payable	460,000	Dividends paid	40,000
Balance, Dec. 31	476,000		

What amount of net cash (in £) provided (used) by financing activities should be reported in the statement of cash flows?

BE13-4 Mokena Ltd. reported net income of €2.0 million in 2017. Depreciation for the year was €160,000, accounts receivable increased €350,000, and accounts payable increased €280,000. Compute net cash provided by operating activities using the indirect method.

Compute net cash provided by operating activities—indirect method.

(LO 3)

BE13-5 The net income for Lodi Ltd. for 2017 was £250,000. For 2017, depreciation on plant assets was £65,000, and the company incurred a gain on disposal of plant assets of £12,000. Compute net cash provided by operating activities under the indirect method.

Compute net cash provided by operating activities—indirect method.

(LO 3)

BE13-6 The comparative statements of financial position for Sergipe SA show these changes in non-cash current asset accounts: accounts receivable increase R$80,000, prepaid expenses decrease R$28,000, and inventories decrease R$30,000. Compute net cash provided by operating activities using the indirect method assuming that net income is R$250,000.

Compute net cash provided by operating activities—indirect method.

(LO 3)

BE13-7 The T-accounts for Equipment and the related Accumulated Depreciation—Equipment for Gao Company Ltd. at the end of 2017 are shown here.

Determine cash received from sale of equipment.

(LO 3)

Equipment

Beg. bal.	800,000	Disposals	220,000
Acquisitions	410,600		
End. bal.	990,600		

Accumulated Depreciation—Equipment

Disposals	85,000	Beg. bal.	445,000
		Depr. exp.	120,000
		End. bal.	480,000

In addition, Gao Company's income statement reported a loss on disposal of plant assets of HK$63,000. What amount was reported on the statement of cash flows as "cash flow from disposal of plant assets"?

Calculate free cash flow. (LO 4)

BE13-8 In a recent year, Cypress Semiconductor Corporation (USA) reported net cash provided by operating activities of $155,397,000, net cash used in investing of $207,628,000, and net cash used in financing of $33,372,000. In addition, cash spent for fixed assets during the period was $130,820,000. No dividends were paid. Calculate free cash flow.

Calculate free cash flow. (LO 4)

BE13-9 Wruck Company reported net cash provided by operating activities of £420,000, net cash used by investing activities of £150,000, and net cash provided by financing activities of £80,000. In addition, cash spent for capital assets during the period was £250,000. No dividends were paid. Calculate free cash flow.

Calculate free cash flow. (LO 4)

BE13-10 Suppose in a recent quarter that Alliance Atlantis Communications Inc. (USA) reported net cash provided by operating activities of $45,000,000 and revenues of $265,800,000. Cash spent on plant asset additions during the quarter was $1,400,000. No dividends were paid. Calculate free cash flow.

Calculate and analyze free cash flow. (LO 4)

BE13-11 The management of Russel Ltd. is trying to decide whether it can increase its dividend. During the current year, it reported net income of €875,000. It had net cash provided by operating activities of €643,000, paid cash dividends of €80,000, and had capital expenditures of €274,000. Compute the company's free cash flow, and discuss whether an increase in the dividend appears warranted. What other factors should be considered?

Compute receipts from customers—direct method. (LO 5)

***BE13-12** Suppose Columbia Sportswear Company (USA) had accounts receivable of $205,025,000 at the beginning of a recent year and $267,653,000 at year end. Sales revenue was $1,085,307,000 for the year. What is the amount of cash receipts from customers?

Compute cash payments for income taxes—direct method. (LO 5)

***BE13-13** Kinsey Ltd. reported income taxes of £360,000,000 on its 2017 income statement, income taxes payable of £277,000,000 at December 31, 2016, and £525,000,000 at December 31, 2017. What amount of cash payments were made for income taxes during 2017?

Compute cash payments for operating expenses—direct method. (LO 5)

***BE13-14** Yaddof SE reports operating expenses of €70,000 excluding depreciation expense of €19,000 for 2017. During the year, prepaid expenses decreased €6,800 and accrued expenses payable increased €4,100. Compute the cash payments for operating expenses in 2017.

Indicate entries in worksheet. (LO 6)

***BE13-15** During the year, prepaid expenses decreased £6,500, and accrued expenses increased £2,000. Indicate how the changes in prepaid expenses and accrued expenses payable should be entered in the reconciling columns of a worksheet. Assume that beginning balances were prepaid expenses £18,600 and accrued expenses payable £8,200.

> DO IT! REVIEW

Classify transactions by type of cash flow activity. (LO 2)

DO IT! 13-1 Piekarski OAO had the following transactions.

1. Issued €200,000 of bonds payable.
2. Paid utilities expense.
3. Issued 500 shares of preference shares for €45,000.
4. Sold land and a building for €250,000.
5. Lent €30,000 to Zarembski Company, receiving Zarembski's 1-year, 12% note.

Classify each of these transactions by type of cash flow activity (operating, investing, or financing).

Calculate net cash from operating activities. (LO 3)

DO IT! 13-2 Muniz Photography SA reported net income of R$100,000 for 2017. Included in the income statement were depreciation expense of R$4,000, amortization expense of R$3,000, and a gain on disposal of plant assets of R$3,900. Muniz's comparative statements of financial position show the following balances.

	12/31/16	12/31/17
Accounts receivable	R$27,000	R$21,000
Accounts payable	6,000	9,200

Calculate net cash provided by operating activities for Muniz Photography SA.

DO IT! 13-3 Zielinski OAO issued the following statement of cash flows for 2017.

Compute and discuss free cash flow.

(LO 4)

ZIELINSKI OAO
Statement of Cash Flows—Indirect Method
For the Year Ended December 31, 2017

Cash flows from operating activities		
Net income		€ 59,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	€ 9,400	
Loss on disposal of plant assets	3,300	
Decrease in accounts receivable	8,500	
Increase in inventory	(5,000)	
Decrease in accounts payable	(2,500)	13,700
Net cash provided by operating activities		72,700
Cash flows from investing activities		
Sale of investments	3,100	
Purchase of equipment	(26,000)	
Net cash used by investing activities		(22,900)
Cash flows from financing activities		
Issuance of shares	20,000	
Payment on long-term note payable	(10,000)	
Payment for dividends	(16,000)	
Net cash used by financing activities		(6,000)
Net increase in cash		43,800
Cash at beginning of year		13,000
Cash at end of year		€ 56,800

(a) Compute free cash flow for Zielinski. (b) Explain why free cash flow often provides better information than "Net cash provided by operating activities."

EXERCISES

E13-1 Laurent AG had these transactions during 2017.

Classify transactions by type of activity.

(LO 2)

(a) Issued CHF50,000 par value ordinary shares for cash.
(b) Purchased a machine for CHF30,000, giving a long-term note in exchange.
(c) Issued CHF200,000 par value ordinary shares upon conversion of bonds having a face value of CHF200,000.
(d) Declared and paid a cash dividend of CHF18,000.
(e) Sold a long-term investment with a cost of CHF15,000 for CHF15,000 cash.
(f) Collected CHF16,000 of accounts receivable.
(g) Paid CHF18,000 on accounts payable.

Instructions
Analyze the transactions and indicate whether each transaction resulted in a cash flow from operating activities, investing activities, financing activities, or non-cash investing and financing activities.

Classify transactions by type of activity.

(LO 2)

E13-2 An analysis of comparative statements of financial position, the current year's income statement, and the general ledger accounts of Solomon Co. uncovered the following items. Assume all items involve cash unless there is information to the contrary.

(a) Payment of interest on notes payable.
(b) Exchange of land for patent.
(c) Sale of building at book value.
(d) Payment of dividends.
(e) Depreciation.
(f) Receipt of dividends on investment in shares.
(g) Receipt of interest on notes receivable.
(h) Issuance of ordinary shares.
(i) Amortization of patent.
(j) Issuance of bonds for land.
(k) Purchase of land.
(l) Conversion of bonds into ordinary shares.
(m) Loss on sale of land.
(n) Retirement of bonds.

Instructions

Indicate how each item should be classified in the statement of cash flows using these four major classifications: operating activity (indirect method), investing activity, financing activity, and significant non-cash investing and financing activity.

Prepare journal entry and determine effect on cash flows.

(LO 2)

E13-3 Tim Latimer Ltd. had the following transactions.

1. Sold land (cost £12,000) for £10,000.
2. Issued ordinary shares at par value for £18,000.
3. Recorded depreciation on buildings for £14,000.
4. Paid salaries of £7,000.
5. Issued 1,000 shares of £1 par value ordinary shares for equipment worth £9,000.
6. Sold equipment (cost £10,000, accumulated depreciation £8,000) for £3,500.

Instructions

For each transaction above, (a) prepare the journal entry, and (b) indicate how it would affect the statement of cash flows under the indirect method.

Prepare the operating activities section—indirect method.

(LO 3)

E13-4 Bracewell Ltd. reported net income of £195,000 for 2017. Bracewell also reported depreciation expense of £40,000 and a gain of £5,000 on disposal of plant assets. The comparative statements of financial position show an increase in accounts receivable of £15,000 for the year, a £17,000 increase in accounts payable, and a £4,000 decrease in prepaid expenses.

Instructions

Prepare the operating activities section of the statement of cash flows for 2017. Use the indirect method.

Prepare the operating activities section—indirect method.

(LO 3)

E13-5 The current sections of Nasreen SA's statements of financial position at December 31, 2016 and 2017, are presented here. Nasreen's net income for 2017 was €147,000. Depreciation expense was €21,000.

	2017	**2016**
Current assets		
Prepaid expenses	€ 27,000	€ 25,000
Inventory	158,000	172,000
Accounts receivable	110,000	79,000
Cash	105,000	99,000
Total current assets	€400,000	€375,000
Current liabilities		
Accrued expenses payable	€ 15,000	€ 9,000
Accounts payable	85,000	95,000
Total current liabilities	€100,000	€104,000

Instructions

Prepare the net cash provided by operating activities section of the company's statement of cash flows for the year ended December 31, 2017, using the indirect method.

E13-6 The three accounts shown below appear in the general ledger of Chaudry NV during 2017.

Prepare partial statement of cash flows—indirect method.

(LO 3)

Equipment

Date			Debit	Credit	Balance
Jan.	1	Balance			160,000
July	31	Purchase of equipment	70,000		230,000
Sept.	2	Cost of equipment constructed	53,000		283,000
Nov.	10	Cost of equipment sold		49,000	234,000

Accumulated Depreciation—Equipment

Date			Debit	Credit	Balance
Jan.	1	Balance			71,000
Nov.	10	Accumulated depreciation on equipment sold	28,000		43,000
Dec.	31	Depreciation for year		23,000	66,000

Retained Earnings

Date			Debit	Credit	Balance
Jan.	1	Balance			105,000
Aug.	23	Dividends (cash)	17,000		88,000
Dec.	31	Net income		67,000	155,000

Instructions

From the postings in the accounts, indicate how the information is reported on a statement of cash flows using the indirect method. The loss on disposal of plant assets was €5,000. (*Hint:* Cost of equipment constructed is reported in the investing activities section as a decrease in cash of €53,000.)

E13-7 Meera Ltd.'s comparative statements of financial position are presented below.

Prepare statement of cash flows and compute free cash flow.

(LO 3, 4)

MEERA LTD.
Comparative Statements of Financial Position
December 31

	2017	2016
Land	£ 20,000	£ 26,000
Buildings	70,000	70,000
Accumulated depreciation—buildings	(15,000)	(10,000)
Accounts receivable	20,800	23,400
Cash	17,660	10,700
Total	£113,460	£120,100
Share capital—ordinary	£ 75,000	£ 72,000
Retained earnings	26,090	20,000
Accounts payable	12,370	28,100
Total	£113,460	£120,100

Additional information:

1. Net income was £22,590. Dividends declared and paid were £16,500.
2. All other changes in non-current account balances had a direct effect on cash flows, except the change in accumulated depreciation. The land was sold for £5,000.

Instructions

(a) Prepare a statement of cash flows for 2017 using the indirect method.
(b) Compute free cash flow.

Prepare a statement of cash flows—indirect method.
(LO 3)

E13-8 Here are comparative statements of financial position for Syal SE.

SYAL SE
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**
Land	€ 73,000	€100,000
Equipment	260,000	200,000
Accumulated depreciation—equipment	(66,000)	(34,000)
Inventory	170,000	187,000
Accounts receivable	85,000	71,000
Cash	73,000	33,000
Total	€595,000	€557,000
Equity and Liabilities		
Share capital—ordinary (€1 par)	€216,000	€174,000
Retained earnings	194,000	136,000
Bonds payable	150,000	200,000
Accounts payable	35,000	47,000
Total	€595,000	€557,000

Additional information:

1. Net income for 2017 was €103,000.
2. Depreciation expense was €32,000.
3. Cash dividends of €45,000 were declared and paid.
4. Bonds payable amounting to €50,000 were redeemed for cash €50,000.
5. Ordinary shares were issued for €42,000 cash.
6. No equipment was sold during 2017.
7. Land was sold for its book value of €27,000.

Instructions
Prepare a statement of cash flows for 2017 using the indirect method.

Prepare statement of cash flows and compute free cash flow.
(LO 3, 4)

E13-9 Cassandra SA's comparative statements of financial position are presented below.

CASSANDRA SA
Comparative Statements of Financial Position
December 31

	2017	**2016**
Equipment	€ 60,000	€ 70,000
Accumulated depreciation—equipment	(14,000)	(10,000)
Investments	20,000	13,000
Accounts receivable	25,200	22,300
Cash	17,000	17,700
Total	€108,200	€113,000
Share capital—ordinary	€ 50,000	€ 45,000
Retained earnings	33,600	24,900
Bonds payable	10,000	30,000
Accounts payable	14,600	13,100
Total	€108,200	€113,000

Additional information:

1. Net income was €23,300. Dividends declared and paid were €14,600.
2. Equipment that cost €10,000 and had accumulated depreciation of €1,800 was sold for €3,500.
3. All other changes in non-current account balances had a direct effect on cash flows, except the change in accumulated depreciation.

Instructions
(a) Prepare a statement of cash flows for 2017 using the indirect method.
(b) Compute free cash flow.

***E13-10** Recife Company completed its first year of operations on December 31, 2017. Its initial income statement showed that Recife had revenues of R$195,000 and operating expenses of R$78,000. Accounts receivable and accounts payable at year-end were R$48,000 and R$25,000, respectively. Assume that accounts payable related to operating expenses. (Ignore income taxes.)

Compute net cash provided by operating activities—direct method.
(LO 5)

Instructions
Compute net cash provided by operating activities using the direct method.

***E13-11** Suppose a recent income statement for McDonald's Corporation (USA) shows cost of goods sold $4,527.8 million and operating expenses (including depreciation expense of $1,120 million) $10,517.6 million. The comparative statements of financial position for the year show that inventory increased $17.1 million, prepaid expenses increased $65.3 million, accounts payable (merchandise suppliers) increased $139.6 million, and accrued expenses payable increased $190.6 million.

Compute cash payments—direct method.
(LO 5)

Instructions
Using the direct method, compute (a) cash payments to suppliers and (b) cash payments for operating expenses.

***E13-12** The 2017 accounting records of Liz Ten Transport Ltd. reveal these transactions and events.

Compute cash flow from operating activities—direct method.
(LO 5)

Payment of interest	£10,000	Collection of accounts receivable	£190,000
Cash sales	54,000	Payment of salaries and wages	55,000
Receipt of dividend revenue	18,000	Depreciation expense	16,000
Payment of income taxes	16,000	Proceeds from disposal of plant assets	12,000
Net income	38,000	Purchase of equipment for cash	22,000
Payment of accounts payable for merchandise	115,000	Loss on disposal of plant assets	3,000
Payment for land	74,000	Payment of dividends	14,000
		Payment of operating expenses	28,000

Instructions
Prepare the cash flows from operating activities section using the direct method. (Not all of the items will be used.)

***E13-13** The following information is taken from the 2017 general ledger of Okonedo ASA.

Calculate cash flows—direct method.
(LO 5)

Rent	Rent expense	€ 40,000
	Prepaid rent, January 1	5,600
	Prepaid rent, December 31	9,000
Salaries	Salaries and wages expense	€ 65,000
	Salaries and wages payable, January 1	10,000
	Salaries and wages payable, December 31	8,000
Sales	Sales revenue	€170,000
	Accounts receivable, January 1	19,000
	Accounts receivable, December 31	7,000

Instructions
In each case, compute the amount that should be reported in the operating activities section of the statement of cash flows under the direct method.

***E13-14** Comparative statements of financial position for Erisa Magambo A/S are presented on the next page.

Prepare a worksheet.
(LO 6)

ERISA MAGAMBO A/S
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**
Land	€ 75,000	€100,000
Equipment	250,000	200,000
Accumulated depreciation—equipment	(66,000)	(42,000)
Inventory	180,000	187,000
Accounts receivable	85,000	76,000
Cash	58,000	22,000
Total	€582,000	€543,000
Equity and Liabilities		
Share capital—ordinary (€1 par)	€214,000	€164,000
Retained earnings	184,000	134,000
Bonds payable	150,000	200,000
Accounts payable	34,000	45,000
Total	€582,000	€543,000

Additional information:

1. Net income for 2017 was €120,000.
2. Cash dividends of €70,000 were declared and paid.
3. Bonds payable amounting to €50,000 were redeemed for cash €50,000.
4. Ordinary shares were issued for €50,000 cash.
5. Depreciation expense was €24,000.
6. Sales for the year were €978,000.

Instructions
Prepare a worksheet for a statement of cash flows for 2017 using the indirect method. Enter the reconciling items directly on the worksheet, using letters to cross-reference each entry.

PROBLEMS: SET A

Distinguish among operating, investing, and financing activities.
(LO 2)

P13-1A You are provided with the following transactions that took place during a recent fiscal year.

Transaction	**Statement of Cash Flow Activity Affected**	**Cash Inflow, Outflow, or No Effect?**
(a) Recorded depreciation expense on the plant assets.		
(b) Recorded and paid interest expense.		
(c) Recorded cash proceeds from a sale of plant assets.		
(d) Acquired land by issuing ordinary shares.		
(e) Paid a cash dividend to preference shareholders.		
(f) Distributed a share dividend to ordinary shareholders.		
(g) Recorded cash sales.		
(h) Recorded sales on account.		
(i) Purchased inventory for cash.		
(j) Purchased inventory on account.		

Instructions
Complete the table indicating whether each item (1) affects operating (O) activities, investing (I) activities, financing (F) activities, or is a non-cash (NC) transaction reported in a separate schedule, and (2) represents a cash inflow or cash outflow or has no cash flow effect. Assume use of the indirect approach.

P13-2A The following account balances relate to the equity accounts of Chipo Ltd. at year-end.

Determine cash flow effects of changes in equity accounts.

(LO 3)

	2017	**2016**
Share capital—ordinary, 10,500 and 10,000 shares, respectively, for 2017 and 2016	£155,000	£130,000
Share capital—preference, 5,000 shares	125,000	125,000
Retained earnings	300,000	250,000

A small share dividend was declared and issued in 2017. The market value of the shares was £11,200. Cash dividends were £16,000 in both 2017 and 2016. The ordinary shares have no par or stated value.

Instructions

(a) What was the amount of net income reported by Chipo Ltd. in 2017?

(a) Net income £77,200

(b) Determine the amounts of any cash inflows or outflows related to the ordinary shares and dividend accounts in 2017.

(c) Indicate where each of the cash inflows or outflows identified in (b) would be classified on the statement of cash flows.

P13-3A The income statement of Toby Zed NV is presented here.

Prepare the operating activities section—indirect method.

(LO 3)

TOBY ZED NV
Income Statement
For the Year Ended November 30, 2017

Sales revenue		€7,500,000
Cost of goods sold		
Beginning inventory	€1,900,000	
Purchases	4,400,000	
Goods available for sale	6,300,000	
Ending inventory	1,400,000	
Total cost of goods sold		4,900,000
Gross profit		2,600,000
Operating expenses		1,150,000
Net income		€1,450,000

Additional information:

1. Accounts receivable increased €200,000 during the year, and inventory decreased €500,000.
2. Prepaid expenses increased €175,000 during the year.
3. Accounts payable to suppliers of merchandise decreased €340,000 during the year.
4. Accrued expenses payable decreased €105,000 during the year.
5. Operating expenses include depreciation expense of €85,000.

Instructions

Prepare the operating activities section of the statement of cash flows for the year ended November 30, 2017, for Toby Zed, using the indirect method.

Cash from oper. €1,215,000

***P13-4A** Data for Toby Zed NV are presented in P13-3A.

Prepare the operating activities section—direct method.

(LO 5)

Instructions

Prepare the operating activities section of the statement of cash flows using the direct method.

Cash from oper. €1,215,000

P13-5A Rattigan plc's income statement contained the condensed information below.

Prepare the operating activities section—indirect method.

(LO 3)

RATTIGAN plc
Income Statement
For the Year Ended December 31, 2017

Service revenue		£970,000
Operating expenses, excluding depreciation	£624,000	
Depreciation expense	55,000	
Loss on disposal of plant assets	25,000	704,000
Income before income taxes		266,000
Income tax expense		40,000
Net income		£226,000

Rattigan's statement of financial position contained the comparative data at December 31, shown below.

	2017	2016
Accounts receivable	£75,000	£60,000
Accounts payable	41,000	27,000
Income taxes payable	13,000	7,000

Accounts payable pertain to operating expenses.

Instructions

Cash from operations £311,000

Prepare the operating activities section of the statement of cash flows using the indirect method.

Prepare the operating activities section—direct method.

(LO 5) Cash from oper. £311,000

***P13-6A** Data for Rattigan plc are presented in P13-5A.

Instructions

Prepare the operating activities section of the statement of cash flows using the direct method.

Prepare a statement of cash flows—indirect method, and compute free cash flow.

(LO 3, 4)

P13-7A Presented below are the financial statements of Rajesh Company Ltd.

RAJESH COMPANY LTD.
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**
Equipment	£ 60,000	£ 78,000
Accumulated depreciation—equipment	(29,000)	(24,000)
Inventory	30,000	20,000
Accounts receivable	33,000	14,000
Cash	37,000	20,000
Total	£131,000	£108,000
Equity and Liabilities		
Share capital—ordinary	£ 18,000	£ 14,000
Retained earnings	50,000	38,000
Bonds payable	27,000	33,000
Accounts payable	29,000	15,000
Income taxes payable	7,000	8,000
Total	£131,000	£108,000

RAJESH COMPANY LTD.
Income Statement
For the Year Ended December 31, 2017

Sales revenue	£242,000
Cost of goods sold	175,000
Gross profit	67,000
Operating expenses	24,000
Income from operations	43,000
Interest expense	3,000
Income before income taxes	40,000
Income tax expense	8,000
Net income	£ 32,000

Additional data:

1. Depreciation expense is £13,300.
2. Dividends declared and paid were £20,000.
3. During the year, equipment was sold for £9,700 cash. This equipment cost £18,000 originally and had accumulated depreciation of £8,300 at the time of sale.

Instructions

(a) Cash from operations £29,300

(a) Prepare a statement of cash flows using the indirect method.
(b) Compute free cash flow.

***P13-8A** Data for Rajesh Company Ltd. are presented in P13-7A. Further analysis reveals the following.

Prepare a statement of cash flows—direct method, and compute free cash flow.

(LO 4, 5)

1. Accounts payable pertain to merchandise suppliers.
2. All operating expenses except for depreciation were paid in cash.
3. All depreciation expense is in the operating expenses.
4. All sales and purchases are on account.

Instructions

(a) Prepare a statement of cash flows for Rajesh using the direct method.
(b) Compute free cash flow.

(a) Cash from operations £29,300

P13-9A Condensed financial data of Sinjh SA follow.

Prepare a statement of cash flows—indirect method.

(LO 3)

SINJH SA
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**
Equipment	€265,000	€242,500
Accumulated depreciation—equipment	(47,000)	(52,000)
Long-term investments	140,000	114,000
Prepaid expenses	29,300	26,000
Inventory	112,500	102,850
Accounts receivable	92,800	33,000
Cash	100,350	48,400
Total	€692,950	€514,750
Equity and Liabilities		
Share capital—ordinary	€220,000	€175,000
Retained earnings	234,450	105,450
Bonds payable	110,000	150,000
Accounts payable	112,000	67,300
Accrued expenses payable	16,500	17,000
Total	€692,950	€514,750

SINJH SA
Income Statement
For the Year Ended December 31, 2017

Sales revenue	€392,780	
Gain on disposal of plant assets	5,000	€397,780
Less:		
Cost of goods sold	135,460	
Operating expenses, excluding depreciation	12,410	
Depreciation expense	45,000	
Income tax expense	27,280	
Interest expense	4,730	224,880
Net income		€172,900

Additional information:

1. New equipment costing €80,000 was purchased for cash during the year.
2. Old equipment having an original cost of €57,500 and accumulated depreciation of €50,000 was sold for €12,500 cash.
3. Bonds payable matured and were paid off at face value for cash.
4. A cash dividend of €43,900 was declared and paid during the year.

Instructions

Prepare a statement of cash flows using the indirect method.

Cash from operations €184,350

***P13-10A** Data for Sinjh SA are presented in P13-9A. Further analysis reveals that accounts payable pertain to merchandise creditors.

Prepare a statement of cash flows—direct method.

(LO 5)

Cash from operations €184,350

Instructions

Prepare a statement of cash flows for Sinjh using the direct method.

Prepare a statement of cash flows—indirect method.

(LO 3)

P13-11A The comparative statements of financial position for Amaral Reis Company SA as of December 31 are presented as follows.

AMARAL REIS COMPANY SA
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**
Land	R$145,000	R$130,000
Equipment	228,000	155,000
Accumulated depreciation—equipment	(45,000)	(35,000)
Buildings	200,000	200,000
Accumulated depreciation—buildings	(60,000)	(40,000)
Prepaid expenses	18,280	21,000
Inventory	154,550	142,000
Accounts receivable	46,000	62,000
Cash	62,520	45,000
Total	R$749,350	R$680,000
Equity and Liabilities		
Share capital—ordinary, R$1 par	R$195,000	R$160,000
Retained earnings	208,000	180,000
Bonds payable	300,000	300,000
Accounts payable	46,350	40,000
Total	R$749,350	R$680,000

Additional information:

1. Operating expenses include depreciation expense of R$40,000.
2. Land was sold for cash at book value of R$20,000.
3. Cash dividends of R$20,000 were paid.
4. Net income for 2017 was R$48,000.
5. Equipment was purchased for R$95,000 cash. In addition, equipment costing R$22,000 with a book value of R$12,000 was sold for R$6,000 cash.
6. Issued 35,000 shares of R$1 par value ordinary shares in exchange for land with a fair value of R$35,000.

Instructions

Cash from operations R$106,520

Prepare a statement of cash flows for the year ended December 31, 2017, using the indirect method.

Prepare a worksheet—indirect method.

(LO 6)

***P13-12A** Condensed financial data of Jhutti Company Ltd. appear below.

JHUTTI COMPANY LTD.
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**
Equipment	€250,000	€205,000
Accumulated depreciation—equipment	(46,600)	(40,000)
Investments	84,000	87,000
Inventory	121,900	102,650
Accounts receivable	80,900	57,000
Cash	90,300	47,250
	€580,500	€458,900
Equity and Liabilities		
Share capital—ordinary	€240,000	€200,000
Retained earnings	175,000	121,790
Bonds payable	100,000	70,000
Accounts payable	53,400	48,280
Accrued expenses payable	12,100	18,830
	€580,500	€458,900

JHUTTI COMPANY LTD.
Income Statement
For the Year Ended December 31, 2017

Sales revenue	€297,500	
Gain on disposal of plant assets	8,550	€306,050
Less:		
Cost of goods sold	99,460	
Operating expenses (excluding depreciation expense)	14,670	
Depreciation expense	47,900	
Income tax expense	7,270	
Interest expense	2,940	172,240
Net income		€133,810

Additional information:

1. Equipment costing €92,000 was purchased for cash during the year.
2. Investments were sold at cost.
3. Equipment costing €47,000 was sold for €14,250, resulting in gain of €8,550.
4. A cash dividend of €80,600 was declared and paid during the year.

Instructions

Prepare a worksheet for the statement of cash flows using the indirect method. Enter the reconciling items directly in the worksheet columns, using letters to cross-reference each entry.

Reconciling items total €580,910

PROBLEMS: SET B

P13-1B You are provided with the following transactions that took place during a recent fiscal year.

Distinguish among operating, investing, and financing activities.

(LO 2)

Transaction	Statement of Cash Flow Activity Affected	Cash Inflow, Outflow, or No Effect?
(a) Recorded depreciation expense on the plant assets.		
(b) Incurred a loss on disposal of plant assets.		
(c) Acquired a building by paying cash.		
(d) Made principal repayments on a mortgage.		
(e) Issued ordinary shares.		
(f) Purchased shares of another company to be held as a long-term equity investment.		
(g) Paid cash dividends to ordinary shareholders.		
(h) Sold inventory on credit. The company uses a perpetual inventory system.		
(i) Purchased inventory on credit.		
(j) Paid wages to employees.		

Instructions

Complete the table indicating whether each item (1) affects operating (O) activities, investing (I) activities, financing (F) activities, or is a non-cash (NC) transaction reported in a separate schedule, and (2) represents a cash inflow or cash outflow or has no cash flow effect. Assume use of the indirect approach.

Determine cash flow effects of changes in plant asset accounts.
(LO 3)

P13-2B The following selected account balances relate to the plant asset accounts of Raji Ltd. at year-end.

	2017	2016
Accumulated depreciation—buildings	€337,500	€300,000
Accumulated depreciation—equipment	145,000	93,000
Buildings	750,000	750,000
Depreciation expense	101,500	85,500
Equipment	300,000	250,000
Land	100,000	70,000
Loss on disposal of plant assets	7,000	0

Additional information:

1. Raji purchased €90,000 of equipment and €30,000 of land for cash in 2017.
2. Raji also sold equipment in 2017.
3. Depreciation expense in 2017 was €37,500 on building and €64,000 on equipment.

Instructions

(a) Cash proceeds €21,000

(a) Determine the amounts of any cash inflows or outflows related to the plant asset accounts in 2017.

(b) Indicate where each of the cash inflows or outflows identified in (a) would be classified on the statement of cash flows.

Prepare the operating activities section—indirect method.
(LO 3)

P13-3B The income statement of Asquith Company SA is presented below.

Additional information:

1. Accounts receivable decreased €230,000 during the year, and inventory increased €120,000.
2. Prepaid expenses increased €125,000 during the year.
3. Accounts payable to merchandise suppliers increased €50,000 during the year.
4. Accrued expenses payable increased €155,000 during the year.

ASQUITH COMPANY SA
Income Statement
For the Year Ended December 31, 2017

Service revenue		€5,250,000
Cost of goods sold		
Beginning inventory	€1,780,000	
Purchases	3,430,000	
Goods available for sale	5,210,000	
Ending inventory	1,900,000	
Total cost of goods sold		3,310,000
Gross profit		1,940,000
Operating expenses		
Depreciation expense	95,000	
Amortization expense	20,000	
Other expenses	945,000	1,060,000
Net income		€ 880,000

Instructions

Cash from operations €1,185,000

Prepare the operating activities section of the statement of cash flows for the year ended December 31, 2017, for Asquith Company, using the indirect method.

Prepare the operating activities section—direct method.
(LO 5)
Cash from operations €1,185,000

***P13-4B** Data for Asquith Company SA are presented in P13-3B.

Instructions

Prepare the operating activities section of the statement of cash flows using the direct method.

P13-5B The income statement of Anne Droid Co. Ltd. reported the following condensed information.

Prepare the operating activities section—indirect method.

(LO 3)

ANNE DROID CO. LTD.
Income Statement
For the Year Ended December 31, 2017

Service revenue	£551,000
Operating expenses	400,000
Income from operations	151,000
Income tax expense	36,000
Net income	£115,000

Anne Droid's statement of financial position contained these comparative data at December 31.

	2017	2016
Accounts receivable	£55,000	£70,000
Accounts payable	40,000	51,000
Income taxes payable	12,000	4,000

Anne Droid has no depreciable assets. Accounts payable pertain to operating expenses.

Instructions
Prepare the operating activities section of the statement of cash flows using the indirect method.

Cash from operations £127,000

***P13-6B** Data for Anne Droid Co. Ltd. are presented in P13-5B.

Prepare the operating activities section—direct method.

(LO 5)

Instructions
Prepare the operating activities section of the statement of cash flows using the direct method.

Cash from operations £127,000

P13-7B Presented below are the financial statements of Rocastle plc.

Prepare a statement of cash flows—indirect method, and compute free cash flow.

(LO 3, 4)

ROCASTLE plc
Comparative Statements of Financial Position
December 31

Assets		2017		2016
Equipment	€ 70,000		€ 78,000	
Accumulated depreciation—equipment	(27,000)	€ 43,000	(24,000)	€ 54,000
Inventory		45,000		25,000
Accounts receivable		25,000		14,000
Cash		18,000		33,000
Total		€131,000		€126,000

Equity and Liabilities	2017	2016
Share capital—ordinary	€ 25,000	€ 25,000
Retained earnings	31,000	28,000
Bonds payable	20,000	10,000
Accounts payable	31,000	43,000
Income taxes payable	24,000	20,000
Total	€131,000	€126,000

ROCASTLE plc
Income Statement
For the Year Ended December 31, 2017

Sales revenue	€286,000
Cost of goods sold	204,000
Gross profit	82,000
Operating expenses	37,000
Income from operations	45,000
Interest expense	7,000
Income before income taxes	38,000
Income tax expense	10,000
Net income	€ 28,000

Additional data:

1. Depreciation expense was €6,000.
2. Dividends of €25,000 were declared and paid.
3. During the year, equipment was sold for €12,000 cash. This equipment cost €15,000 originally and had accumulated depreciation of €3,000 at the time of sale.
4. Additional equipment was purchased for €7,000 cash.

Instructions

(a) Cash from operations €(5,000)

(a) Prepare a statement of cash flows using the indirect method.
(b) Compute free cash flow.

Prepare a statement of cash flows—direct method, and compute free cash flow.
(LO 4, 5)

***P13-8B** Data for Rocastle plc are presented in P13-7B. Further analysis reveals the following.

1. Accounts payable pertains to merchandise creditors.
2. All operating expenses except for depreciation are paid in cash.
3. All depreciation expense is in the operating expenses.
4. All sales and purchases are on account.

Instructions

(a) Cash from operations €(5,000)

(a) Prepare a statement of cash flows using the direct method.
(b) Compute free cash flow.

Prepare a statement of cash flows—indirect method.
(LO 3)

P13-9B Condensed financial data of Keller Minden Company SE are shown below.

KELLER MINDEN COMPANY SE
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**
Equipment	€318,000	€205,000
Accumulated depreciation— equipment	(44,000)	(40,000)
Investments	79,500	107,000
Inventory	124,500	102,650
Accounts receivable	63,200	37,000
Cash	93,600	33,400
Total	€634,800	€445,050
Equity and Liabilities		
Share capital—ordinary	€250,000	€200,000
Retained earnings	173,100	107,940
Bonds payable	140,000	70,000
Accounts payable	56,600	48,280
Accrued expenses payable	15,100	18,830
Total	€634,800	€445,050

KELLER MINDEN COMPANY SE
Income Statement
For the Year Ended December 31, 2017

Sales revenue		€297,500
Less:		
Cost of goods sold	€99,460	
Operating expenses, excluding depreciation expense	19,670	
Depreciation expense	25,000	
Loss on disposal of plant assets	5,000	
Income tax expense	37,270	
Interest expense	2,940	189,340
Net income		€108,160

Additional information:

1. New equipment costing €149,000 was purchased for cash during the year.
2. Investments were sold at cost.
3. Equipment costing €36,000 was sold for €10,000, resulting in a loss of €5,000.
4. A cash dividend of €43,000 was declared and paid during the year.

Instructions
Prepare a statement of cash flows using the indirect method.

Cash from operations €94,700

***P13-10B** Data for Keller Minden Company SE are presented in P13-9B. Further analysis reveals that accounts payable pertain to merchandise creditors.

Prepare a statement of cash flows—direct method.

(LO 5)

Instructions
Prepare a statement of cash flows for Keller Minden using the direct method.

Cash from operations €94,700

P13-11B Presented below are the comparative statements of financial position for Vernet Company Ltd. at December 31.

Prepare a statement of cash flows—indirect method.

(LO 3)

VERNET COMPANY LTD.
Comparative Statements of Financial Position
December 31

Assets	**2017**	**2016**
Land	£140,000	£150,000
Equipment	215,000	175,000
Accumulated depreciation—equipment	(70,000)	(42,000)
Buildings	250,000	250,000
Accumulated depreciation—buildings	(70,000)	(50,000)
Prepaid expenses	12,140	16,540
Inventory	170,000	140,000
Accounts receivable	77,000	64,000
Cash	41,460	57,000
Total	£765,600	£760,540

Equity and Liabilities		
Share capital—ordinary, £1 par	£275,000	£250,000
Retained earnings	187,600	200,540
Bonds payable	265,000	265,000
Accounts payable	38,000	45,000
Total	£765,600	£760,540

Additional information:

1. Operating expenses include depreciation expense £57,000 and charges from prepaid expenses of £4,400.
2. Land was sold for cash at cost for £35,000.

3. Cash dividends of £82,940 were paid.
4. Net income for 2017 was £70,000.
5. Equipment was purchased for £80,000 cash. In addition, equipment costing £40,000 with a book value of £31,000 was sold for £34,000 cash.
6 Issued 25,000 ordinary shares with a £1 par value for land with a fair value of £25,000.

Instructions

Prepare a statement of cash flows for 2017 using the indirect method.

Cash from operations £78,400

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–12.)

MC13 Mei-ling has prepared the statement of financial position and income statement of Matcha & Coffee Creations and would like you to prepare the statement of cash flows.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP13-1 Refer to the financial statements of TSMC presented in Appendix A, and answer the following questions. The complete annual report, including notes to the financial statements, is available in the Investors section of the company's website at *www.tsmc.com*.

(a) What was the amount of net cash provided by operating activities for the year ended December 31, 2013? For the year ended December 31, 2012?
(b) What was the amount of increase or decrease in cash and cash equivalents for the year ended December 31, 2013? For the year ended December 31, 2012?
(c) Which method of computing net cash provided by operating activities does TSMC use?
(d) From your analysis of the 2013 statement of cash flows, did the change in accounts and notes receivable require or provide cash? Did the change in inventories require or provide cash? Did the change in accounts payable and other current liabilities require or provide cash?
(e) What was the net outflow or inflow of cash from investing activities for the year ended December 31, 2013?
(f) What was the amount of interest paid in the year ended December 31, 2013? What was the amount of income taxes paid in the year ended December 31, 2013?

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP13-2 Nestlé's financial statements are presented in Appendix B. Financial statements of Petra Foods are presented in Appendix C.

Instructions

(a) Based on the information contained in these financial statements, compute free cash flow for each company for the most recent fiscal year shown.
(b) What conclusions concerning the management of cash can be drawn from these data?

Real-World Focus

BYP13-3 Purpose: Learn about the U.S. Securities and Exchange Commission (SEC).

Address: **www.sec.gov** or go to **www.wiley.com/college/weygandt**

From the SEC homepage, choose **About**.

Instructions
Answer the following questions.

(a) How many enforcement actions does the SEC take each year against securities law violators? What are typical infractions?
(b) After the Depression, Congress passed the Securities Acts of 1933 and 1934 to improve investor confidence in the markets. What two "common sense" notions are these laws based on?
(c) Who was the President of the United States at the time of the creation of the SEC? Who was the first SEC Chairperson?

BYP13-4 Purpose: Use the Internet to view U.S. SEC filings.

Address: **finance.yahoo.com** or go to **www.wiley.com/college/weygandt**

Steps:
1. Type in a company name.
2. Choose **Profile**.
3. Choose **SEC Filings**. (This will take you to Yahoo-Edgar Online.)

Instructions
Answer the following questions.

(a) What company did you select?
(b) Which filing is the most recent? What is the date?
(c) What other recent SEC filings are available for your viewing?

Critical Thinking

Decision-Making Across the Organization

BYP13-5 Norman Roads and Sara Mesa are examining the following statement of cash flows for Del Carpio Company, SLU for the year ended January 31, 2017.

DEL CARPIO COMPANY, SLU
Statement of Cash Flows
For the Year Ended January 31, 2017

Sources of cash	
From sales of merchandise	€350,000
From sale of ordinary shares	405,000
From sale of investment (purchased below)	85,000
From depreciation	75,000
From issuance of note for truck	25,000
From interest on investments	6,000
Total sources of cash	946,000
Uses of cash	
For purchase of fixtures and equipment	320,000
For merchandise purchased for resale	245,000
For operating expenses (including depreciation)	160,000
For purchase of investment	75,000
For purchase of truck by issuance of note	25,000
For purchase of ordinary shares	15,000
For interest on note payable	5,000
Total uses of cash	845,000
Net increase in cash	€101,000

Norman claims that Del Carpio's statement of cash flows is an excellent portrayal of a superb first year with cash increasing €101,000. Sara replies that it was not a superb first year. Rather, she says, the year was an operating failure, the statement is presented incorrectly, and €101,000 is not the actual increase in cash. The cash balance at the beginning of the year was €140,000.

Instructions

With the class divided into groups, answer the following.

(a) Using the data provided, prepare a statement of cash flows in proper form using the indirect method. The only non-cash items in the income statement are depreciation and the gain from the sale of the investment.

(b) With whom do you agree, Norman or Sara? Explain your position.

Communication Activity

BYP13-6 Bart Sampson, the owner-president of Computer Services Company, is unfamiliar with the statement of cash flows that you, as his accountant, prepared. He asks for further explanation.

Instructions

Write him a brief memo explaining the form and content of the statement of cash flows as shown in Illustration 13-14 (pages 659–660).

Ethics Case

BYP13-7 Babbit Ltd. is a medium-sized wholesaler of automotive parts. It has 10 shareholders who have been paid a total of £1 million in cash dividends for 8 consecutive years. The board's policy requires that, for this dividend to be declared, net cash provided by operating activities as reported in Babbit's current year's statement of cash flows must exceed £1 million. President and CEO Milton Williams' job is secure so long as he produces annual operating cash flows to support the usual dividend.

At the end of the current year, controller Jerry Roberts presents president Milton Williams with some disappointing news: The net cash provided by operating activities is calculated by the indirect method to be only £970,000. The president says to Jerry, "We must get that amount above £1 million. Isn't there some way to increase operating cash flow by another £30,000?" Jerry answers, "These figures were prepared by my assistant. I'll go back to my office and see what I can do." The president replies, "I know you won't let me down, Jerry."

Upon close scrutiny of the statement of cash flows, Jerry concludes that he can get the operating cash flows above £1 million by reclassifying a £60,000, 2-year note payable listed in the financing activities section as "Proceeds from bank loan—£60,000." He will report the note instead as "Increase in payables—£60,000" and treat it as an adjustment of net income in the operating activities section. He returns to the president, saying, "You can tell the board to declare their usual dividend. Our net cash flow provided by operating activities is £1,030,000." "Good man, Jerry! I knew I could count on you," exults the president.

Instructions

(a) Who are the stakeholders in this situation?

(b) Was there anything unethical about the president's actions? Was there anything unethical about the controller's actions?

(c) Are the board members or anyone else likely to discover the misclassification?

Answers to Insight and Accounting Across the Organization Questions

p. 648 Net *What*? Q: In general, why do differences exist between net income and net cash provided by operating activities? **A:** The differences are explained by differences in the timing of the reporting of revenues and expenses under accrual accounting versus cash. Under accrual accounting, companies report revenues when their performance obligation is satisfied, even if cash hasn't been received, and they report expenses when incurred, even if cash hasn't been paid.

p. 657 Cash Flow Isn't Always What It Seems Q: For what reasons might managers at WorldCom and at Dynegy take the actions noted above? **A:** Analysts increasingly use cash flow-based measures of income, such as net cash flow provided by operating activities, in addition to net income. More investors now focus on cash flow from operations, and some compensation contracts now have bonuses tied to cash flow numbers. Thus, some managers have taken actions that artificially increase cash flow from operations.

A Look at U.S. GAAP

As in IFRS, the statement of cash flows is a required statement for GAAP. In addition, the content and presentation of a GAAP statement of cash flows is similar to the one used for IFRS. However, the disclosure requirements related to the statement of cash flows are more extensive under GAAP. *IAS 7* ("Cash Flow Statements") provides the overall IFRS requirements for cash flow information.

Learning Objective 8

Compare the procedures for the statement of cash flows under IFRS and U.S. GAAP.

Key Points

Similarities

- Companies preparing financial statements under both GAAP and IFRS must prepare a statement of cash flows as an integral part of the financial statements.
- Both IFRS and GAAP require that the statement of cash flows should have three major sections—operating, investing, and financing—along with changes in cash and cash equivalents.
- Similar to IFRS, the statement of cash flows can be prepared using either the indirect or direct method under GAAP. Companies choose for the most part to use the indirect method for reporting net cash flows from operating activities.

Differences

- The definition of cash equivalents used in GAAP is similar to that used in IFRS. A major difference is that in certain situations, bank overdrafts are considered part of cash and cash equivalents under IFRS (which is not the case in GAAP). Under GAAP, bank overdrafts are classified as financing activities in the statement of cash flows and are reported as liabilities on the statement of financial position.
- IFRS requires that non-cash investing and financing activities be excluded from the statement of cash flows. Instead, these non-cash activities should be reported elsewhere. This requirement is interpreted to mean that non-cash investing and financing activities should be disclosed in the notes to the financial statements instead of in the financial statements. Under GAAP, companies may present this information on the face of the statement of cash flows.
- One area where there can be substantial differences between IFRS and GAAP relates to the classification of interest, dividends, and taxes. The following table indicates the differences between the two approaches.

Item	IFRS	GAAP
Interest paid	Operating or financing	Operating
Interest received	Operating or investing	Operating
Dividends paid	Operating or financing	Financing
Dividends received	Operating or investing	Operating
Taxes paid	Operating—unless specific identification with financing or investing activity	Operating

- Under IFRS, some companies present the operating section in a single line item, with a full reconciliation provided in the notes to the financial statements. This presentation is not seen under GAAP.
- Similar to IFRS, under GAAP companies must disclose the amount of taxes and interest paid. Under GAAP, companies disclose this in the notes to the financial statements. Under IFRS, some companies disclose this information in the notes, but others provide individual line items on the face of the statement. In order to provide this information on the face of the statement, companies first add back the amount of interest expense and tax expense (similar to adding back depreciation expense) and then further down the statement they subtract the cash amount paid for interest and taxes. This treatment can be seen in the statement of cash flows provided for Petra Foods in Appendix C.

Looking to the Future

Presently, the FASB and the IASB are involved in a joint project on the presentation and organization of information in the financial statements. One interesting approach, revealed in a published proposal from that project, is that in the future the income statement and statement of financial position (balance sheet) would adopt headings similar to those of the statement of cash flows. That is, the income statement and statement of financial position would be broken into operating, investing, and financing sections.

With respect to the cash flow statement specifically, the notion of *cash equivalents* will probably not be retained. That is, cash equivalents will not be combined with cash but instead will be reported as a form of highly liquid, low-risk investment. The definition of cash in the existing literature would be retained, and the statement of cash flows would present information on changes in cash only. In addition, the FASB favors presentation of operating cash flows using the direct method only. However, the majority of IASB members express a preference for not requiring use of the direct method of reporting operating cash flows. The two Boards will have to resolve their differences in this area in order to issue a converged standard for the statement of cash flows.

GAAP Practice

GAAP Self-Test Questions

1. Under GAAP interest paid can be reported as:
   (a) only a financing element.
   (b) a financing element or an investing element.
   (c) a financing element or an operating element.
   (d) only an operating element.
2. IFRS requires that non-cash items:
   (a) be reported in the section to which they relate, that is, a non-cash investing activity would be reported in the investing section.
   (b) be disclosed in the notes to the financial statements.
   (c) do not need to be reported.
   (d) be treated in a fashion similar to cash equivalents.
3. In the future, it appears likely that:
   (a) the income statement and statement of financial position (balance sheet) will have headings of operating, investing, and financing, much like the statement of cash flows.
   (b) cash and cash equivalents will be combined in a single line item.
   (c) the IASB will not allow companies to use the direct approach to the statement of cash flows.
   (d) None of the above.
4. Under GAAP:
   (a) taxes are always treated as an operating item.
   (b) the income statement uses the headings operating, investing, and financing.
   (c) dividends received can be either an operating or investing item.
   (d) dividends paid can be either an operating or investing item.
5. Which of the following is **correct**?
   (a) Under GAAP, the statement of cash flows is optional.
   (b) GAAP requires use of the direct approach in preparing the statement of cash flows.
   (c) The majority of companies following GAAP and the majority following IFRS employ the indirect approach to the statement of cash flows.
   (d) Cash and cash equivalents are reported as separate line items under GAAP.

GAAP Exercises

GAAP13-1 Discuss the differences that exist in the treatment of bank overdrafts under GAAP and IFRS.

GAAP13-2 Describe the treatment of each of the following items under IFRS versus GAAP.

(a) Interest paid.
(b) Interest received.
(c) Dividends paid.
(d) Dividends received.

GAAP13-3 Explain how the treatment of cash equivalents will probably change in the future.

GAAP Financial Reporting Problem: Apple Inc.

GAAP13-4 The financial statements of Apple are presented in Appendix D. The company's complete annual report, including the notes to its financial statements, is available at *http://investor.apple.com*.

Instructions

Use the company's financial statements to answer the following questions.

(a) What was the amount of net cash provided by operating activities for 2013? For 2012?
(b) What was the amount of increase or decrease in cash and cash equivalents for the year ended September 28, 2013?
(c) Which method of computing net cash provided by operating activities does Apple use?
(d) From your analysis of the 2013 statement of cash flows, was the change in accounts receivable a decrease or an increase? Was the change in inventories a decrease or an increase? Was the change in accounts payable a decrease or an increase?
(e) What was the net cash used by investing activities for 2013?
(f) What was the amount of income taxes paid in 2013?

Answers to GAAP Self-Test Questions

1. d **2.** b **3.** a **4.** a **5.** c

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✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

CHAPTER

14 Financial Statement Analysis

FEATURE STORY Making Money the Old-Fashioned Way

Li Ka-shing likes things simple. He wears a basic electronic wristwatch, basic black dress shoes, and basic business suits. He lives by the philosophy that "If you keep a good reputation, work hard, be nice to people, keep your promises, your business will be much easier." It seems to have worked for him. Business has been good. Li Ka-shing is Asia's richest man, with a net worth of over US$30 billion. That placed him in the top 20 on a recent list of the richest people in the world.

Li was not born rich. His family fled to Hong Kong from mainland China during the upheavals of war in 1940. His father died when Li was in his teens, forcing him to quit school and take a job at a plastics trading company. Within a few years, Li had started his own plastics company. One of his early businesses produced plastic flowers. He produced the parts for the flowers and then paid people to assemble the flowers in their homes. This saved him the cost of additional factory space (space being in short supply in Hong Kong).

Over the years, Li also invested in Hong Kong properties. One long-time business associate recalls that Li was very disciplined when bidding on investments in businesses and properties. He didn't like debt, and he would never bid above a predetermined number. He knew precisely what it would take for his investments to be profitable.

Today, Li's business interests span many industries and virtually all parts of the world. His companies operate in 55 countries with approximately 250,000 employees. He owns ports, retail companies, electricity companies and energy interests such as oil sands in Canada, shipping companies, and telecom companies. He describes his criteria for doing business in a country as "rule of law, political stability that safeguards investments, ease of doing business and good tax structures."

How can you enjoy similar success? There are no guarantees, but honing your financial analysis skills would be a start. A good way for you to begin your career as a successful investor is to master the fundamentals of financial analysis discussed in this chapter.

Sources: Tom Mitchell and Robin Kwong, "Breaking the Mould," *Financial Times Online* (*FT.com*) (October 26, 2007); Michael Schuman, "The Miracle of Asia's Richest Man," *Forbes.com* (February 24, 2010).

✔ The Navigator

- ☐ Scan Learning Objectives
- ☐ Read Feature Story
- ☐ Review and Practice pp. 736–741
  - Reviews of Learning Objectives and Glossary
  - Answer Practice Multiple-Choice Questions, Exercises, and Problem
- ☐ Complete Assignments
- ☐ Watch WileyPLUS Chapter Reviews
- ☐ Read A Look at U.S. GAAP

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1 Discuss the need for comparative analysis.

2 Identify the tools of financial statement analysis.

3 Explain and apply horizontal analysis.

4 Describe and apply vertical analysis.

5 Identify and compute ratios used in analyzing a firm's liquidity, profitability, and solvency.

6 Understand the concept of earning power, and how discontinued operations are presented.

7 Understand the concept of quality of earnings.

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Bloomberg/Getty Images, Inc.

PREVIEW OF CHAPTER 14

We can learn an important lesson from Li Ka-shing: Study companies carefully if you wish to invest. Do not get caught up in fads but instead find companies that are financially healthy. Using some of the basic decision tools presented in this textbook, you can perform a rudimentary analysis on any company and draw basic conclusions about its financial health. Although it would not be wise for you to bet your life savings on a company's shares relying solely on your current level of knowledge, we strongly encourage you to practice your new skills wherever possible. Only with practice will you improve your ability to interpret financial numbers.

Before unleashing you on the world of high finance, we will present a few more important concepts and techniques, as well as provide you with one more comprehensive review of corporate financial statements. We use all of the decision tools presented in this textbook to analyze a single company.

The content and organization of Chapter 14 are as follows.

FINANCIAL STATEMENT ANALYSIS

Basics of Financial Statement Analysis	Horizontal and Vertical Analysis	Ratio Analysis	Earning Power and Unusual Items	Quality of Earnings
• Need for comparative analysis • Tools of analysis	• Statement of financial position • Income statement • Retained earnings statement	• Liquidity • Profitability • Solvency • Summary	• Discontinued operations • Changes in accounting principle • Comprehensive income	• Alternative accounting methods • Pro forma income • Improper recognition

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Basics of Financial Statement Analysis

Learning Objective 1

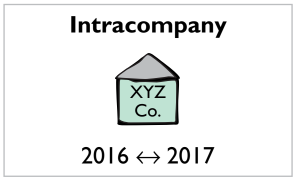
Discuss the need for comparative analysis.

Analyzing financial statements involves evaluating three characteristics: a company's liquidity, profitability, and solvency. A **short-term creditor**, such as a bank, is primarily interested in liquidity—the ability of the borrower to pay obligations when they come due. The liquidity of the borrower is extremely important in evaluating the safety of a loan. A **long-term creditor**, such as a bondholder, looks to profitability and solvency measures that indicate the company's ability to survive over a long period of time. Long-term creditors consider such measures as the amount of debt in the company's capital structure and its ability to meet interest payments. Similarly, **shareholders** look at the profitability and solvency of the company. They want to assess the likelihood of dividends and the growth potential of their investment.

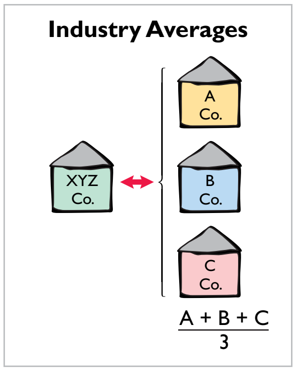
Need for Comparative Analysis

Every item reported in a financial statement has significance. When Marks and Spencer plc (M&S) (GBR) reports cash and cash equivalents of £422.9 million on its statement of financial position, we know the company had that amount of cash on the report date. But, we do not know whether the amount represents an increase over prior years, or whether it is adequate in relation to the company's need for cash. To obtain such information, we need to compare the amount of cash with other financial statement data.

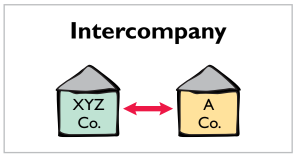
Comparisons can be made on a number of different bases. Three are illustrated in this chapter.



1. **Intracompany basis.** Comparisons within a company are often useful to detect changes in financial relationships and significant trends. For example, a comparison of M&S's current year's cash amount with the prior year's cash amount shows either an increase or a decrease. Likewise, a comparison of M&S's year-end cash amount with the amount of its total assets at year-end shows the proportion of total assets in the form of cash.



2. **Industry averages.** Comparisons with industry averages provide information about a company's relative position within the industry. For example, financial statement readers can compare M&S's financial data with the averages for its industry compiled by financial rating organizations such as the U.S. companies Dun & Bradstreet, Moody's, and Standard & Poor's, or with information provided on the Internet by organizations such as Yahoo! on its financial site.



3. **Intercompany basis.** Comparisons with other companies provide insight into a company's competitive position. For example, investors can compare M&S's total sales for the year with the total sales of its competitors in retail, such as Carrefour (FRA).

Tools of Analysis

Learning Objective 2

Identify the tools of financial statement analysis.

We use various tools to evaluate the significance of financial statement data. Three commonly used tools are as follows.

- **Horizontal analysis** evaluates a series of financial statement data over a period of time.
- **Vertical analysis** evaluates financial statement data by expressing each item in a financial statement as a percentage of a base amount.
- **Ratio analysis** expresses the relationship among selected items of financial statement data.

Horizontal analysis is used primarily in intracompany comparisons. Two features in published financial statements and annual report information facilitate this type of comparison. First, each of the basic financial statements presents comparative financial data for a minimum of two years. Second, a summary of selected financial data is presented for a series of five to 10 years or more. Vertical analysis is used in both intra- and intercompany comparisons. Ratio analysis is used in all three types of comparisons. In the following sections, we explain and illustrate each of the three types of analysis.

Horizontal Analysis

Learning Objective 3

Explain and apply horizontal analysis.

Horizontal analysis, also called **trend analysis**, is a technique for evaluating a series of financial statement data over a period of time. Its purpose is to determine the increase or decrease that has taken place. This change may be expressed as either an amount or a percentage. For example, Illustration 14-1 shows recent net sales figures of Dubois SA.

Illustration 14-1
Dubois SA's net sales

DUBOIS SA
Net Sales (in thousands)

2017	2016	2015
€19,860	€19,903	€18,781

If we assume that 2015 is the base year, we can measure all percentage increases or decreases from this base period amount as follows.

Illustration 14-2
Formula for horizontal analysis of changes since base period

$$\text{Change Since Base Period} = \frac{\text{Current Year Amount} - \text{Base Year Amount}}{\text{Base Year Amount}}$$

For example, we can determine that net sales for Dubois increased from 2015 to 2016 approximately 6% [(€19,903 − €18,781) ÷ €18,781]. Similarly, we can determine that net sales increased from 2015 to 2017 approximately 5.7% [(€19,860 − €18,781) ÷ €18,781].

Alternatively, we can express current year sales as a percentage of the base period. We do this by dividing the current year amount by the base year amount, as shown below.

Illustration 14-3
Formula for horizontal analysis of current year in relation to base year

$$\text{Current Results in Relation to Base Period} = \frac{\text{Current Year Amount}}{\text{Base Year Amount}}$$

Illustration 14-4 presents this analysis for Dubois for a three-year period using 2015 as the base period.

Illustration 14-4
Horizontal analysis of Dubois SA's net sales in relation to base period

DUBOIS SA
Net Sales (in thousands)
in Relation to Base Period 2015

2017	2016	2015
€19,860	€19,903	€18,781
105.7%	106.0%	100%

Statement of Financial Position

To further illustrate horizontal analysis, we will use the financial statements of Quality Department Store, a fictional retailer. Illustration 14-5 presents a horizontal analysis of its two-year condensed statements of financial position, showing euro and percentage changes.

Illustration 14-5
Horizontal analysis of statements of financial position

QUALITY DEPARTMENT STORE
Condensed Statements of Financial Position
December 31

	2017	2016	Increase or (Decrease) during 2017 Amount	Percent
Assets				
Intangible assets	€ 15,000	€ 17,500	€ (2,500)	(14.3%)
Plant assets (net)	800,000	632,500	167,500	26.5%
Current assets	1,020,000	945,000	75,000	7.9%
Total assets	€1,835,000	€1,595,000	€240,000	15.0%
Equity				
Share capital—ordinary, €1 par	€ 275,400	€ 270,000	€ 5,400	2.0%
Retained earnings	727,600	525,000	202,600	38.6%
Total equity	1,003,000	795,000	208,000	26.2%
Liabilities				
Non-current liabilities	€ 487,500	€ 497,000	€ (9,500)	(1.9%)
Current liabilities	344,500	303,000	41,500	13.7%
Total liabilities	832,000	800,000	32,000	4.0%
Total equity and liabilities	€1,835,000	€1,595,000	€240,000	15.0%

The comparative statements of financial position in Illustration 14-5 show that a number of significant changes have occurred in Quality Department Store's financial structure from 2016 to 2017:

- In the assets section, plant assets (net) increased €167,500, or 26.5%.
- In the equity section, retained earnings increased €202,600, or 38.6%.
- In the liabilities section, current liabilities increased €41,500, or 13.7%.

These changes suggest that the company expanded its asset base during 2017 and **financed this expansion primarily by retaining income** rather than assuming additional long-term debt.

Income Statement

Illustration 14-6 presents a horizontal analysis of the two-year condensed income statements of Quality Department Store for the years 2017 and 2016. Horizontal analysis of the income statements shows the following changes:

- Net sales increased €260,000, or 14.2% (€260,000 ÷ €1,837,000).
- Cost of goods sold increased €141,000, or 12.4% (€141,000 ÷ €1,140,000).
- Total operating expenses increased €37,000, or 11.6% (€37,000 ÷ €320,000).

Overall, gross profit and net income were up substantially. Gross profit increased 17.1%, and net income, 26.5%. Quality's profit trend appears favorable.

Illustration 14-6
Horizontal analysis of income statements

QUALITY DEPARTMENT STORE
Condensed Income Statements
For the Years Ended December 31

	2017	2016	Increase or (Decrease) during 2017 Amount	Percent
Sales revenue	€2,195,000	€1,960,000	€235,000	12.0%
Sales returns and allowances	98,000	123,000	(25,000)	(20.3%)
Net sales	2,097,000	1,837,000	260,000	14.2%
Cost of goods sold	1,281,000	1,140,000	141,000	12.4%
Gross profit	816,000	697,000	119,000	17.1%
Selling expenses	253,000	211,500	41,500	19.6%
Administrative expenses	104,000	108,500	(4,500)	(4.1%)
Total operating expenses	357,000	320,000	37,000	11.6%
Income from operations	459,000	377,000	82,000	21.8%
Other income and expense				
Interest and dividends	9,000	11,000	(2,000)	(18.2%)
Interest expense	36,000	40,500	(4,500)	(11.1%)
Income before income taxes	432,000	347,500	84,500	24.3%
Income tax expense	168,200	139,000	29,200	21.0%
Net income	€ 263,800	€ 208,500	€ 55,300	26.5%

• HELPFUL HINT
Note that though the amount column is additive (the total is €55,300), the percentage column is not additive (26.5% is not the column total). A separate percentage has been calculated for each item.

Retained Earnings Statement

Illustration 14-7 presents a horizontal analysis of Quality Department Store's comparative retained earnings statements. Analyzed horizontally, net income increased €55,300, or 26.5%, whereas dividends on the share capital—ordinary increased only €1,200, or 2%. We saw in the horizontal analysis of the statement of financial position that ending retained earnings increased 38.6%. As indicated earlier, the company retained a significant portion of net income to finance additional plant facilities.

Illustration 14-7
Horizontal analysis of retained earnings statements

QUALITY DEPARTMENT STORE
Retained Earnings Statements
For the Years Ended December 31

	2017	2016	Increase or (Decrease) during 2017 Amount	Percent
Retained earnings, Jan. 1	€525,000	€376,500	€148,500	39.4%
Add: Net income	263,800	208,500	55,300	26.5%
	788,800	585,000	203,800	
Deduct: Dividends	61,200	60,000	1,200	2.0%
Retained earnings, Dec. 31	€727,600	€525,000	€202,600	38.6%

Horizontal analysis of changes from period to period is relatively straightforward and is quite useful. But, complications can occur in making the computations. If an item has no value in a base year or preceding year but does have a value in the next year, we cannot compute a percentage change. Similarly, if a negative amount appears in the base or preceding period and a positive amount exists the following year (or vice versa), no percentage change can be computed.

DO IT!

Horizontal Analysis

Summary financial information for Rosepatch NV is as follows.

	December 31, 2017	December 31, 2016
Plant assets (net)	€756,000	€420,000
Current assets	234,000	180,000
Total assets	€990,000	€600,000

Compute the amount and percentage changes in 2017 using horizontal analysis, assuming 2016 is the base year.

Action Plan

✔ Find the percentage change by dividing the amount of the increase by the 2016 amount (base year).

Solution

	Increase in 2017	
	Amount	Percent
Plant assets (net)	€336,000	80% [(€756,000 − €420,000) ÷ €420,000]
Current assets	54,000	30% [(€234,000 − €180,000) ÷ €180,000]
Total assets	€390,000	65% [(€990,000 − €600,000) ÷ €600,000]

Related exercise material: **BE14-2, BE14-3, BE14-6, BE14-7, E14-1, E14-3, E14-4, and DO IT! 14-1.**

✔ The Navigator

Vertical Analysis

Learning Objective 4

Describe and apply vertical analysis.

Vertical analysis, also called **common-size analysis**, is a technique that expresses each financial statement item as a percentage of a base amount. On a statement of financial position, we might say that current assets are 22% of total assets—total assets being the base amount. Or on an income statement, we might say that selling expenses are 16% of net sales—net sales being the base amount.

Statement of Financial Position

Illustration 14-8 presents the vertical analysis of Quality Department Store's comparative statements of financial position. The base for the asset items is **total assets**. The base for the equity and liability items is **total equity and liabilities**.

Vertical analysis shows the relative size of each category in the statement of financial position. It also can show the **percentage change** in the individual asset, liability, and equity items. For example, we can see that current assets decreased from 59.2% of total assets in 2016 to 55.6% in 2017 (even though the absolute euro amount increased €75,000 in that time). Plant assets (net) have increased from 39.7% to 43.6% of total assets. Retained earnings have increased from 32.9% to 39.7% of total equity and liabilities. These results reinforce the earlier observations that **Quality Department Store is choosing to finance its growth through retention of earnings rather than through issuing additional debt**.

Income Statement

Illustration 14-9 shows vertical analysis of Quality Department Store's income statements. Cost of goods sold as a percentage of net sales declined 1% (62.1% vs. 61.1%), and total operating expenses declined 0.4% (17.4% vs. 17.0%). As a result, it is not surprising to see net income as a percentage of net sales increase from 11.4% to 12.6%. Quality Department Store appears to be a profitable business that is becoming even more successful.

Illustration 14-8
Vertical analysis of statements of financial position

QUALITY DEPARTMENT STORE Condensed Statements of Financial Position December 31	2017		2016	
	Amount	Percent	Amount	Percent
Assets				
Intangible assets	€ 15,000	0.8%	€ 17,500	1.1%
Plant assets (net)	800,000	43.6%	632,500	39.7%
Current assets	1,020,000	55.6%	945,000	59.2%
Total assets	€1,835,000	100.0%	€1,595,000	100.0%
Equity				
Share capital—ordinary, €1 par	€ 275,400	15.0%	€ 270,000	16.9%
Retained earnings	727,600	39.7%	525,000	32.9%
Total equity	1,003,000	54.7%	795,000	49.8%
Liabilities				
Non-current liabilities	€ 487,500	26.5%	€ 497,000	31.2%
Current liabilities	344,500	18.8%	303,000	19.0%
Total liabilities	832,000	45.3%	800,000	50.2%
Total equity and liabilities	€1,835,000	100.0%	€1,595,000	100.0%

• HELPFUL HINT
The formula for calculating these statement of financial position percentages is:

$$\frac{\text{Each item}}{\text{Total assets}} = \%$$

Illustration 14-9
Vertical analysis of income statements

QUALITY DEPARTMENT STORE Condensed Income Statements For the Years Ended December 31	2017		2016	
	Amount	Percent	Amount	Percent
Sales revenue	€2,195,000	104.7%	€1,960,000	106.7%
Sales returns and allowances	98,000	4.7%	123,000	6.7%
Net sales	2,097,000	100.0%	1,837,000	100.0%
Cost of goods sold	1,281,000	61.1%	1,140,000	62.1%
Gross profit	816,000	38.9%	697,000	37.9%
Selling expenses	253,000	12.0%	211,500	11.5%
Administrative expenses	104,000	5.0%	108,500	5.9%
Total operating expenses	357,000	17.0%	320,000	17.4%
Income from operations	459,000	21.9%	377,000	20.5%
Other income and expense				
Interest and dividends	9,000	0.4%	11,000	0.6%
Interest expense	36,000	1.7%	40,500	2.2%
Income before income taxes	432,000	20.6%	347,500	18.9%
Income tax expense	168,200	8.0%	139,000	7.5%
Net income	€ 263,800	12.6%	€ 208,500	11.4%

• HELPFUL HINT
The formula for calculating these income statement percentages is:

$$\frac{\text{Each item on I/S}}{\text{Net sales}} = \%$$

An associated benefit of vertical analysis is that it enables you to compare companies of different sizes. For example, Quality Department Store's main competitor is a Park Street store in a nearby town. Using vertical analysis, we can compare the condensed income statements of Quality Department Store (a small retail company) with Park Street (a giant global retailer), as shown in Illustration 14-10 (page 718).

Illustration 14-10
Intercompany income statement comparison

CONDENSED INCOME STATEMENTS
For the Year Ended December 31, 2017
(in thousands)

	Quality Department Store		Park Street	
	Amount	**Percent**	**Amount**	**Percent**
Net sales	€2,097	**100.0%**	€17,556,000	**100.0%**
Cost of goods sold	1,281	**61.1%**	10,646,000	**60.6%**
Gross profit	816	**38.9%**	6,910,000	**39.4%**
Selling and administrative expenses	357	**17.0%**	6,247,000	**35.6%**
Income from operations	459	**21.9%**	663,000	**3.8%**
Other income and expense (including income taxes)	195	**9.3%**	412,000	**2.4%**
Net income	€ 264	**12.6%**	€ 251,000	**1.4%**

Park Street's net sales are 8,372 times greater than the net sales of relatively tiny Quality Department Store. But vertical analysis eliminates this difference in size. The percentages show that Quality's and Park Street's gross profit rates were comparable at 38.9% and 39.4%. However, the percentages related to income from operations were significantly different at 21.9% and 3.8%. This disparity can be attributed to Quality's selling and administrative expense percentage (17%), which is much lower than Park Street's (35.6%). Although Park Street earned net income more than 951 times larger than Quality's, Park Street's net income as a **percentage of each sales euro** (1.4%) is only 11% of Quality's (12.6%).

Ratio Analysis

Learning Objective 5

Identify and compute ratios used in analyzing a firm's liquidity, profitability, and solvency.

Ratio analysis expresses the relationship among selected items of financial statement data. A **ratio** expresses the mathematical relationship between one quantity and another. The relationship is expressed in terms of either a percentage, a rate, or a simple proportion. To illustrate, in 2013, Marks and Spencer plc (M&S) had current assets of £1,267.9 million and current liabilities of £2,238.3 million. We can find the relationship between these two measures by dividing current assets by current liabilities. The alternative means of expression are:

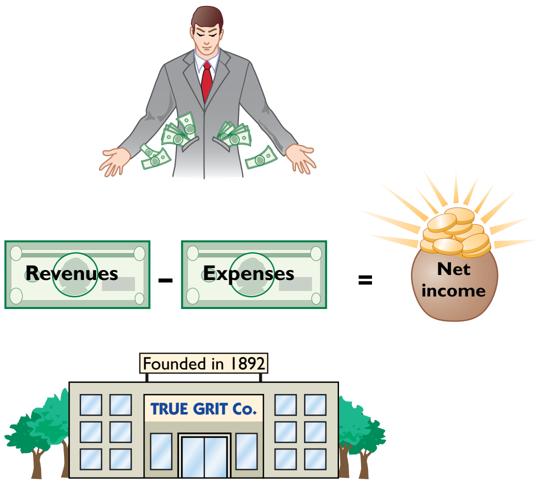
Percentage: Current assets are 57% of current liabilities.
Rate: Current assets are .57 times current liabilities.
Proportion: The relationship of current assets to liabilities is .57:1.

To analyze the primary financial statements, we can use ratios to evaluate liquidity, profitability, and solvency. Illustration 14-11 describes these classifications.

Ratios can provide clues to underlying conditions that may not be apparent from individual financial statement components. However, a single ratio by itself is not very meaningful. Thus, in the discussion of ratios we will use the following types of comparisons.

1. **Intracompany comparisons** for two years for Quality Department Store.
2. **Industry average comparisons** based on median ratios for department stores.
3. **Intercompany comparisons** based on Park Street as Quality Department Store's principal competitor.

Illustration 14-11
Financial ratio classifications



Liquidity Ratios

Measure short-term ability of the company to pay its maturing obligations and to meet unexpected needs for cash

Profitability Ratios

Measure the income or operating success of a company for a given period of time

Solvency Ratios

Measure the ability of the company to survive over a long period of time

ANATOMY OF A FRAUD

Sometimes, relationships between numbers can be used by companies to detect fraud. The numeric relationships that can reveal fraud can be such things as financial ratios that appear abnormal, or statistical abnormalities in the numbers themselves. For example, the fact that WorldCom's (USA) line costs, as a percentage of either total expenses or revenues, differed very significantly from its competitors should have alerted people to the possibility of fraud. Or, consider the case of a bank manager, who cooperated with a group of his friends to defraud the bank's credit card department. The manager's friends would apply for credit cards and then run up balances of slightly less than $5,000. The bank had a policy of allowing bank personnel to write off balances of less than $5,000 without seeking supervisor approval. The fraud was detected by applying statistical analysis based on Benford's Law. Benford's Law states that in a random collection of numbers, the frequency of lower digits (e.g., 1, 2, or 3) should be much higher than higher digits (e.g., 7, 8, or 9). In this case, bank auditors analyzed the first two digits of amounts written off. There was a spike at 48 and 49, which was not consistent with what would be expected if the numbers were random.

Total take: Thousands of dollars

THE MISSING CONTROL

Independent internal verification. While it might be efficient to allow employees to write off accounts below a certain level, it is important that these write-offs be reviewed and verified periodically. Such a review would likely call attention to an employee with large amounts of write-offs, or in this case, write-offs that were frequently very close to the approval threshold.

Source: Mark J. Nigrini, "I've Got Your Number," *Journal of Accountancy Online* (May 1999).

Liquidity Ratios

Liquidity ratios measure the short-term ability of the company to pay its maturing obligations and to meet unexpected needs for cash. Short-term creditors such as bankers and suppliers are particularly interested in assessing liquidity. The ratios we can use to determine the company's short-term debt-paying ability are the current ratio, the acid-test ratio, accounts receivable turnover, and inventory turnover.

1. CURRENT RATIO

The **current ratio** is a widely used measure for evaluating a company's liquidity and short-term debt-paying ability. The ratio is computed by dividing current assets by current liabilities. Illustration 14-12 shows the 2017 and 2016 current ratios for Quality Department Store and comparative data.

Illustration 14-12
Current ratio

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Quality Department Store

2017	**2016**
$\frac{€1,020,000}{€344,500} = 2.96:1$	$\frac{€945,000}{€303,000} = 3.12:1$
Industry average	Park Street
1.70:1	**2.05:1**

What does the ratio actually mean? The 2017 ratio of 2.96:1 means that for every euro of current liabilities, Quality has €2.96 of current assets. Quality's current ratio has decreased in the current year. But, compared to the industry average of 1.70:1, Quality appears to be very liquid. Park Street has a current ratio of 2.05:1, which indicates it has adequate current assets relative to its current liabilities.

• HELPFUL HINT
Any company can operate successfully without working capital if it has very predictable cash flows and solid earnings. A number of U.S. companies (e.g., Whirlpool, American Standard, and Campbell's Soup) are pursuing this goal as less money tied up in working capital means more money to invest in the business.

The current ratio is sometimes referred to as the **working capital ratio**. **Working capital** is current assets minus current liabilities. The current ratio is a more dependable indicator of liquidity than working capital. Two companies with the same amount of working capital may have significantly different current ratios.

The current ratio is only one measure of liquidity. It does not take into account the **composition** of the current assets. For example, a satisfactory current ratio does not disclose the fact that a portion of the current assets may be tied up in slow-moving inventory. A euro of cash would be more readily available to pay the bills than a euro of slow-moving inventory.

Investor Insight How to Manage the Current Ratio


NovaStock/SuperStock

The apparent simplicity of the current ratio can have real-world limitations because adding equal amounts to both the numerator and the denominator causes the ratio to decrease if it exceeds 1:1.

Assume, for example, that a company has $2,000,000 of current assets and $1,000,000 of current liabilities; its current ratio is 2:1. If it purchases $1,000,000 of inventory on account, it will have $3,000,000 of current assets and $2,000,000 of current liabilities; its current ratio decreases to 1.5:1. If, instead, the company pays off $500,000 of its current liabilities, it will have $1,500,000 of current assets and $500,000 of current liabilities; its current ratio increases to 3:1. Thus, any trend analysis should be done with care because the ratio is susceptible to quick changes and is easily influenced by management.

Q How might management influence a company's current ratio? (See page 759.)

2. ACID-TEST RATIO

The **acid-test (quick) ratio** is a measure of a company's immediate short-term liquidity. We compute this ratio by dividing the sum of cash, short-term investments, and net accounts receivable by current liabilities. Thus, it is an important complement to the current ratio. For example, assume that the current assets of Quality Department Store for 2017 and 2016 consist of the items shown in Illustration 14-13.

Illustration 14-13
Current assets of Quality Department Store

QUALITY DEPARTMENT STORE
Statement of Financial Position (partial)

	2017	2016
Current assets		
Prepaid expenses	€ 50,000	€ 40,000
Inventory	620,000	500,000
Accounts receivable (net*)	**230,000**	**180,000**
Short-term investments	**20,000**	**70,000**
Cash	**100,000**	**155,000**
Total current assets	€1,020,000	€ 945,000

*Allowance for doubtful accounts is €10,000 at the end of each year.

Cash, short-term investments, and accounts receivable (net) are highly liquid compared to inventory and prepaid expenses. The inventory may not be readily saleable, and the prepaid expenses may not be transferable to others. Thus, the acid-test ratio measures **immediate** liquidity. The 2017 and 2016 acid-test ratios for Quality Department Store and comparative data are as follows.

Illustration 14-14
Acid-test ratio

$$\text{Acid-Test Ratio} = \frac{\text{Cash} + \text{Short-Term Investments} + \text{Accounts Receivable (Net)}}{\text{Current Liabilities}}$$

Quality Department Store

2017	2016
$\frac{€100{,}000 + €20{,}000 + €230{,}000}{€344{,}500} = 1.02{:}1$	$\frac{€155{,}000 + €70{,}000 + €180{,}000}{€303{,}000} = 1.34{:}1$
Industry average	Park Street
0.70:1	**1.05:1**

The ratio has declined in 2017. Is an acid-test ratio of 1.02:1 adequate? This depends on the industry and the economy. When compared with the industry average of 0.70:1 and Park Street's of 1.05:1, Quality's acid-test ratio seems adequate.

3. ACCOUNTS RECEIVABLE TURNOVER

We can measure liquidity by how quickly a company can convert certain assets to cash. How liquid, for example, are the accounts receivable? The ratio used to assess the liquidity of the receivables is the **accounts receivable turnover**. It measures the number of times, on average, the company collects receivables during the period. We compute the accounts receivable turnover by dividing net credit sales (net sales less cash sales) by the average net accounts receivable. Unless seasonal factors are significant, average net accounts receivable can be computed from the beginning and ending balances of the net accounts receivable.[1]

[1]If seasonal factors are significant, the average accounts receivable balance might be determined by using monthly amounts.

Assume that all sales are credit sales. The balance of net accounts receivable at the beginning of 2016 is €200,000. Illustration 14-15 shows the accounts receivable turnover for Quality Department Store and comparative data. Quality's accounts receivable turnover improved in 2017. The turnover of 10.2 times is substantially lower than Park Street's 37.2 times, and is also lower than the department store industry's average of 46.4 times.

Illustration 14-15
Accounts receivable turnover

$$\text{Accounts Receivable Turnover} = \frac{\text{Net Credit Sales}}{\text{Average Net Accounts Receivable}}$$

Quality Department Store

2017

$$\frac{€2{,}097{,}000}{\left[\frac{€180{,}000 + €230{,}000}{2}\right]} = 10.2 \text{ times}$$

2016

$$\frac{€1{,}837{,}000}{\left[\frac{€200{,}000 + €180{,}000}{2}\right]} = 9.7 \text{ times}$$

Industry average	Park Street
46.4 times	**37.2 times**

AVERAGE COLLECTION PERIOD A popular variant of the accounts receivable turnover is to convert it to an **average collection period** in terms of days. To do so, we divide the accounts receivable turnover into 365 days. For example, the accounts receivable turnover of 10.2 times divided into 365 days gives an average collection period of approximately 36 days. This means that accounts receivable are collected on average every 36 days, or about every 5 weeks. Analysts frequently use the average collection period to assess the effectiveness of a company's credit and collection policies. The general rule is that the collection period should not greatly exceed the credit term period (the time allowed for payment).

4. INVENTORY TURNOVER

Inventory turnover measures the number of times, on average, the inventory is sold during the period. Its purpose is to measure the liquidity of the inventory. We compute the inventory turnover by dividing cost of goods sold by the average inventory. Unless seasonal factors are significant, we can use the beginning and ending inventory balances to compute average inventory.

Assuming that the inventory balance for Quality Department Store at the beginning of 2016 was €450,000, its inventory turnover and comparative data are as shown in Illustration 14-16. Quality's inventory turnover declined slightly in 2017. The turnover of 2.3 times is low compared with the industry average of 4.3 and Park Street's 3.1. Generally, the faster the inventory turnover, the less cash a

Illustration 14-16
Inventory turnover

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

Quality Department Store

2017

$$\frac{€1{,}281{,}000}{\left[\frac{€500{,}000 + €620{,}000}{2}\right]} = 2.3 \text{ times}$$

2016

$$\frac{€1{,}140{,}000}{\left[\frac{€450{,}000 + €500{,}000}{2}\right]} = 2.4 \text{ times}$$

Industry average	Park Street
4.3 times	**3.1 times**

company has tied up in inventory and the less chance a company has of inventory obsolescence.

DAYS IN INVENTORY A variant of inventory turnover is the **days in inventory**. We calculate it by dividing the inventory turnover into 365. For example, Quality's 2017 inventory turnover of 2.3 times divided into 365 is approximately 159 days. An average selling time of 159 days is also high compared with the industry average of 84.9 days (365 ÷ 4.3) and Park Street's 117.7 days (365 ÷ 3.1).

Inventory turnovers vary considerably among industries. For example, grocery store chains have a turnover of 17.1 times and an average selling period of 21 days. In contrast, jewelry stores have an average turnover of 0.80 times and an average selling period of 456 days.

Profitability Ratios

Profitability ratios measure the income or operating success of a company for a given period of time. Income, or the lack of it, affects the company's ability to obtain debt and equity financing. It also affects the company's liquidity position and the company's ability to grow. As a consequence, both creditors and investors are interested in evaluating earning power—profitability. Analysts frequently use profitability as the ultimate test of management's operating effectiveness.

5. PROFIT MARGIN

Profit margin is a measure of the percentage of each euro of sales that results in net income. We can compute it by dividing net income by net sales. Illustration 14-17 shows Quality Department Store's profit margin and comparative data.

• **Alternative Terminology** Profit margin is also called the *rate of return on sales.*

Illustration 14-17
Profit margin

$$\text{Profit Margin} = \frac{\text{Net Income}}{\text{Net Sales}}$$

Quality Department Store

2017	2016
$\frac{€263{,}800}{€2{,}097{,}000} = 12.6\%$	$\frac{€208{,}500}{€1{,}837{,}000} = 11.4\%$
Industry average	Park Street
8.0%	**1.4%**

Quality experienced an increase in its profit margin from 2016 to 2017. Its profit margin is unusually high in comparison with the industry average of 8% and Park Street's 1.4%.

High-volume (high inventory turnover) businesses, such as grocery stores and discount stores, generally experience low profit margins. In contrast, low-volume businesses, such as jewelry stores or airplane manufacturers, have high profit margins.

6. ASSET TURNOVER

Asset turnover measures how efficiently a company uses its assets to generate sales. It is determined by dividing net sales by average total assets. The resulting number shows the euros of sales produced by each euro invested in assets. Unless seasonal factors are significant, we can use the beginning and ending balance of total assets to determine average total assets. Assuming that total assets at the beginning of 2016 were €1,446,000, the 2017 and 2016 asset turnover for Quality Department Store and comparative data are shown in Illustration 14-18 (page 724).

Illustration 14-18
Asset turnover

$$\text{Asset Turnover} = \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

Quality Department Store

2017

$$\frac{€2{,}097{,}000}{\left[\frac{€1{,}595{,}000 + €1{,}835{,}000}{2}\right]} = 1.2 \text{ times}$$

2016

$$\frac{€1{,}837{,}000}{\left[\frac{€1{,}446{,}000 + €1{,}595{,}000}{2}\right]} = 1.2 \text{ times}$$

Industry average	Park Street
1.4 times	**1.4 times**

Asset turnover shows that in 2017 Quality generated sales of approximately €1.20 for each euro it had invested in assets. The ratio changed very little from 2016 to 2017. Quality's asset turnover is below both the industry average of 1.4 times and Park Street's ratio of 1.4 times.

Asset turnovers vary considerably among industries. For example, a large utility company might have a ratio of 0.4 times, and a large grocery chain might have a ratio of 3.4 times.

7. RETURN ON ASSETS

An overall measure of profitability is **return on assets**. We compute this ratio by dividing net income by average total assets. The 2017 and 2016 return on assets for Quality Department Store and comparative data are shown below.

Illustration 14-19
Return on assets

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

Quality Department Store

2017

$$\frac{€263{,}800}{\left[\frac{€1{,}595{,}000 + €1{,}835{,}000}{2}\right]} = 15.4\%$$

2016

$$\frac{€208{,}500}{\left[\frac{€1{,}446{,}000 + €1{,}595{,}000}{2}\right]} = 13.7\%$$

Industry average	Park Street
8.9%	**2.4%**

Quality's return on assets improved from 2016 to 2017. Its return of 15.4% is very high compared with the department store industry average of 8.9% and Park Street's 2.4%.

8. RETURN ON ORDINARY SHAREHOLDERS' EQUITY

Another widely used profitability ratio is **return on ordinary shareholders' equity**. It measures profitability from the ordinary shareholders' viewpoint. This ratio shows how many euros of net income the company earned for each euro invested by the owners. We compute it by dividing net income available to ordinary shareholders by average ordinary shareholders' equity. When a company has preference shares, we must deduct **preference dividend** requirements from net income to compute income available to ordinary shareholders. Similarly, we deduct the par value of preference shares (or call price, if applicable) from total equity to determine the amount of ordinary shareholders' equity used in this ratio. Assuming that ordinary shareholders' equity at the beginning of 2016 was €667,000, Illustration 14-20 shows the 2017 and 2016 ratios for Quality Department Store and comparative data.

Illustration 14-20
Return on ordinary shareholders' equity

$$\text{Return on Ordinary Shareholders' Equity} = \frac{\text{Net Income} - \text{Preference Dividends}}{\text{Average Ordinary Shareholders' Equity}}$$

Quality Department Store

2017

$$\frac{€263{,}800 - €0}{\left[\frac{€795{,}000 + €1{,}003{,}000}{2}\right]} = 29.3\%$$

2016

$$\frac{€208{,}500 - €0}{\left[\frac{€667{,}000 + €795{,}000}{2}\right]} = 28.5\%$$

Industry average	Park Street
18.3%	**6.4%**

Quality's rate of return on ordinary shareholders' equity is high at 29.3%, considering an industry average of 18.3% and a rate of 6.4% for Park Street.

Note also that Quality's rate of return on ordinary shareholders' equity (29.3%) is substantially higher than its rate of return on assets (15.4%). The reason is that Quality has made effective use of **leverage**. **Leveraging** or **trading on the equity** at a gain means that the company has borrowed money at a lower rate of interest than it is able to earn by using the borrowed money. Leverage enables Quality Department Store to use money supplied by non-owners to increase the return to the owners. A comparison of the rate of return on total assets with the rate of interest paid for borrowed money indicates the profitability of trading on the equity. Quality Department Store earns more on its borrowed funds than it has to pay in the form of interest. Thus, the return to shareholders exceeds the return on the assets, due to benefits from the positive leveraging.

9. EARNINGS PER SHARE (EPS)

Earnings per share (EPS) is a measure of the net income earned on each ordinary share. It is computed by dividing net income available to ordinary shareholders by the number of weighted-average ordinary shares outstanding during the year. A measure of net income earned on a per share basis provides a useful perspective for determining profitability. Assuming that there is no change in the number of outstanding shares during 2016 and that the 2017 increase occurred midyear, Illustration 14-21 shows the net income per share for Quality Department Store for 2017 and 2016.

Illustration 14-21
Earnings per share

$$\text{Earnings per Share} = \frac{\text{Net Income} - \text{Preference Dividends}}{\text{Weighted-Average Ordinary Shares Outstanding}}$$

Quality Department Store

2017

$$\frac{€263{,}800 - €0}{\left[\frac{270{,}000 + 275{,}400}{2}\right]} = €0.97$$

2016

$$\frac{€208{,}500 - €0}{270{,}000} = €0.77$$

Note that no industry or specific competitive data are presented. Such comparisons are not meaningful because of the wide variations in the number of shares outstanding among companies. The only meaningful EPS comparison is an intracompany trend comparison. Here, Quality's earnings per share increased 20 cents per share in 2017. This represents a 26% increase over the 2016 earnings per share of 77 cents.

The terms "earnings per share" and "net income per share" refer to the amount of net income applicable to each ordinary share. Therefore, in computing EPS, if there are preference dividends declared for the period, we must deduct them from net income to determine income available to the ordinary shareholders.

10. PRICE-EARNINGS RATIO

The **price-earnings (P-E) ratio** is a widely used measure of the ratio of the market price of each ordinary share to the earnings per share. The price-earnings (P-E) ratio reflects investors' assessments of a company's future earnings. We compute it by dividing the market price per share by earnings per share. Assuming that the market price of Quality Department Store shares is €8 in 2016 and €12 in 2017, the price-earnings ratio computation is as follows.

Illustration 14-22
Price-earnings ratio

$$\text{Price-Earnings Ratio} = \frac{\text{Market Price per Share}}{\text{Earnings per Share}}$$

Quality Department Store

2017	2016
$\frac{€12.00}{€0.97} = 12.4$ times	$\frac{€8.00}{€0.77} = 10.4$ times
Industry average	Park Street
21.3 times	**17.2 times**

In 2017, each Quality Department Store share sold for 12.4 times the amount that the company earned on each share. Quality's price-earnings ratio is lower than the industry average of 21.3 times, and also lower than the ratio of 17.2 times for Park Street.

11. PAYOUT RATIO

The **payout ratio** measures the percentage of earnings distributed in the form of cash dividends. We compute it by dividing cash dividends declared on ordinary shares by net income. Companies that have high growth rates generally have low payout ratios because they reinvest most of their net income into the business. The 2017 and 2016 payout ratios for Quality Department Store are computed as shown in Illustration 14-23.

Illustration 14-23
Payout ratio

$$\text{Payout Ratio} = \frac{\text{Cash Dividends Declared on Ordinary Shares}}{\text{Net Income}}$$

Quality Department Store

2017	2016
$\frac{€61,200}{€263,800} = 23.2\%$	$\frac{€60,000}{€208,500} = 28.8\%$
Industry average	Park Street
16.1%	**63.0%**

Quality's payout ratio is higher than the industry average payout ratio of 16.1%. Park Street's ratio is very high because its net income in 2017 was quite low.

Solvency Ratios

Solvency ratios measure the ability of a company to survive over a long period of time. Long-term creditors and shareholders are particularly interested in a company's ability to pay interest as it comes due and to repay the face value of debt at maturity. Debt to assets and times interest earned are two ratios that provide information about debt-paying ability.

12. DEBT TO ASSETS RATIO

The **debt to assets ratio** measures the percentage of the total assets that creditors provide. We compute it by dividing total liabilities (both current and non-current liabilities) by total assets. This ratio indicates the company's degree of leverage. It also provides some indication of the company's ability to withstand losses without impairing the interests of creditors. The higher the percentage of total liabilities to total assets, the greater the risk that the company may be unable to meet its maturing obligations. The 2017 and 2016 ratios for Quality Department Store and comparative data are as follows.

Illustration 14-24
Debt to assets ratio

$$\textbf{Debt to Assets Ratio} = \frac{\textbf{Total Liabilities}}{\textbf{Total Assets}}$$

Quality Department Store

2017	**2016**
$\frac{€832,000}{€1,835,000} = 45.3\%$	$\frac{€800,000}{€1,595,000} = 50.2\%$
Industry average	Park Street
34.2%	**62.0%**

A ratio of 45.3% means that creditors have provided 45.3% of Quality Department Store's total assets. Quality's 45.3% is above the industry average of 34.2%. It is considerably below the high 62.0% ratio of Park Street. The lower the ratio, the more equity "buffer" there is available to the creditors. Thus, from the creditors' point of view, a low ratio of debt to assets is usually desirable.

The adequacy of this ratio is often judged in the light of the company's earnings. Generally, companies with relatively stable earnings (such as public utilities) have higher debt to assets ratios than cyclical companies with widely fluctuating earnings (such as many high-tech companies).

13. TIMES INTEREST EARNED

Times interest earned provides an indication of the company's ability to meet interest payments as they come due. We compute it by dividing the sum of net income, interest expense, and income tax expense by interest expense. Illustration 14-25 (page 728) shows the 2017 and 2016 ratios for Quality Department Store and comparative data. Note that times interest earned uses net income before interest expense and income tax expense. This represents the amount available to cover interest. For Quality Department Store, the 2017 amount of €468,000 is computed by taking net income of €263,800 and adding back the €36,000 of interest expense and the €168,200 of income tax expense.

• Alternative Terminology
Times interest earned is also called *interest coverage.*

Illustration 14-25
Times interest earned

$$\text{Times Interest Earned} = \frac{\text{Net Income} + \text{Interest Expense} + \text{Income Tax Expense}}{\text{Interest Expense}}$$

Quality Department Store

2017	2016
$\frac{€263{,}800 + €36{,}000 + €168{,}200}{€36{,}000}$ = 13 times	$\frac{€208{,}500 + €40{,}500 + €139{,}000}{€40{,}500}$ = 9.6 times
Industry average	Park Street
16.1 times	**2.9 times**

Quality's interest expense is well covered at 13 times. It is less than the industry average of 16.1 times but significantly exceeds Park Street's 2.9 times.

Summary of Ratios

Illustration 14-26
Summary of liquidity, profitability, and solvency ratios

Illustration 14-26 summarizes the ratios discussed in this chapter. The summary includes the formula and purpose or use of each ratio.

Ratio	Formula	Purpose or Use
Liquidity Ratios		
1. Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	Measures short-term debt-paying ability.
2. Acid-test (quick) ratio	$\frac{\text{Cash + Short-term investments + Accounts receivable (net)}}{\text{Current liabilities}}$	Measures immediate short-term liquidity.
3. Accounts receivable turnover	$\frac{\text{Net credit sales}}{\text{Average net accounts receivable}}$	Measures liquidity of accounts receivable.
4. Inventory turnover	$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$	Measures liquidity of inventory.
Profitability Ratios		
5. Profit margin	$\frac{\text{Net income}}{\text{Net sales}}$	Measures net income generated by each currency unit of sales.
6. Asset turnover	$\frac{\text{Net sales}}{\text{Average total assets}}$	Measures how efficiently assets are used to generate sales.
7. Return on assets	$\frac{\text{Net income}}{\text{Average total assets}}$	Measures overall profitability of assets.
8. Return on ordinary shareholders' equity	$\frac{\text{Net income − Preference dividends}}{\text{Average ordinary shareholders' equity}}$	Measures profitability of owners' investment.
9. Earnings per share (EPS)	$\frac{\text{Net income − Preference dividends}}{\text{Weighted-average ordinary shares outstanding}}$	Measures net income earned on each ordinary share.
10. Price-earnings (P-E) ratio	$\frac{\text{Market price per share}}{\text{Earnings per share}}$	Measures the ratio of the market price per share to earnings per share.
11. Payout ratio	$\frac{\text{Cash dividends declared on ordinary shares}}{\text{Net income}}$	Measures percentage of earnings distributed in the form of cash dividends.

Illustration 14-26
(cont'd.)

Solvency Ratios		
12. Debt to assets ratio	$\frac{\text{Total liabilities}}{\text{Total assets}}$	Measures the percentage of total assets provided by creditors.
13. Times interest earned	$\frac{\text{Net income + Interest expense + Income tax expense}}{\text{Interest expense}}$	Measures ability to meet interest payments as they come due.

DO IT!

Ratio Analysis

The condensed financial statements of John Cully Company, for the years ended June 30, 2017 and 2016, are presented below.

JOHN CULLY COMPANY
Statements of Financial Position
June 30

	(in thousands)			
Assets	**2017**		**2016**	
Intangibles and other assets		€ 876.7		€ 849.3
Property, plant, and equipment (net)		694.2		647.0
Investments		12.3		12.6
Current assets				
Prepaid expenses and other current assets	€204.4		€269.2	
Inventory	768.3		653.5	
Accounts receivable (net)	776.6		664.9	
Cash	553.3	2,302.6	611.6	2,199.2
Total assets		€3,885.8		€3,708.1
Equity and Liabilities				
Shareholders' equity—ordinary		€1,708.6		€1,749.0
Non-current liabilities		679.5		637.1
Current liabilities		1,497.7		1,322.0
Total equity and liabilities		€3,885.8		€3,708.1

JOHN CULLY COMPANY
Income Statements
For the Year Ended June 30

	(in thousands)	
	2017	**2016**
Sales revenue	€6,336.3	€5,790.4
Costs and expenses		
Cost of goods sold	1,617.4	1,476.3
Selling and administrative expenses	4,007.6	3,679.0
Interest expense	13.9	27.1
Total costs and expenses	5,638.9	5,182.4
Income before income taxes	697.4	608.0
Income tax expense	291.3	232.6
Net income	€ 406.1	€ 375.4

Compute the following ratios for 2017 and 2016.

(a) Current ratio.
(b) Inventory turnover. (Inventory on 6/30/15 was €599.0.)
(c) Profit margin.
(d) Return on assets. (Assets on 6/30/15 were €3,349.9.)
(e) Return on ordinary shareholders' equity. (Equity on 6/30/15 was €1,795.9.)
(f) Debt to assets ratio.
(g) Times interest earned.

Solution

Action Plan

✔ Remember that the current ratio includes all current assets. The acid-test ratio uses only cash, short-term investments, and net accounts receivable.

✔ Use average balances for turnover ratios like inventory, accounts receivable, as well as return on assets.

	2017	2016
(a) Current ratio:		
€2,302.6 ÷ €1,497.7 =	1.5:1	
€2,199.2 ÷ €1,322.0 =		1.7:1
(b) Inventory turnover:		
€1,617.4 ÷ [(€768.3 + €653.5) ÷ 2] =	2.3 times	
€1,476.3 ÷ [(€653.5 + €599.0) ÷ 2] =		2.4 times
(c) Profit margin:		
€406.1 ÷ €6,336.3 =	6.4%	
€375.4 ÷ €5,790.4 =		6.5%
(d) Return on assets:		
€406.1 ÷ [(€3,885.8 + €3,708.1) ÷ 2] =	10.7%	
€375.4 ÷ [(€3,708.1 + €3,349.9) ÷ 2] =		10.6%
(e) Return on ordinary shareholders' equity:		
(€406.1 − €0) ÷ [(€1,708.6 + €1,749.0) ÷ 2] =	23.5%	
(€375.4 − €0) ÷ [(€1,749.0 + €1,795.9) ÷ 2] =		21.2%
(f) Debt to assets ratio:		
(€1,497.7 + €679.5) ÷ €3,885.8 =	56.0%	
(€1,322.0 + €637.1) ÷ €3,708.1 =		52.8%
(g) Times interest earned:		
(€406.1 + €291.3 + €13.9) ÷ €13.9 =	51.2 times	
(€375.4 + €232.6 + €27.1) ÷ €27.1 =		23.4 times

Related exercise material: **BE14-9, BE14-10, BE14-11, BE14-12, BE14-13, E14-5, E14-6, E14-7, E14-8, E14-9, E14-10, E14-11, and DO IT! 14-2.**

✔ The Navigator

Earning Power and Unusual Items

Learning Objective 6

Understand the concept of earning power, and how discontinued operations are presented.

Users of financial statements are interested in the concept of earning power. **Earning power** means the normal level of income to be obtained in the future. Earning power differs from actual net income by the amount of unusual revenues, expenses, gains, and losses. Users are interested in earning power because it helps them derive an estimate of future earnings without the "noise" of unusual items.

For users of financial statements to determine earning power or regular income, discontinued operations are separately identified on the income statement. Discontinued operations are reported net of income taxes. That is, the income statement first reports income tax on the income before discontinued operations. Then, the amount of tax for discontinued operations is computed. The general concept is "let the tax follow income or loss."

Discontinued Operations

Discontinued operations refers to the disposal of a **significant component** of a business, such as the elimination of a major class of customers or an entire activity. For example, to downsize its operations, General Dynamics Corp. (USA) sold its missile business to Hughes Aircraft Co. (USA) for $450 million. In its income statement, General Dynamics reported the sale in a separate section entitled "Discontinued operations."

Following the disposal of a significant component, the company should report on its income statement both income from continuing operations and income (or loss) from discontinued operations. **The income (loss) from discontinued operations consists of two parts: the income (loss) from operations** and **the gain (loss) on disposal of the component.**

To illustrate, assume that during 2017 Acro Energy Ltd. has income before income taxes of NT$800,000. During 2017, Acro discontinued and sold its unprofitable chemical division. The loss in 2017 from chemical operations (net of NT$60,000 taxes) was NT$140,000. The loss on disposal of the chemical division (net of NT$30,000 taxes) was NT$70,000. Assuming a 30% tax rate on income, Illustration 14-27 shows Acro's income statement presentation.

Illustration 14-27
Statement presentation of discontinued operations

ACRO ENERGY LTD.
Income Statement (partial)
For the Year Ended December 31, 2017

Income before income taxes		NT$ 800,000
Income tax expense		240,000
Income from continuing operations		560,000
Discontinued operations		
Loss from operations of chemical division, net of NT$60,000 income tax savings	**NT$140,000**	
Loss from disposal of chemical division, net of NT$30,000 income tax savings	**70,000**	**210,000**
Net income		NT$ 350,000

• HELPFUL HINT
Observe the dual disclosures: (1) the results of operations of the discontinued division must be eliminated from the results of continuing operations, and (2) the company must also report the disposal of the operation.

Note that the statement uses the caption "Income from continuing operations" and adds a new section "Discontinued operations." **The new section reports both the operating loss and the loss on disposal net of applicable income taxes.** This presentation clearly indicates the separate effects of continuing operations and discontinued operations on net income.

Investor Insight What Does "Non-Recurring" Really Mean?

Procter & Gamble Co. (USA)

Kenneth C. Zirkel/iStockphoto

Many companies incur restructuring charges as they attempt to reduce costs. They often label these items in the income statement as "non-recurring" charges to suggest that they are isolated events which are unlikely to occur in future periods. The question for analysts is, are these costs really one-time, "non-recurring" events, or do they reflect problems that the company will be facing for many periods in the future? If they are one-time events, they can be largely ignored when trying to predict future earnings.

But some companies report "one-time" restructuring charges over and over again. For example, toothpaste and other consumer-goods giant Procter & Gamble Co. (USA) reported a restructuring charge in 12 consecutive quarters. Motorola (USA) had "special" charges in 14 consecutive quarters. On the other hand, other companies have a restructuring charge only once in a five- or ten-year period. There appears to be no substitute for careful analysis of the numbers that comprise net income.

Q If a company takes a large restructuring charge, what is the effect on the company's current income statement versus future ones? (See page 759.)

Changes in Accounting Principle

Ethics Note

Changes in accounting principle should result in financial statements that are more informative for statement users. They should *not* be used to artificially improve the reported performance or financial position of the corporation.

For ease of comparison, users of financial statements expect companies to prepare such statements on a basis **consistent** with the preceding period. A **change in accounting principle** occurs when the principle used in the current year is different from the one used in the preceding year. Accounting rules permit a change when management can show that the new principle is preferable to the old principle. An example is a change in inventory costing methods (such as FIFO to average-cost).

Companies report most changes in accounting principle retroactively. That is, they report both the current period and previous periods using the new principle. As a result the same principle applies in all periods. This treatment improves the ability to compare results across years.

Comprehensive Income

The income statement reports most revenues, expenses, gains, and losses recognized during the period. However, over time, specific exceptions to this general practice have developed. Certain items now bypass income and are reported directly in equity.

Companies do not include in income any unrealized gains and losses on non-trading securities. Instead, they report such gains and losses in the statement of financial position as adjustments to equity, called accumulated other comprehensive income. Why are these gains and losses on non-trading securities excluded from net income? Because disclosing them separately (1) reduces the volatility of net income due to fluctuations in fair value, yet (2) informs the financial statement user of the gain or loss that would be incurred if the securities were sold at fair value. Similarly, in Chapter 9 you learned that companies that employ revaluation accounting do not include the revaluation surplus in income. It also is closed out to accumulated other comprehensive income.

Many analysts have expressed concern over the significant increase in the number of items that bypass the income statement. They feel that such reporting has reduced the usefulness of the income statement. To address this concern, in addition to reporting net income, a company must also report comprehensive income. **Comprehensive income** is therefore the sum of net income plus other comprehensive income items. In other words, it includes all changes in equity during a period except those resulting from investments by shareholders and distributions to shareholders.

To illustrate, assume Stassi AG has ordinary shares of €3,000,000, retained earnings of €1,500,000, and accumulated other comprehensive loss of €2,000. Illustration 14-28 shows the statement of financial position presentation of the unrealized loss.

Illustration 14-28
Unrealized loss in equity section

STASSI AG Statement of Financial Position (partial)	
Equity	
Share capital—ordinary	€3,000,000
Retained earnings	1,500,000
Accumulated other comprehensive loss	**2,000**
Total equity	€4,498,000

Note that the presentation of the accumulated other comprehensive loss is similar to the presentation of the cost of treasury shares in the equity section. (An unrealized gain would be added in this section of the statement of financial position.) Reporting the unrealized gain or loss in the equity section serves two important purposes: (1) it reduces the volatility of net income due to fluctuations in fair value, and (2) it informs the financial statement user of the gain or loss that would occur if the company sold the securities at fair value.

COMPLETE STATEMENT OF COMPREHENSIVE INCOME

In earlier chapters, we presented other comprehensive income items in a separate comprehensive income statement. Alternatively, companies can present other comprehensive income items and net income in a combined statement of comprehensive income. The statement of comprehensive income for Pace AG in Illustration 14-29 presents the types of items found on this statement, such as net sales, cost of goods sold, operating expenses, and income taxes. In addition, it shows how companies report discontinued operations and other comprehensive income (highlighted in red).

Illustration 14-29
Complete statement of comprehensive income

PACE AG Statement of Comprehensive Income For the Year Ended December 31, 2017	
Net sales	€440,000
Cost of goods sold	260,000
Gross profit	180,000
Operating expenses	110,000
Income from operations	70,000
Other revenues and gains	5,600
Other expenses and losses	9,600
Income before income taxes	66,000
Income tax expense (€66,000 × 30%)	19,800
Income from continuing operations	46,200
Discontinued operations: Gain on disposal of plastics division, net of €15,000 income taxes (€50,000 × 30%)	**35,000**
Loss from operation of plastics division, net of income tax savings €18,000 (€60,000 × 30%)	**42,000**
Net income	**39,200**
Other comprehensive income	
Unrealized gain on non-trading securities, net of income taxes (€15,000 × 30%)	**10,500**
Comprehensive income	**€ 49,700**

DO IT!

Unusual Items

In its proposed 2017 income statement, AIR plc reports income before income taxes £400,000, loss on operation of discontinued flower division £50,000, and loss on disposal of discontinued flower division £90,000. The income tax rate is 30%. Prepare a correct income statement, beginning with "Income before income taxes."

Action Plan

✔ Disclose the income tax effect of each component of income, beginning with income from continuing operations.

Solution

AIR plc
Income Statement (partial)
For the Year Ended December 31, 2017

Income before income taxes		£400,000
Income tax expense		120,000
Income from continuing operations		280,000
Discontinued operations		
Loss from operation of flower division, net of £15,000 tax savings	£35,000	
Loss on disposal of flower division, net of £27,000 tax savings	63,000	98,000
Net income		£182,000

Related exercise material: BE14-14, BE14-15, E14-12, E14-13, and DO IT! 14-3.

✔ The Navigator

Quality of Earnings

Learning Objective 7
Understand the concept of quality of earnings.

In evaluating the financial performance of a company, the quality of a company's earnings is of extreme importance to analysts. A company that has a high **quality of earnings** provides full and transparent information that will not confuse or mislead users of the financial statements.

The issue of quality of earnings has taken on increasing importance because recent accounting scandals suggest that some companies are spending too much time managing their income and not enough time managing their business. Here are some of the factors affecting quality of earnings.

Alternative Accounting Methods

Variations among companies in the application of IFRS may hamper comparability and reduce quality of earnings. For example, one company may use the average-cost method of inventory costing, while another company in the same industry may use FIFO. If inventory is a significant asset to both companies, it is unlikely that their current ratios are comparable.

In addition to differences in inventory costing methods, differences also exist in reporting such items as depreciation, depletion, and amortization. Although these differences in accounting methods might be detectable from reading the notes to the financial statements, adjusting the financial data to compensate for the different methods is often difficult, if not impossible.

Pro Forma Income

Companies whose shares are publicly traded are required to present their income statement following IFRS. Some companies also report a second measure of income, called pro forma income. **Pro forma income** usually excludes items that the company thinks are unusual or non-recurring.

To compute pro forma income, companies generally can exclude any items they deem inappropriate for measuring their performance. Many analysts and investors are critical of the practice of using pro forma income because these numbers often make companies look better than they really are. As the financial press noted, pro forma numbers might be called EBBS, which stands for "earnings before bad stuff." Companies, on the other hand, argue that pro forma numbers more clearly indicate sustainable income because they exclude unusual and non-recurring expenses.

Accounting regulators have provided guidance on how companies should present pro forma information. Stay tuned: Everyone seems to agree that pro forma numbers can be useful if they provide insights into determining a company's sustainable income. However, many companies have abused the flexibility that pro forma numbers allow and have used the measure as a way to put their companies in a good light.

Improper Recognition

Because some managers have felt pressure from some analysts to continually increase earnings, they have manipulated the earnings numbers to meet these expectations. The most common abuse is the improper recognition of revenue. One practice that companies are using is **channel stuffing**: Offering deep discounts on their products to customers, companies encourage their customers to buy early (stuff the channel) rather than later. This lets the company report good earnings in the current period, but it often leads to a disaster in subsequent periods because customers have no need for additional goods. To illustrate, Bristol-Myers Squibb (USA) at one time indicated that it used sales incentives to encourage wholesalers to buy more drugs than needed to meet patients' demands. As a result, the company had to issue revised financial statements showing corrected revenues and income.

Another practice is the improper capitalization of operating expenses. The classic case is WorldCom (USA). It capitalized over $7 billion of operating expenses so that it would report positive net income. In other situations, companies fail to report all their liabilities. Enron (USA) had promised to make payments on certain contracts if financial difficulty developed, but these guarantees were not reported as liabilities. In addition, disclosure was so lacking in transparency that it was impossible to understand what was happening at the company.

> DO IT!

Quality of Earnings, Financial Statement Analysis

Match each of the following terms with the phrase that best describes it.

Comprehensive income	Vertical analysis
Quality of earnings	Pro forma income
Solvency ratio	Discontinued operations

1. ______ Measures the ability of the company to survive over a long period of time.
2. ______ Usually excludes items that a company thinks are unusual or non-recurring.
3. ______ Includes all changes in equity during a period except those resulting from investments by shareholders and distributions to shareholders.

4. ______ Indicates the level of full and transparent information provided to users of the financial statements.
5. ______ The disposal of a significant component of the business.
6. ______ Expresses each item within a financial statement as a percentage of a base amount.

Action Plan

✔ Develop a sound understanding of basic methods used for financial reporting.

✔ Understand the use of fundamental analysis techniques.

Solution

1. Solvency ratio: Measures the ability of the company to survive over a long period of time.
2. Pro forma income: Usually excludes items that a company thinks are unusual or non-recurring.
3. Comprehensive income: Includes all changes in equity during a period except those resulting from investments by shareholders and distributions to shareholders.
4. Quality of earnings: Indicates the level of full and transparent information provided to users of the financial statements.
5. Discontinued operations: The disposal of a significant component of the business.
6. Vertical analysis: Expresses each item within a financial statement as a percentage of a base amount.

Related exercise material: DO IT! 14-4.

✔ The Navigator

REVIEW AND PRACTICE

LEARNING OBJECTIVES REVIEW

✔ The Navigator

1 **Discuss the need for comparative analysis.** There are three bases of comparison: (1) Intracompany, which compares an item or financial relationship with other data within a company. (2) Industry, which compares company data with industry averages. (3) Intercompany, which compares an item or financial relationship of a company with data of one or more competing companies.

2 **Identify the tools of financial statement analysis.** Financial statements can be analyzed horizontally, vertically, and with ratios.

3 **Explain and apply horizontal analysis.** Horizontal analysis is a technique for evaluating a series of data over a period of time to determine the increase or decrease that has taken place, expressed as either an amount or a percentage.

4 **Describe and apply vertical analysis.** Vertical analysis is a technique that expresses each item within a financial statement in terms of a percentage of a relevant total or a base amount.

5 **Identify and compute ratios used in analyzing a firm's liquidity, profitability, and solvency.** The formula and purpose of each ratio was presented in Illustration 14-26 (pages 728–729).

6 **Understand the concept of earning power, and how discontinued operations are presented.** Earning power refers to a company's ability to sustain its profits from operations. Discontinued operations are presented net of tax below income from continuing operations to highlight their unusual nature. Other comprehensive income items are presented net of tax below net income.

7 **Understand the concept of quality of earnings.** A high quality of earnings provides full and transparent information that will not confuse or mislead users of the financial statements. Issues related to quality of earnings are (1) alternative accounting methods, (2) pro forma income, and (3) improper recognition.

GLOSSARY REVIEW

Accounts receivable turnover A measure of the liquidity of accounts receivable; computed by dividing net credit sales by average net accounts receivable. (p. 721).

Acid-test (quick) ratio A measure of a company's immediate short-term liquidity; computed by dividing the sum of cash, short-term investments, and net accounts receivable by current liabilities. (p. 721).

Asset turnover A measure of how efficiently a company uses its assets to generate sales; computed by dividing net sales by average total assets. (p. 723).

Change in accounting principle The use of a principle in the current year that is different from the one used in the preceding year. (p. 732).

Comprehensive income The sum of net income plus other comprehensive income items; it therefore includes all changes in equity during a period except those resulting from investments by shareholders and distributions to shareholders. (p. 732).

Current ratio A measure used to evaluate a company's liquidity and short-term debt-paying ability; computed by dividing current assets by current liabilities. (p. 720).

Debt to assets ratio Measures the percentage of assets provided by creditors; computed by dividing total liabilities by total assets. (p. 727).

Discontinued operations The disposal of a significant component of a business. (p. 731).

Earnings per share (EPS) The net income earned on each ordinary share; computed by dividing net income minus preference dividends (if any) by the number of weighted-average ordinary shares outstanding. (p. 725).

Horizontal analysis A technique for evaluating a series of financial statement data over a period of time, to determine the increase (decrease) that has taken place, expressed as either an amount or a percentage. (p. 713).

Inventory turnover A measure of the liquidity of inventory; computed by dividing cost of goods sold by average inventory. (p. 722).

Leveraging See *Trading on the equity*. (p. 725).

Liquidity ratios Measures of the short-term ability of the company to pay its maturing obligations and to meet unexpected needs for cash. (p. 719).

Payout ratio Measures the percentage of earnings distributed in the form of cash dividends; computed by dividing cash dividends declared on ordinary shares by net income. (p. 726).

Price-earnings (P-E) ratio Measures the ratio of the market price of each ordinary share to the earnings per share; computed by dividing the market price per share by earnings per share. (p. 726).

Profitability ratios Measures of the income or operating success of a company for a given period of time. (p. 723).

Profit margin Measures the percentage of each currency unit of sales that results in net income; computed by dividing net income by net sales. (p. 723).

Pro forma income A measure of income that usually excludes items that a company thinks are unusual or non-recurring. (p. 735).

Quality of earnings Indicates the level of full and transparent information provided to users of the financial statements. (p. 734).

Ratio An expression of the mathematical relationship between one quantity and another. The relationship may be expressed either as a percentage, a rate, or a simple proportion. (p. 718).

Ratio analysis A technique for evaluating financial statements that expresses the relationship between selected financial statement data. (p. 718).

Return on assets An overall measure of profitability; computed by dividing net income by average total assets. (p. 724).

Return on ordinary shareholders' equity Measures the currency units of net income earned for each currency unit invested by the owners; computed by dividing net income minus preference dividends (if any) by average ordinary shareholders' equity. (p. 724).

Solvency ratios Measures of the ability of the company to survive over a long period of time. (p. 727).

Times interest earned Measures a company's ability to meet interest payments as they come due; computed by dividing the sum of net income, interest expense, and income tax expense by interest expense. (p. 727).

Trading on the equity Borrowing money at a lower rate of interest than can be earned by using the borrowed money. (p. 725).

Vertical analysis A technique for evaluating financial statement data that expresses each item within a financial statement as a percentage of a base amount. (p. 716).

PRACTICE MULTIPLE-CHOICE QUESTIONS

(LO 1) **1.** Comparisons of data within a company are an example of the following comparative basis:
(a) Industry averages (c) Intercompany.
(b) Intracompany. (d) Both (b) and (c).

(LO 3) **2.** In horizontal analysis, each item is expressed as a percentage of the:
(a) net income amount. (c) total assets amount.
(b) equity amount. (d) base year amount.

(LO 3) **3.** Sammy plc reported net sales of £300,000, £330,000, and £360,000 in the years, 2015, 2016, and 2017, respectively. If 2015 is the base year, what is the trend percentage for 2017?
(a) 77%. (c) 120%.
(b) 108%. (d) 130%.

4. The following schedule is a display of what type of analysis? (LO 4)

	Amount	Percent
Property, plant, and equipment	€600,000	75%
Current assets	200,000	25%
Total assets	€800,000	

(a) Horizontal analysis. (c) Vertical analysis.
(b) Differential analysis. (d) Ratio analysis.

5. In vertical analysis, the base amount for depreciation expense is generally: (LO 4)
(a) net sales.
(b) depreciation expense in a previous year.

(c) gross profit.
(d) fixed assets.

(LO 5) **6.** Which of the following measures is an evaluation of a firm's ability to pay current liabilities?
(a) Acid-test ratio. (c) Both (a) and (b).
(b) Current ratio. (d) None of the above.

(LO 5) **7.** A measure useful in evaluating the efficiency in managing inventories is:
(a) inventory turnover.
(b) days in inventory.
(c) Both (a) and (b).
(d) None of the above.

Use the following financial statement information as of the end of each year to answer Questions 8–12.

	2017	2016
Inventory	£ 54,000	£ 48,000
Current assets	81,000	106,000
Total assets	382,000	326,000
Current liabilities	27,000	36,000
Total liabilities	102,000	88,000
Share capital—preference	40,000	40,000
Ordinary shareholders' equity	240,000	198,000
Net sales	784,000	697,000
Cost of goods sold	306,000	277,000
Net income	134,000	90,000
Income tax expense	22,000	18,000
Interest expense	12,000	12,000
Dividends paid to preference shareholders	4,000	4,000
Dividends paid to ordinary shareholders	15,000	10,000

(LO 5) **8.** Compute the days in inventory for 2017.
(a) 64.4 days. (c) 6 days.
(b) 60.8 days. (d) 24 days.

(LO 5) **9.** Compute the current ratio for 2017.
(a) 1.26:1. (c) 0.80:1.
(b) 3.0:1. (d) 3.75:1.

10. Compute the profit margin for 2017. (LO 5)
(a) 17.1%. (c) 37.9%.
(b) 18.1%. (d) 5.9%.

11. Compute the return on ordinary shareholders' equity for 2017. (LO 5)
(a) 47.9%. (c) 61.2%.
(b) 51.7%. (d) 59.4%.

12. Compute the times interest earned for 2017. (LO 5)
(a) 11.2 times. (c) 14.0 times.
(b) 65.3 times. (d) 13.0 times.

13. In reporting discontinued operations, the statement of comprehensive income should show in a special section: (LO 6)
(a) gains and losses on the disposal of the discontinued component.
(b) gains and losses from operations of the discontinued component.
(c) Both (a) and (b).
(d) None of the above.

14. Scout Ltd. has income before taxes of £400,000, loss on operation of a discontinued division of £40,000, and a £60,000 loss on disposal of a division. If the income tax rate is 25% on all items, the statement of comprehensive income should show income from continuing operations and discontinued operations, respectively, of: (LO 6)
(a) £400,000 and £100,000.
(b) £400,000 and £75,000.
(c) £300,000 and £100,000.
(d) £300,000 and £75,000.

15. Which situation below might indicate a company has a low quality of earnings? (LO 7)
(a) The same accounting principles are used each year.
(b) Revenue is recognized when goods are provided or services are performed.
(c) Maintenance costs are expensed as incurred.
(d) The company is continually reporting pro forma income numbers.

Solutions

1. (b) Comparisons of data within a company are called intracompany comparisons, not (a) industry averages, (c) intercompany comparisons, or (d) both intracompany and intercompany comparisons. Intercompany comparisons are among companies.

2. (d) Horizontal analysis converts each succeeding year's balance to a percentage of the base year amount, not (a) net income amount, (b) equity amount, or (c) total assets amount.

3. (c) The trend percentage for 2017 is 120% (£360,000/£300,000), not (a) 77%, (b) 108%, or (d) 130%.

4. (c) The data in the schedule is a display of vertical analysis because the individual asset items are expressed as a percentage of total assets. The other choices are therefore incorrect. Horizontal analysis is a technique for evaluating a series of data over a period of time.

5. (a) In vertical analysis, net sales is used as the base amount for income statement items, not (b) depreciation expense in a previous year, (c) gross profit, or (d) fixed assets.

6. (c) Both the acid-test ratio and the current ratio measure a firm's ability to pay current liabilities. Choices (a) and (b) are correct but (c) is the better answer. Choice (d) is incorrect because there is a correct answer.

7. (c) Both inventory turnover and days in inventory measure a firm's efficiency in managing inventories. Choices (a) and (b) are correct but (c) is the better answer. Choice (d) is incorrect because there is a correct answer.

8. (b) Inventory turnover = Cost of goods sold/Average inventory [£306,000/(£54,000 + £48,000/2)] = 6 times. Thus, days in inventory = 60.8 (365/6), not (a) 64.4, (c) 6, or (d) 24 days.

9. (b) Current ratio = Current assets/Current liabilities (£81,000/£27,000) = 3.0:1, not (a) 1.26:1, (c) 0.80:1, or (d) 3.75:1.

10. (a) Profit margin = Net income/Net sales (£134,000/£784,000) =17.1%, not (b) 18.1%, (c) 37.9%, or (d) 5.9%.

11. (d) Return on ordinary shareholders' equity = Net income (£134,000) − Preference dividends (£4,000)/Average ordinary shareholders' equity [(£240,000 + £198,000)/2] = 59.4%, not (a) 47.9%, (b) 51.7%, or (c) 61.2%.

12. (c) Times interest earned = Net income + Interest expense + Income tax expense divided by Interest expense [(£134,000 + £12,000 + £22,000)/£12,000] = 14.0 times, not (a) 11.2, (b) 65.3, or (d) 13.0 times.

13. (c) Gains and losses on the disposal of the discontinued component and gains and losses from operations of the discontinued component are shown in the special section titled discontinued operations. Other comprehensive income items are reported in a separate section after net income on the statement of comprehensive income. Choices (a) and (b) are therefore correct but (c) is the better answer. Choice (d) is incorrect as there is a correct answer.

14. (d) Income tax expense = 25% × £400,000 = £100,000; therefore, income from continuing operations = £400,000 − £100,000 = £300,000. The loss on discontinued operations is shown net of tax, (£60,000 + £40,000) × 75% = £75,000. The other choices are therefore incorrect.

15. (d) By continually reporting pro forma income numbers, the company appears to be interested in diverting attention away from IFRS-based results. Choices (a), (b), and (c) all describe situations where the company is reporting as required by IFRS.

PRACTICE EXERCISES

Prepare horizontal and vertical analysis.
(LO 3, 4)

1. The comparative condensed statements of financial position of Roadway Ltd. are presented below.

ROADWAY LTD.
Condensed Statements of Financial Position
December 31
(in thousands)

	2017	2016
Assets		
Intangibles	NT$ 25,000	NT$ 40,000
Property, plant, and equipment (net)	99,000	90,000
Current assets	76,000	80,000
Total assets	NT$200,000	NT$210,000
Equity and Liabilities		
Equity	NT$ 16,200	NT$ 12,000
Non-current liabilities	143,000	150,000
Current liabilities	40,800	48,000
Total equity and liabilities	NT$200,000	NT$210,000

Instructions

(a) Prepare a horizontal analysis of the statement of financial position data for Roadway Ltd. using 2016 as a base.
(b) Prepare a vertical analysis of the statement of financial position data for Roadway Ltd. in columnar form for 2017.

Solution

1. (a)

ROADWAY LTD.
Condensed Statements of Financial Position
December 31
(in thousands)

	2017	2016	Increase (Decrease)	Percent Change from 2016
Assets				
Intangibles	NT$ 25,000	NT$ 40,000	NT$(15,000)	(37.5%)
Property, plant, and equipment (net)	99,000	90,000	9,000	10.0%
Current assets	76,000	80,000	(4,000)	(5.0%)
Total assets	NT$200,000	NT$210,000	NT$(10,000)	(4.8%)

	2017	2016	Increase (Decrease)	Percent Change from 2016
Equity and liabilities				
Equity	NT$ 16,200	NT$ 12,000	NT$ 4,200	35.0%
Non-current liabilities	143,000	150,000	(7,000)	(4.7%)
Current liabilities	40,800	48,000	(7,200)	(15.0%)
Total equity and liabilities	NT$200,000	NT$210,000	NT$(10,000)	(4.8%)

(b)

ROADWAY LTD.
Condensed Statement of Financial Position
December 31, 2017

	Amount	Percent
Assets		
Intangibles	NT$ 25,000	12.5%
Property, plant, and equipment (net)	99,000	49.5%
Current assets	76,000	38.0%
Total assets	NT$200,000	100.0%
Equity and liabilities		
Equity	NT$ 16,200	8.1%
Non-current liabilities	143,000	71.5%
Current liabilities	40,800	20.4%
Total equity and liabilities	NT$200,000	100.0%

Compute ratios.
(LO 5)

2. Rondo plc's comparative statements of financial position are presented below.

RONDO plc
Statements of Financial Position
December 31

	2017	2016
Land	£ 20,000	£ 26,000
Buildings	70,000	70,000
Accumulated depreciation—buildings	(15,000)	(10,000)
Inventory	9,000	7,000
Accounts receivable	21,200	23,400
Cash	5,300	3,700
Total	£110,500	£120,100
Share capital—ordinary	£ 75,000	£ 69,000
Retained earnings	25,130	20,000
Accounts payable	10,370	31,100
Total	£110,500	£120,100

Rondo's 2017 income statement included net sales of £120,000, cost of goods sold of £70,000, and net income of £14,000.

Instructions

Compute the following ratios for 2017.

(a) Current ratio.
(b) Acid-test ratio.
(c) Accounts receivable turnover.
(d) Inventory turnover.
(e) Profit margin.
(f) Asset turnover.
(g) Return on assets.
(h) Return on ordinary shareholders' equity.
(i) Debt to assets ratio.

Solution

2. (a) (£5,300 + £21,200 + £9,000)/£10,370 = 3.42
   (b) (£5,300 + £21,200)/£10,370 = 2.56
   (c) £120,000/[(£21,200 + £23,400)/2] = 5.38

(d) £70,000/[(£9,000 + £7,000)/2] = 8.8

(e) £14,000/£120,000 = 11.7%

(f) £120,000/[(£110,500 + £120,100)/2] = 1.04

(g) £14,000/[(£110,500 + £120,100)/2] = 12.1%

(h) £14,000/[(£100,130 + £89,000)/2] = 14.8%

(i) £10,370/£110,500 = 9.4%

PRACTICE PROBLEM

Prepare a statement of comprehensive income.

(LO 6)

The events and transactions of Dever SA for the year ending December 31, 2017, resulted in the following data.

Cost of goods sold	R$2,600,000
Net sales	4,400,000
Other income and expense	(4,000)
Selling and administrative expenses	1,100,000
Income from operations of plastics division	70,000
Gain from disposal of plastics division	500,000
Unrealized loss on non-trading securities	60,000

Analysis reveals that:

1. All items are before the applicable income tax rate of 30%.
2. The plastics division was sold on July 1.
3. All operating data for the plastics division have been segregated.

Instructions

Prepare a statement of comprehensive income for the year.

Solution

DEVER SA
Statement of Comprehensive Income
For the Year Ended December 31, 2017

Net sales		R$4,400,000
Cost of goods sold		2,600,000
Gross profit		1,800,000
Selling and administrative expenses		1,100,000
Income from operations		700,000
Other income and expense		4,000
Income before income taxes		696,000
Income tax expense (R$696,000 × 30%)		208,800
Income from continuing operations		487,200
Discontinued operations		
Income from operations of plastics division, net of R$21,000 income taxes (R$70,000 × 30%)	R$ 49,000	
Gain from disposal of plastics division, net of R$150,000 income taxes (R$500,000 × 30%)	350,000	399,000
Net income		886,200
Other comprehensive income		
Unrealized loss on non-trading securities, net of R$18,000 income tax savings (R$60,000 × 30%)		42,000
Comprehensive income		R$ 844,200

QUESTIONS

1. (a) Kurt Gibson believes that the analysis of financial statements is directed at two characteristics of a company: liquidity and profitability. Is Kurt correct? Explain.
   (b) Are short-term creditors, long-term creditors, and shareholders interested primarily in the same characteristics of a company? Explain.
2. (a) Distinguish among the following bases of comparison: (1) intracompany, (2) industry averages, and (3) intercompany.
   (b) Give the principal value of using each of the three bases of comparison.
3. Two popular methods of financial statement analysis are horizontal analysis and vertical analysis. Explain the difference between these two methods.
4. (a) If Nimoy SA had net income of €350,000 in 2016 and it experienced a 22.4% increase in net income for 2017, what is its net income for 2017?
   (b) If five cents of every euro of Nimoy revenue is net income in 2016, what is the euro amount of 2016 revenue?
5. What is a ratio? What are the different ways of expressing the relationship of two amounts? What information does a ratio provide?
6. Name the major ratios useful in assessing (a) liquidity and (b) solvency.
7. Maribel Ortiz is puzzled. Her company had a profit margin of 10% in 2017. She feels that this is an indication that the company is doing well. Gordon Liddy, her accountant, says that more information is needed to determine the firm's financial well-being. Who is correct? Why?
8. What do the following classes of ratios measure? (a) Liquidity ratios. (b) Profitability ratios. (c) Solvency ratios.
9. What is the difference between the current ratio and the acid-test ratio?
10. Monte Company, a retail store, has an accounts receivable turnover of 4.5 times. The industry average is 12.5 times. Does Monte have a collection problem with its accounts receivable?
11. Which ratios should be used to help answer the following questions?
    (a) How efficient is a company in using its assets to produce sales?
    (b) How near to sale is the inventory on hand?
    (c) How many dollars of net income were earned for each dollar invested by the owners?
    (d) How able is a company to meet interest charges as they fall due?
12. The price-earnings ratio of General Motors (USA) (automobile builder) was 8, and the price-earnings ratio of Microsoft (USA) (computer software) was 38. Which company did the securities market favor? Explain.
13. What is the formula for computing the payout ratio? Would you expect this ratio to be high or low for a growth company?
14. Holding all other factors constant, indicate whether each of the following changes generally signals good or bad news about a company.
    (a) Increase in profit margin.
    (b) Decrease in inventory turnover.
    (c) Increase in the current ratio.
    (d) Decrease in earnings per share.
    (e) Increase in price-earnings ratio.
    (f) Increase in debt to assets ratio.
    (g) Decrease in times interest earned.
15. The return on assets for Miller Limited is 7.6%. During the same year, Miller's return on ordinary shareholders' equity is 12.8%. What is the explanation for the difference in the two rates?
16. Which two ratios do you think should be of greatest interest to:
    (a) A pension fund considering the purchase of 20-year bonds?
    (b) A bank contemplating a short-term loan?
    (c) An ordinary shareholder?
17. Why must preference dividends be subtracted from net income in computing earnings per share?
18. (a) What is meant by trading on the equity?
    (b) How would you determine the profitability of trading on the equity?
19. Tillman SA has net income of R$160,000, weighted-average ordinary shares outstanding of 50,000, and preference dividends for the period of R$30,000. What is Tillman's earnings per share? Pat Tillman, the president of Tillman SA, believes the computed EPS of the company is high. Comment.
20. Why is it important to report discontinued operations separately from income from continuing operations?
21. You are considering investing in Cherokee Transportation. The company reports 2017 earnings per share of €6.50 on income from continuing operations and €4.75 on net income. Which EPS figure would you consider more relevant to your investment decision? Why?
22. MRT Ltd. reported 2016 earnings per share of £3.20 and had no discontinued operations. In 2017, EPS on income from continuing operations was £2.99, and EPS on net income was £3.49. Is this a favorable trend?
23. Identify and explain factors that affect quality of earnings.

BRIEF EXERCISES

Follow the rounding procedures used in the chapter.

BE14-1 You recently received a letter from your Uncle Liam. A portion of the letter is presented below.

Discuss need for comparative analysis. (LO 1)

You know that I have a significant amount of money I saved over the years. I am thinking about starting an investment program. I want to do the investing myself, based on my own research and analysis of financial statements. I know that you are studying accounting, so I have a couple of questions for you. I have heard that different users of financial statements are interested in different characteristics of companies. Is this true, and, if so, why? Also, some of my friends, who are already investing, have told me that comparisons involving a company's financial data can be made on a number of different bases. Can you explain these bases to me?

Instructions

Write a letter to your Uncle Liam which answers his questions.

BE14-2 Maria Fierro SpA reported the following amounts in 2015, 2016, and 2017.

Identify and use tools of financial statement analysis. (LO 2, 3, 4, 5)

	2015	2016	2017
Current assets	€220,000	€230,000	€240,000
Current liabilities	€160,000	€170,000	€184,000
Total assets	€500,000	€600,000	€630,000

Instructions

(a) Identify and describe the three tools of financial statement analysis. (b) Perform each of the three types of analysis on Maria Fierro's current assets.

BE14-3 Using the following data from the comparative statements of financial position of Dotte NV, illustrate horizontal analysis.

Prepare horizontal analysis. (LO 3)

	December 31, 2017	December 31, 2016
Inventory	€ 840,000	€ 500,000
Accounts receivable	€ 520,000	€ 350,000
Total assets	€2,500,000	€3,000,000

BE14-4 Using the same data presented above in BE14-3 for Dotte NV, illustrate vertical analysis.

Prepare vertical analysis. (LO 4)

BE14-5 Net income was €550,000 in 2015, €500,000 in 2016, and €525,000 in 2017. What is the percentage of change from (a) 2015 to 2016 and (b) 2016 to 2017? Is the change an increase or a decrease?

Calculate percentage of change. (LO 3)

BE14-6 If Valdamorte plc had net income of £560,000 in 2017 and it experienced a 40% increase in net income over 2016, what was its 2016 net income?

Calculate net income. (LO 3)

BE14-7 Horizontal analysis (trend analysis) percentages for Kemplar Company's sales revenue, cost of goods sold, and expenses are shown below.

Calculate change in net income. (LO 3)

Horizontal Analysis	2017	2016	2015
Sales revenue	97.8	103.3	100.0
Cost of goods sold	103.0	96.0	100.0
Expenses	105.2	99.3	100.0

Did Kemplar's net income increase, decrease, or remain unchanged over the 3-year period?

BE14-8 Vertical analysis (common size) percentages for Dagman Company's sales revenue, cost of goods sold, and expenses are shown below.

Calculate change in net income. (LO 4)

Vertical Analysis	2017	2016	2015
Sales revenue	100.0	100.0	100.0
Cost of goods sold	59.2	62.4	64.5
Expenses	25.0	25.6	27.5

Did Dagman's net income as a percentage of sales increase, decrease, or remain unchanged over the 3-year period? Provide numerical support for your answer.

Calculate liquidity ratios.
(LO 5)

BE14-9 Selected condensed data taken from a recent statement of financial position of Morino Ltd. are as follows.

MORINO LTD.
Statement of Financial Position (partial)

Other current assets	£ 6,271,000
Inventory	14,814,000
Accounts receivable	12,545,000
Short-term investments	4,947,000
Cash	8,113,000
Total current assets	£46,690,000
Total current liabilities	£41,200,000

What are the (a) working capital, (b) current ratio, and (c) acid-test ratio?

Calculate profitability ratios.
(LO 5)

BE14-10 Huntsinger SE has net income of €12.76 million and net revenue of €88 million in 2017. Its assets are €14 million at the beginning of the year and €18 million at the end of the year. What are Huntsinger's (a) asset turnover and (b) profit margin?

Evaluate collection of accounts receivable.
(LO 5)

BE14-11 The following data are taken from the financial statements of Gladow Company.

	2017	2016
Accounts receivable (net), end of year	€ 550,000	€ 520,000
Net sales on account	3,680,000	3,000,000
Terms for all sales are 1/10, n/60.		

(a) Compute for each year (1) the accounts receivable turnover and (2) the average collection period. At the end of 2015, accounts receivable (net) was €480,000.
(b) What conclusions about the management of accounts receivable can be drawn from these data?

Evaluate management of inventory.
(LO 5)

BE14-12 The following data are from the income statements of Charles A.Ş.

	2017	2016
Sales revenue	₺6,420,000	₺6,240,000
Beginning inventory	980,000	860,000
Purchases	4,440,000	4,720,000
Ending inventory	1,020,000	980,000

(a) Compute for each year (1) the inventory turnover and (2) the days in inventory.
(b) What conclusions concerning the management of the inventory can be drawn from these data?

Calculate amounts from profitability ratios.
(LO 5)

BE14-13 Feng Company has equity of HK$4,000,000 and net income of HK$680,000. It has a payout ratio of 22% and a return on assets of 16%. How much did Feng pay in cash dividends, and what were its average assets?

Prepare income statement including discontinued operations.
(LO 6)

BE14-14 An inexperienced accountant for Ming Limited showed the following in the income statement: income before income taxes and discontinued operations £400,000, income from operation of discontinued retail division (before taxes) £10,000, and loss from disposal of discontinued retail division (before taxes) £80,000. The applicable tax rate is 30%. Prepare a correct income statement.

Prepare discontinued operations section of income statement.
(LO 6)

BE14-15 On June 30, Blevins ASA discontinued its operations in Europe. During the year, the operating loss was €320,000 before taxes. On September 1, Blevins disposed of its European facilities at a pretax loss of €150,000. The applicable tax rate is 30%. Show the discontinued operations section of the income statement.

Prepare partial statement of comprehensive income.
(LO 6)

BE14-16 An inexperienced accountant for Silva AG showed the following in the income statement: income before income taxes €450,000 and unrealized gain on non-trading securities (before taxes) €70,000. The unrealized gain on non-trading securities and income before income taxes are both subject to a 25% tax rate. Prepare a correct partial statement of comprehensive income, beginning with income before income taxes.

> DO IT! REVIEW

DO IT! 14-1 Summary financial information for Rapture Limited is as follows.

Prepare horizontal analysis. (LO 3)

	December 31, 2017	December 31, 2016
Plant assets	£ 821,000	£750,000
Current assets	188,000	225,000
Total assets	£1,009,000	£975,000

Compute the amount and percentage changes in 2017 using horizontal analysis, assuming 2016 is the base year.

DO IT! 14-2 The condensed financial statements of Soule SpA for the years 2016 and 2017 are presented as follows.

Compute ratios. (LO 5)

SOULE SpA
Statements of Financial Position
December 31

	2017		2016	
Intangibles and other assets		€ 530		€ 510
Property, plant, and equipment		420		380
Investments		10		10
Current assets				
Prepaid expenses	€120		€160	
Inventory	430		390	
Accounts receivable (net)	470		433	
Cash and cash equivalents	330	1,350	360	1,343
Total assets		€2,310		€2,243
Equity		€1,020		€1,040
Non-current liabilities		390		393
Current liabilities		900		810
Total equity and liabilities		€2,310		€2,243

SOULE SpA
Income Statements
For the Years Ended December 31

	2017	2016
Sales revenue	€4,000	€3,600
Costs and expenses		
Cost of goods sold	984	895
Selling and administrative expenses	2,400	2,330
Interest expense	10	20
Total costs and expenses	3,394	3,245
Income before income taxes	606	355
Income tax expense	242	142
Net income	€ 364	€ 213

Compute the following ratios for 2017 and 2016.

(a) Current ratio.
(b) Inventory turnover. (Inventory on 12/31/15 was €326.)
(c) Profit margin.
(d) Return on assets. (Assets on 12/31/15 were €2,100.)
(e) Return on ordinary shareholders' equity. (Equity on 12/31/15 was €960.)
(f) Debt to assets ratio.
(g) Times interest earned.

Prepare income statement.
(LO 6)

DO IT! **14-3** In its proposed 2017 income statement, Grinders Limited reports income before income taxes £500,000, income taxes £160,000 (not including unusual items), loss on operation of discontinued music division £60,000, and gain on disposal of discontinued music division £50,000, and unrealized loss on non-trading securities of £30,000. The income tax rate is 32%. Prepare a correct partial statement of comprehensive income beginning with income before income taxes.

Match terms relating to quality of earnings and financial statement analysis.
(LO 3, 5, 6, 7)

DO IT! **14-4** Match each of the following terms with the phrase that best describes it.

Quality of earnings	Pro forma income
Current ratio	Discontinued operations
Horizontal analysis	Comprehensive income

1. ______ A measure used to evaluate a company's liquidity.
2. ______ Usually excludes items that a company thinks are unusual or non-recurring.
3. ______ Indicates the level of full and transparent information provided to users of the financial statements.
4. ______ The disposal of a significant component of a business.
5. ______ Determines increases or decreases in a series of financial statement data.
6. ______ Includes all changes in equity during a period except those resulting from investments by shareholders and distributions to shareholders.

EXERCISES

Follow the rounding procedures used in the chapter.

Prepare horizontal analysis.
(LO 3)

E14-1 Financial information for Gallup SA is presented below.

	December 31, 2017	December 31, 2016
Plant assets (net)	€396,000	€320,000
Current assets	128,000	110,000
Share capital—ordinary, €1 par	159,000	115,000
Retained earnings	135,300	150,000
Non-current liabilities	138,700	95,000
Current liabilities	91,000	70,000

Instructions
Prepare a schedule showing a horizontal analysis for 2017 using 2016 as the base year.

Prepare vertical analysis.
(LO 4)

E14-2 Operating data for Conard Limited are presented below.

	2017	2016
Net sales	£750,000	£600,000
Cost of goods sold	480,000	408,000
Selling expenses	105,000	84,000
Administrative expenses	75,000	54,000
Income tax expense	36,000	18,000
Net income	54,000	36,000

Instructions
Prepare a schedule showing a vertical analysis for 2017 and 2016.

E14-3 The comparative condensed statements of financial position of Garcia SLU are presented below.

Prepare horizontal and vertical analyses.

(LO 3, 4)

GARCIA SLU
Comparative Condensed Statements of Financial Position
December 31

	2017	2016
Assets		
Intangibles	€ 24,000	€ 40,000
Property, plant, and equipment (net)	100,000	92,000
Current assets	76,000	82,000
Total assets	€200,000	€214,000
Equity and liabilities		
Equity	€ 20,000	€ 16,000
Non-current liabilities	140,000	150,000
Current liabilities	40,000	48,000
Total equity and liabilities	€200,000	€214,000

Instructions

(a) Prepare a horizontal analysis of the statement of financial position data for Garcia using 2016 as a base.

(b) Prepare a vertical analysis of the statement of financial position data for Garcia in columnar form for 2017.

E14-4 The comparative condensed income statements of Hendi A.Ş. are shown below.

Prepare horizontal and vertical analyses.

(LO 3, 4)

HENDI A.Ş.
Comparative Condensed Income Statements
For the Years Ended December 31

	2017	2016
Net sales	₺600,000	₺500,000
Cost of goods sold	468,000	400,000
Gross profit	132,000	100,000
Operating expenses	60,000	54,000
Net income	₺ 72,000	₺ 46,000

Instructions

(a) Prepare a horizontal analysis of the income statement data for Hendi using 2016 as a base. (Show the amounts of increase or decrease.)

(b) Prepare a vertical analysis of the income statement data for Hendi in columnar form for both years.

E14-5 Nordstrom, Inc. (USA), operates department stores in numerous states. Selected financial statement data for the year ending February 1, 2014, are shown below.

Compute liquidity ratios and compare results.

(LO 5)

NORDSTROM, INC.
Statement of Financial Position (partial)

(in millions)	End-of-Year	Beginning-of-Year
Other current assets	$ 239	$ 227
Prepaid expenses	87	80
Merchandise inventory	1,531	1,360
Accounts receivable (net)	2,177	2,129
Cash and cash equivalents	1,194	1,285
Total current assets	$5,228	$5,081
Total current liabilities	$2,541	$2,226

For the year, net sales were $12,166 and cost of goods sold was $7,737 (in millions).

Instructions

(a) Compute the four liquidity ratios at the end of the year.
(b) Using the data in the chapter, compare Nordstrom's liquidity with (1) that of Park Street, and (2) the industry averages for department stores.

Perform current and acid-test ratio analysis.
(LO 5)

E14-6 Bennis SA had the following transactions occur involving current assets and current liabilities during February 2017.

Feb.	3	Accounts receivable of R$15,000 are collected.
	7	Equipment is purchased for R$28,000 cash.
	11	Paid R$3,000 for a 3-year insurance policy.
	14	Accounts payable of R$12,000 are paid.
	18	Cash dividends of R$5,000 are declared.

Additional information:

1. As of February 1, 2017, current assets were R$140,000, and current liabilities were R$50,000.
2. As of February 1, 2017, current assets included R$10,000 of inventory and R$5,000 of prepaid expenses.

Instructions

(a) Compute the current ratio as of the beginning of the month and after each transaction.
(b) Compute the acid-test ratio as of the beginning of the month and after each transaction.

Compute selected ratios.
(LO 5)

E14-7 Willingham Company Ltd. has the following comparative statements of financial position data.

WILLINGHAM COMPANY LTD.
Statements of Financial Position
December 31

	2017	**2016**
Plant assets (net)	£205,000	£190,000
Inventory	60,000	50,000
Accounts receivable (net)	70,000	50,000
Cash	10,000	30,000
	£345,000	£320,000
Share capital—ordinary, £10 par	£140,000	£120,000
Retained earnings	55,000	40,000
Mortgage payable (6%)	100,000	100,000
Accounts payable	50,000	60,000
	£345,000	£320,000

Additional information for 2017:

1. Net income was £28,000.
2. Sales on account were £418,000. Sales returns and allowances were £22,000.
3. Cost of goods sold was £190,000.

Instructions

Compute the following ratios at December 31, 2017.

(a) Current ratio.
(b) Acid-test ratio.
(c) Accounts receivable turnover.
(d) Inventory turnover.

Compute selected ratios.
(LO 5)

E14-8 Selected comparative statement data for Molini Products Company are presented below. All statement of financial position data are as of December 31.

	2017	**2016**
Net sales	£700,000	£680,000
Cost of goods sold	480,000	400,000
Interest expense	7,000	5,000
Net income	42,000	34,000
Accounts receivable	120,000	100,000
Inventory	85,000	75,000
Total assets	580,000	540,000
Total ordinary shareholders' equity	425,000	325,000

Instructions
Compute the following ratios for 2017.

(a) Profit margin.
(b) Asset turnover.
(c) Return on assets.
(d) Return on ordinary shareholders' equity.

E14-9 The income statement for Christiansen, A/S, appears below.

Compute selected ratios.
(LO 5)

CHRISTIANSEN, A/S
Income Statement
For the Year Ended December 31, 2017

Net sales	€400,000
Cost of goods sold	235,000
Gross profit	165,000
Expenses (including €14,000 interest and €17,000 income taxes)	105,000
Net income	€ 60,000

Additional information:

1. The weighted-average ordinary shares outstanding in 2017 were 32,000 shares.
2. The market price of Christiansen, A/S was €10.80 per share in 2017.
3. Cash dividends of €20,000 were paid, €5,000 of which were to preference shareholders.

Instructions
Compute the following ratios for 2017.

(a) Earnings per share.
(b) Price-earnings ratio.
(c) Payout ratio.
(d) Times interest earned.

E14-10 Rees Company experienced a fire on December 31, 2017, in which its financial records were partially destroyed. It has been able to salvage some of the records and has ascertained the following balances.

Compute amounts from ratios.
(LO 5)

	December 31, 2017	December 31, 2016
Inventory	€200,000	€180,000
Accounts receivable (net)	73,000	126,000
Cash	30,000	10,000
Share capital—ordinary, €100 par	400,000	400,000
Retained earnings	134,000	122,000
Accounts payable	50,000	90,000
Notes payable	30,000	60,000

Additional information:

1. The inventory turnover is 3.4 times.
2. The return on ordinary shareholders' equity is 25%.
3. The accounts receivable turnover is 8.8 times.
4. The return on assets is 20%.
5. Total assets at December 31, 2016, were €650,000.

Instructions
Compute the following for Rees Company.

(a) Cost of goods sold for 2017.
(b) Net sales (credit) for 2017.
(c) Net income for 2017.
(d) Total assets at December 31, 2017.

Compute ratios.
(LO 5)

E14-11 Yadier NV's comparative statements of financial position are presented below.

YADIER NV
Statements of Financial Position
December 31

	2017	2016
Land	€ 20,000	€ 26,000
Buildings	70,000	70,000
Accumulated depreciation—buildings	(15,000)	(10,000)
Inventory	10,000	7,000
Accounts receivable	22,000	24,000
Cash	4,300	3,700
Total	€111,300	€120,700
Share capital—ordinary	€ 72,000	€ 69,000
Retained earnings	24,300	20,600
Accounts payable	15,000	31,100
Total	€111,300	€120,700

Yadier's 2017 income statement included net sales of €100,000, cost of goods sold of €60,350, and net income of €14,000.

Instructions
Compute the following ratios for 2017.

(a) Current ratio.
(b) Acid-test ratio.
(c) Accounts receivable turnover.
(d) Inventory turnover.
(e) Profit margin.
(f) Asset turnover.
(g) Return on assets.
(h) Return on ordinary shareholders' equity.
(i) Debt to assets ratio.

Prepare a correct income statement.
(LO 6)

E14-12 For its fiscal year ending October 31, 2017, Douglas Limited reports the following partial data shown below.

Income before income taxes	£550,000
Income tax expense (30% × £400,000)	120,000
Income before discontinued operations	430,000
Loss on discontinued division	150,000
Net income	£280,000

The loss on discontinued division consists of £60,000 loss from operations of the division and £90,000 loss on disposal of the division. The income tax rate is 30% on all items.

Instructions
(a) Prepare a correct income statement, beginning with income before income taxes.
(b) Explain in memo form why the income statement data are misleading.

Prepare statement of comprehensive income.
(LO 6)

E14-13 Trayer plc has income from continuing operations of £290,000 for the year ended December 31, 2017. It also has the following items (before considering income taxes).

1. An unrealized loss of £80,000 on non-trading securities.
2. A gain of £30,000 on the discontinuance of a division (comprised of a £10,000 loss from operations and a £40,000 gain on disposal).
3. A correction of an error in last year's financial statements that resulted in a £20,000 understatement of 2016 income before income taxes.

Assume all items are subject to income taxes at a 20% tax rate.

Instructions
Prepare a statement of comprehensive income, beginning with income from continuing operations.

PROBLEMS

Follow the rounding procedures used in the chapter.

P14-1 Comparative statement data for Lionel Company and Barrymore Company, two competitors, appear below. All statement of financial position data are as of December 31, 2017, and December 31, 2016.

Prepare vertical analysis and comment on profitability.

(LO 4, 5)

	Lionel Company		Barrymore Company	
	2017	**2016**	**2017**	**2016**
Net sales	£1,549,035		£339,038	
Cost of goods sold	1,053,345		237,325	
Operating expenses	263,336		77,979	
Interest expense	7,745		2,034	
Income tax expense	61,960		8,476	
Plant assets (net)	596,920	£575,610	142,842	£128,927
Current assets	401,584	388,020	86,450	82,581
Share capital—ordinary, £5 par	578,765	578,765	137,435	137,435
Retained earnings	252,224	225,358	55,528	47,430
Non-current liabilities	102,500	84,000	16,711	11,989
Current liabilities	65,015	75,507	19,618	14,654

Instructions

(a) Prepare a vertical analysis of the 2017 income statement data for Lionel Company and Barrymore Company in columnar form.

(b) Comment on the relative profitability of the companies by computing the return on assets and the return on ordinary shareholders' equity for both companies.

P14-2 The comparative statements of Larker Tool SA are presented below.

Compute ratios from statement of financial position and income statement.

(LO 5)

LARKER TOOL SA
Income Statement
For the Years Ended December 31

	2017	**2016**
Net sales	R$1,818,500	R$1,750,500
Cost of goods sold	1,011,500	996,000
Gross profit	807,000	754,500
Selling and administrative expense	516,000	479,000
Income from operations	291,000	275,500
Interest expense	15,000	14,000
Income before income taxes	276,000	261,500
Income tax expense	84,000	77,000
Net income	R$ 192,000	R$ 184,500

LARKER TOOL SA
Statements of Financial Position
December 31

Assets	**2017**		**2016**	
Plant assets (net)		R$600,300		R$520,300
Current assets				
Inventory	R$110,950		R$115,500	
Accounts receivable (net)	105,750		102,800	
Short-term investments	69,000		50,000	
Cash	60,100	345,800	64,200	332,500
Total assets		R$946,100		R$852,800

Equity and Liabilities	**2017**	**2016**
Equity		
Share capital—ordinary (R$5 par)	R$300,000	R$300,000
Retained earnings	242,600	165,400
Total equity	542,600	465,400
Bonds payable	200,000	200,000
Current liabilities		
Accounts payable	160,000	145,400
Income taxes payable	43,500	42,000
Total current liabilities	203,500	187,400
Total liabilities	403,500	387,400
Total equity and liabilities	R$946,100	R$852,800

All sales were on account.

Instructions

Compute the following ratios for 2017. (Weighted-average ordinary shares in 2017 were 60,000.)

(a) Earnings per share.
(b) Return on ordinary shareholders' equity.
(c) Return on assets.
(d) Current ratio.
(e) Acid-test ratio.
(f) Accounts receivable turnover.
(g) Inventory turnover.
(h) Times interest earned.
(i) Asset turnover.
(j) Debt to assets ratio.

Perform ratio analysis, and evaluate financial position and operating results.

(LO 5)

P14-3 Condensed statement of financial position and income statement data for Clarence Limited appear below.

CLARENCE LIMITED
Statements of Financial Position
December 31

	2017	**2016**	**2015**
Plant and equipment (net)	£400,000	£370,000	£358,000
Investments	75,000	70,000	45,000
Other current assets	90,000	95,000	64,000
Accounts receivable (net)	50,000	45,000	48,000
Cash	25,000	20,000	18,000
	£640,000	£600,000	£533,000
Share capital—ordinary, £10 par	£345,000	£315,000	£300,000
Retained earnings	145,000	123,000	113,000
Non-current liabilities	80,000	87,000	50,000
Current liabilities	70,000	75,000	70,000
	£640,000	£600,000	£533,000

CLARENCE LIMITED
Income Statement
For the Years Ended December 31

	2017	**2016**
Sales revenue	£740,000	£700,000
Less: Sales returns and allowances	40,000	60,000
Net sales	700,000	640,000
Cost of goods sold	420,000	400,000
Gross profit	280,000	240,000
Operating expenses (including income taxes)	236,000	210,000
Net income	£ 44,000	£ 30,000

Additional information:

1. The market price of Clarence's ordinary shares was £4.00, £5.00, and £7.00 for 2015, 2016, and 2017, respectively.
2. All dividends were paid in cash.

Instructions

(a) Compute the following ratios for 2016 and 2017.
   (1) Profit margin.
   (2) Asset turnover.
   (3) Earnings per share. (Weighted-average ordinary shares in 2017 were 32,000 and in 2016 were 31,000.)
   (4) Price-earnings ratio.
   (5) Payout ratio.
   (6) Debt to assets ratio.

(b) Based on the ratios calculated, discuss briefly the improvement or lack thereof in financial position and operating results from 2016 to 2017 of Clarence Limited.

P14-4 Financial information for Ernie Bishop Company is presented below.

Compute ratios, and comment on overall liquidity and profitability.

(LO 5)

ERNIE BISHOP COMPANY
Statements of Financial Position
December 31

Assets	**2016**	**2015**
Land	€130,000	€130,000
Building and equipment (net)	168,000	175,000
Prepaid expenses	29,000	23,000
Inventory	125,000	135,000
Accounts receivable (net)	98,000	80,000
Short-term investments	52,000	40,000
Cash	70,000	65,000
	€672,000	€648,000
Equity and Liabilities		
Share capital—ordinary, €10 par	€200,000	€200,000
Retained earnings	130,000	116,000
Bonds payable, due 2019	150,000	150,000
Notes payable	100,000	100,000
Accounts payable	48,000	42,000
Accrued liabilities	44,000	40,000
	€672,000	€648,000

ERNIE BISHOP COMPANY
Income Statement
For the Years Ended December 31

	2016	**2015**
Net sales	€858,000	€798,000
Cost of goods sold	611,000	575,000
Gross profit	247,000	223,000
Operating expenses	204,500	181,000
Net income	€ 42,500	€ 42,000

Additional information:

1. Inventory at the beginning of 2015 was €118,000.
2. Total assets at the beginning of 2015 were €632,000.
3. No ordinary share transactions occurred during 2015 or 2016.
4. All sales were on account.
5. Accounts receivable (net) at the beginning of 2015 were €88,000.
6. Notes payable are classified as a current liability.

Instructions

(a) Indicate, by using ratios, the change in liquidity and profitability of Ernie Bishop Company from 2015 to 2016. (*Note:* Not all profitability ratios can be computed.)

(b) Given below are three independent situations and a ratio that may be affected. For each situation, compute the affected ratio (1) as of December 31, 2016, and (2) as of December 31, 2017, after giving effect to the situation. Net income for 2017 was €50,000. Total assets on December 31, 2017, were €700,000.

Situation	Ratio
(1) 18,000 ordinary shares were sold at par on July 1, 2017.	Return on ordinary shareholders' equity
(2) All of the notes payable were paid in 2017. The only change in liabilities was that the notes payable were paid.	Debt to assets ratio
(3) Market price of ordinary shares was €9 on December 31, 2016, and €12.50 on December 31, 2017.	Price-earnings ratio

Compute selected ratios, and compare liquidity, profitability, and solvency for two companies.

(LO 5)

P14-5 Selected financial data of Target (USA) and Wal-Mart Stores, Inc. (USA) for a recent year are presented below (in millions).

	Target Corporation	Wal-Mart Stores, Inc.
	Income Statement Data for Year	
Net sales	$72,596	$476,294
Cost of goods sold	51,160	358,069
Selling and administrative expenses	16,816	91,353
Interest expense	1,126	2,335
Other income (expense)	(391)	(410)
Income tax expense	1,132	8,105
Net income	$ 1,971	$ 16,022
	Statement of Financial Position Data (End of Year)	
Non-current assets	$32,980	$143,566
Current assets	11,573	61,185
Total assets	$44,553	$204,751
Total equity	$16,231	$ 81,339
Non-current liabilities	15,545	54,067
Current liabilities	12,777	69,345
Total equity and liabilities	$44,553	$204,751
	Beginning-of-Year Balances	
Total assets	$48,163	$203,105
Total equity	16,558	81,738
Current liabilities	14,031	71,818
Total liabilities	31,605	131,287
	Other Data	
Average net accounts receivable	$2,921	$ 6,723
Average inventory	8,335	44,331
Net cash provided by operating activities	6,520	23,257

Instructions

(a) For each company, compute the following ratios.

(1) Current ratio.
(2) Accounts receivable turnover.
(3) Average collection period.
(4) Inventory turnover.
(5) Days in inventory.
(6) Profit margin.
(7) Asset turnover.
(8) Return on assets.

(9) Return on ordinary shareholders' equity.
(10) Debt to assets ratio.
(11) Times interest earned.

(b) Compare the liquidity, profitability, and solvency of the two companies.

P14-6 The comparative statements of Beulah Company Limited are presented below.

Compute numerous ratios.
(LO 5)

BEULAH COMPANY LIMITED
Income Statement
For the Years Ended December 31

	2017	**2016**
Net sales (all on account)	£500,000	£420,000
Expenses		
Cost of goods sold	315,000	254,000
Selling and administrative	120,800	114,800
Interest expense	7,500	6,500
Income tax expense	20,000	15,000
Total expenses	463,300	390,300
Net income	£ 36,700	£ 29,700

BEULAH COMPANY LIMITED
Statements of Financial Position
December 31

Assets	**2017**	**2016**
Plant assets (net)	£423,000	£383,000
Current assets		
Inventory	80,000	60,000
Accounts receivable (net)	85,000	75,000
Short-term investments	18,000	15,000
Cash	21,000	18,000
Total current assets	204,000	168,000
Total assets	£627,000	£551,000
Equity and Liabilities		
Equity		
Share capital—ordinary (£5 par)	£150,000	£150,000
Retained earnings	223,000	200,000
Total equity	373,000	350,000
Non-current liabilities		
Bonds payable	120,000	80,000
Current liabilities		
Accounts payable	122,000	110,000
Income taxes payable	12,000	11,000
Total current liabilities	134,000	121,000
Total liabilities	254,000	201,000
Total equity and liabilities	£627,000	£551,000

Additional data:
The ordinary shares recently sold at £19.50 per share.

Instructions
Compute the following ratios for 2017.

(a) Current ratio.
(b) Acid-test ratio.
(c) Accounts receivable turnover.
(d) Inventory turnover.
(e) Profit margin.
(f) Asset turnover.
(g) Return on assets.
(h) Return on ordinary shareholders' equity.
(i) Earnings per share.
(j) Price-earnings ratio.
(k) Payout ratio.
(l) Debt to assets ratio.
(m) Times interest earned.

Compute missing information given a set of ratios.
(LO 5)

P14-7 Presented below is an incomplete income statement and incomplete comparative statements of financial position of Bondi ASA.

BONDI ASA
Income Statement
For the Year Ended December 31, 2017

Net sales	€10,500,000
Cost of goods sold	?
Gross profit	?
Operating expenses	1,500,000
Income from operations	?
Interest expense	?
Income before income taxes	?
Income tax expense	550,000
Net income	€ ?

BONDI ASA
Statements of Financial Position
December 31

Assets	**2017**	**2016**
Plant assets (net)	€4,620,000	€4,355,000
Current assets		
Inventory	?	1,720,000
Accounts receivable (net)	?	1,050,000
Cash	480,000	375,000
Total current assets	?	3,145,000
Total assets	€ ?	€7,500,000

Equity and Liabilities	**2017**	**2016**
Share capital—ordinary, €1 par	€3,000,000	€3,000,000
Retained earnings	400,000	375,000
Total equity	3,400,000	3,375,000
Long-term notes payable	?	3,300,000
Current liabilities	?	825,000
Total liabilities	?	4,125,000
Total equity and liabilities	€ ?	€7,500,000

Additional information:
1. The accounts receivable turnover for 2017 is 8 times.
2. All sales are on account.
3. The profit margin for 2017 is 14.5%.
4. Return on assets is 20% for 2017.
5. The current ratio on December 31, 2017, is 2.5.
6. The inventory turnover for 2017 is 4.9 times.

Instructions
Compute the missing information given the ratios above. Show computations. (*Note:* Start with one ratio and derive as much information as possible from it before trying another ratio. List all missing amounts under the ratio used to find the information.)

Prepare statement of comprehensive income with discontinued operations.
(LO 6)

P14-8 Violet Bick SA owns a number of cruise ships and a chain of hotels. The hotels, which have not been profitable, were discontinued on September 1, 2017. The 2017 operating results for the company were as follows.

Operating revenues	€12,900,000
Operating expenses	8,700,000
Operating income	€ 4,200,000

Analysis discloses that these data include the operating results of the hotel chain, which were operating revenues €2,000,000 and operating expenses €2,500,000. The hotels were sold at a gain of €300,000 before taxes. This gain is not included in the operating results. During the year, the company had an unrealized gain on non-trading securities of €150,000. In 2017, the company had other expense of €200,000, which is not included in the operating results. The corporation is in the 30% income tax bracket.

Instructions
Prepare a condensed statement of comprehensive income.

Prepare statement of comprehensive income.
(LO 6)

P14-9 The ledger of Gower Limited at December 31, 2017, contains the following summary data.

Net sales	£1,580,000	Cost of goods sold	£1,100,000
Selling expenses	70,000	Administrative expenses	90,000
Other income and expense	(6,000)		

Your analysis reveals the following additional information that is not included in the above data.

1. The entire puzzles division was discontinued on August 31. The income from operations for this division before income taxes was £15,000. The puzzles division was sold at a loss of £74,000 before income taxes.
2. The company had an unrealized gain on non-trading securities of £120,000 before income taxes for the year.
3. The income tax rate on all items is 30%.

Instructions
Prepare a statement of comprehensive income for the year ended December 31, 2017. Use the format illustrated in the Practice Problem (page 741).

MATCHA CREATIONS

(*Note:* This is a continuation of the Matcha Creations problem from Chapters 1–13.)

MC14 Mei-ling and Curtis have comparative statements of financial position and income statements for Matcha & Coffee Creations. They have been told that they can use these financial statements to prepare horizontal and vertical analyses, to calculate financial ratios, to analyze how their business is doing, and to make some decisions they have been considering.

Go to the book's companion website, www.wiley.com/college/weygandt, to see the completion of this problem.

BROADENING YOUR PERSPECTIVE

Financial Reporting and Analysis

Financial Reporting Problem: TSMC, Ltd. (TWN)

BYP14-1 Your parents are considering investing in TSMC ordinary shares. They ask you, as an accounting expert, to make an analysis of the company for them. TSMC's financial statements are presented in Appendix A. The complete annual report, including the notes to the financial statements, is available in the Investors section of the company's website at *www.tsmc.com*.

Instructions
(Follow the approach in the chapter for rounding numbers.)

(a) Compute for 2013 and 2012 the (1) profit margin, (2) asset turnover, (3) return on assets, and (4) return on ordinary shareholders' equity. How would you evaluate TSMC's profitability?
(b) Compute for 2013 and 2012 the (1) debt to assets ratio and (2) times interest earned. How would you evaluate TSMC's long-term solvency?
(c) What information outside the annual report may also be useful to your parents in making a decision about TSMC?

Comparative Analysis Problem: Nestlé SA (CHE) vs. Petra Foods Ltd. (SGP)

BYP14-2 Nestlé's financial statements are presented in Appendix B. Financial statements for Petra Foods are presented in Appendix C.

Instructions

(a) Based on the information contained in these financial statements, determine each of the following for each company for the most recent fiscal year shown.
   (1) The percentage increase (decrease) in (i) net sales and (ii) net income.
   (2) The percentage increase in (i) total assets and (ii) total ordinary shareholders' equity.

(b) What conclusions concerning the two companies can be drawn from these data?

Critical Thinking

Decision-Making Across the Organization

BYP14-3 As the chartered public accountant for Bonita Ltd., you have been asked to develop some key ratios from the comparative financial statements. This information is to be used to convince creditors that the company is solvent and will continue as a going concern. The data requested and the computations developed from the financial statements follow.

	2017	2016
Current ratio	3.4 times	2.1 times
Acid-test ratio	.8 times	1.3 times
Asset turnover	2.6 times	2.2 times
Net income	Up 32%	Down 9%
Earnings per share	$3.30	$2.50

Instructions

With the class divided into groups, complete the following.

Bonita Ltd. asks you to prepare a list of brief comments stating how each of these items supports the solvency and going-concern potential of the business. The company wishes to use these comments to support its presentation of data to its creditors. You are to prepare the comments as requested, giving the implications and the limitations of each item separately. Then prepare a collective inference that may be drawn from the individual items about Bonita's solvency and going-concern potential.

Communication Activity

BYP14-4 Kyle Benson is the CEO of McCarty's Electronics. Benson is an expert engineer but a novice in accounting. He asks you to explain (1) the bases for comparison in analyzing McCarty's financial statements, and (2) the factors affecting quality of earnings.

Instructions

Write a letter to Kyle Benson that explains the bases for comparison and factors affecting quality of earnings.

Ethics Case

BYP14-5 Robert Turnbull, president of Turnbull Industries, wishes to issue a press release to bolster his company's image and maybe even its share price, which has been gradually falling. As controller, you have been asked to provide a list of 20 financial ratios along with some other operating statistics relative to Turnbull Industries' first quarter financials and operations.

Two days after you provide the ratios and data requested, Perry Jarvis, the public relations director of Turnbull, asks you to prove the accuracy of the financial and operating data contained in the press release written by the president and edited by Perry. In the press release, the president highlights the sales increase of 25% over last year's first quarter and the positive change in the current ratio from 1.5:1 last year to 3:1 this year. He also emphasizes that production was up 50% over the prior year's first quarter.

You note that the press release contains only positive or improved ratios and none of the negative or deteriorated ratios. For instance, no mention is made that the debt to assets ratio has increased from 35% to 55%, that inventories are up 89%, and that while the current ratio improved, the acid-test ratio fell from 1:1 to .5:1. Nor is there any mention that the reported profit for the quarter would have been a loss had not the estimated lives of Turnbull's plant and machinery been increased by 30%. Perry emphasizes, "The prez wants this release by early this afternoon."

Instructions

(a) Who are the stakeholders in this situation?
(b) Is there anything unethical in president Turnbull's actions?
(c) Should you as controller remain silent? Does Perry have any responsibility?

Answers to Insight and Accounting Across the Organization Questions

p. 720 How to Manage the Current Ratio Q: How might management influence a company's current ratio? **A:** Management can affect the current ratio by speeding up or withholding payments on accounts payable just before the statement of financial position date. Management can alter the cash balance by increasing or decreasing non-current assets or long-term debt, or by issuing or purchasing ordinary shares.
p. 732 What Does "Non-Recurring" Really Mean? Q: If a company takes a large restructuring charge, what is the effect on the company's current income statement versus future ones? **A:** The current period's net income can be greatly diminished by a large restructuring charge. The net incomes in future periods can be enhanced because they are relieved of costs (e.g., depreciation and labor expenses) that would have been charged to them.

A Look at U.S. GAAP

The tools of financial analysis are the same throughout the world. Techniques such as vertical and horizontal analysis, for example, are tools used by analysts regardless of whether GAAP- or IFRS-related financial statements are being evaluated. In addition, the ratios provided in the textbook are the same ones that are used globally.

Learning Objective 8

Compare financial statement analysis and income statement presentation under IFRS and U.S. GAAP.

Key Points

- The tools of financial statement analysis covered in this chapter are universal and therefore no significant differences exist in the analysis methods used.
- The basic objectives of the income statement are the same under both GAAP and IFRS. As indicated in the textbook, a very important objective is to ensure that users of the income statement can evaluate the earning power of the company. Earning power is the normal level of income to be obtained in the future. Thus, both the IASB and the FASB are interested in distinguishing normal levels of income from unusual items in order to better predict a company's future profitability.
- The basic accounting for discontinued operations is the same under GAAP and IFRS.
- The accounting for changes in accounting principles and changes in accounting estimates are the same for both GAAP and IFRS.
- Both IFRS and GAAP follow the same approach in reporting comprehensive income. The statement of comprehensive income can be prepared under the one-statement approach or the two-statement approach.

  Under the one-statement approach, all components of revenue and expense are reported in a statement of income. This combined statement of comprehensive income first computes net income or loss, which is then followed by components of other comprehensive income or loss items to arrive at comprehensive income. An example appears below.

WALTER COMPANY
Statement of Comprehensive Income
For the Year Ended December 31, 2017

Sales revenue	$5,100,000
Cost of goods sold	3,800,000
Gross profit	1,300,000
Operating expenses	700,000
Net income	600,000
Other comprehensive income	
Unrealized gain on non-trading securities	75,000
Comprehensive income	$ 675,000

Under the two-statement approach, all the components of revenues and expenses are reported in a traditional income statement *except* for other comprehensive income or loss. In addition, a second statement (the comprehensive income statement) is then prepared, starting with net income and followed by other comprehensive income or loss items to arrive at comprehensive income. An example of the two-statement approach, using the same data as that used above for Walter Company, is as follows.

WALTER COMPANY
Income Statement
For the Year Ended December 31, 2017

Sales revenue	$5,100,000
Cost of goods sold	3,800,000
Gross profit	1,300,000
Operating expenses	700,000
Net income	$ 600,000

WALTER COMPANY
Comprehensive Income Statement
For the Year Ended December 31, 2017

Net income	$600,000
Other comprehensive income	
Unrealized gain on non-trading securities	75,000
Comprehensive income	$675,000

- The issues related to quality of earnings are the same under both GAAP and IFRS. It is hoped that by adopting a more principles-based approach, as found in IFRS, many of the earnings quality issues will disappear.

Looking to the Future

The FASB and the IASB are working on a project that would rework the structure of financial statements. One part of this project addresses the issue of how to classify various items in the income statement. A main goal of this new approach is to provide information that better represents how businesses are run. In addition, the approach draws attention away from one number—net income.

GAAP Practice

GAAP Self-Test Questions

1. The basic tools of financial analysis are the same under both GAAP and IFRS **except** that:
   (a) horizontal analysis cannot be done because the format of the statements is sometimes different.
   (b) analysis is different because vertical analysis cannot be done under GAAP.
   (c) the current ratio cannot be computed because current liabilities are often reported before current assets in GAAP statements of position.
   (d) None of the above.
2. Under GAAP:
   (a) the reporting of discontinued items is different than IFRS.
   (b) the reporting of other comprehensive income is prohibited.
   (c) the reporting of changes in accounting principles is different than under IFRS.
   (d) None of the above.

3. Presentation of comprehensive income must be reported under GAAP in:
   (a) the statement of stockholders' equity.
   (b) the income statement before net income.
   (c) the notes to the financial statements.
   (d) a statement of comprehensive income.
4. Parmalane reports the following information:

Sales revenue	$500,000
Cost of goods sold	200,000
Operating expense	40,000
Unrealized loss on non-trading securities	10,000

   Parmalane should report the following under the two-statement approach using GAAP:
   (a) net income of $260,000 and comprehensive income of $270,000.
   (b) net income of $270,000 and comprehensive income of $260,000.
   (c) other comprehensive income of $10,000 and comprehensive income of $270,000.
   (d) other comprehensive loss of $10,000 and comprehensive income of $250,000.
5. Assuming the same information as in Question 4, Parmalane should report the following using a one-statement approach under GAAP:
   (a) net income of $260,000 and comprehensive income of $270,000.
   (b) net income of $270,000 and comprehensive income of $260,000.
   (c) other comprehensive income of $10,000 and comprehensive income of $270,000.
   (d) other comprehensive loss of $10,000 and comprehensive income of $250,000.

GAAP Exercises

GAAP14-1 Chen Company reports the following information for the year ended December 31, 2017: sales revenue $1,000,000, cost of goods sold $700,000, operating expenses $200,000, and an unrealized gain on non-trading securities of $75,000. Prepare a statement of comprehensive income using the one-statement approach.

GAAP14-2 Assume the same information for Chen Company as in GAAP14-1. Prepare the income statement and comprehensive income statement using the two-statement approach.

GAAP Financial Reporting Problem: Apple Inc.

GAAP14-3 Your parents are considering investing in Apple common stock. They ask you, as an accounting expert, to make an analysis of the company for them. The financial statements and the notes to the financial statements from a recent annual report of Apple are presented at *http://investor.apple.com*.

Instructions

(a) Make a 3-year trend analysis, using 2011 as the base year, of (1) net sales and (2) net earnings. Comment on the significance of the trend results.
(b) Compute for 2013 and 2012 the (1) debt to assets ratio and (2) times interest earned. (See Note 6 for interest expense.) How would you evaluate Apple's long-term solvency?
(c) Compute for 2013 and 2012 the (1) profit margin, (2) asset turnover, (3) return on assets, and (4) return on common stockholders' equity. How would you evaluate Apple's profitability? Total assets at September 24, 2011 were $116,371 million, and total stockholders' equity at September 24, 2011, was $76,615 million.
(d) What information outside the annual report may also be useful to your parents in making a decision about Apple?

Answers to GAAP Self-Test Questions

1. d **2.** d **3.** d **4.** d **5.** d

✔ The Navigator

✔ Remember to go back to the Navigator box on the chapter opening page and check off your completed work.

APPENDIX A

Specimen Financial Statements: Taiwan Semiconductor Manufacturing Company, Ltd.

CONSOLIDATED BALANCE SHEETS

(In Thousands of New Taiwan Dollars)

ASSETS	December 31, 2013		December 31, 2012		January 1, 2012	
	Amount	%	Amount	%	Amount	%
CURRENT ASSETS						
Cash and cash equivalents (Note 6)	$ 242,695,447	19	$ 143,410,588	15	$ 143,472,277	18
Financial assets at fair value through profit or loss (Note 7)	90,353	-	39,554	-	15,360	-
Available-for-sale financial assets (Note 8)	760,793	-	2,410,635	-	3,308,770	-
Held-to-maturity financial assets (Note 9)	1,795,949	-	5,056,973	1	3,825,680	1
Notes and accounts receivable, net (Note 11)	71,649,926	6	57,777,586	6	45,830,288	6
Receivables from related parties (Note 37)	291,708	-	353,811	-	185,764	-
Other receivables from related parties (Note 37)	221,576	-	185,550	-	122,292	-
Inventories (Notes 5 and 12)	37,494,893	3	37,830,498	4	24,840,582	3
Other financial assets (Note 38)	501,785	-	473,833	-	617,142	-
Other current assets (Note 17)	2,984,224	-	2,786,408	-	2,174,014	-
Total current assets	358,486,654	28	250,325,436	26	224,392,169	28
NONCURRENT ASSETS						
Available-for-sale financial assets (Note 8)	58,721,959	5	38,751,245	4	-	-
Held-to-maturity financial assets (Note 9)	-	-	-	-	5,243,167	1
Financial assets carried at cost (Note 13)	2,145,591	-	3,605,077	-	4,315,005	1
Investments accounted for using equity method (Notes 5 and 14)	28,316,260	2	23,360,918	3	24,886,931	3
Property, plant and equipment (Notes 5 and 15)	792,665,913	63	617,562,188	64	490,422,153	63
Intangible assets (Notes 5 and 16)	11,490,383	1	10,959,569	1	10,861,563	1
Deferred income tax assets (Notes 5 and 31)	7,239,609	1	13,128,219	2	13,604,218	2
Refundable deposits (Note 37)	2,519,031	-	2,426,712	-	4,518,863	1
Other noncurrent assets (Note 17)	1,469,577	-	1,235,144	-	1,306,746	-
Total noncurrent assets	904,568,323	72	711,029,072	74	555,158,646	72
TOTAL	$ 1,263,054,977	100	$ 961,354,508	100	$ 779,550,815	100

The accompanying notes are an integral part of the consolidated financial statements.

(Continued)

LIABILITIES AND EQUITY	December 31, 2013		December 31, 2012		January 1, 2012	
	Amount	%	Amount	%	Amount	%
CURRENT LIABILITIES						
Short-term loans (Note 18)	$ 15,645,000	1	$ 34,714,929	4	$ 25,926,528	3
Financial liabilities at fair value through profit or loss (Note 7)	33,750	-	15,625	-	13,742	-
Hedging derivative financial liabilities (Note 10)	-	-	-	-	232	-
Accounts payable	14,670,260	1	14,490,429	2	10,530,487	1
Payables to related parties (Note 37)	1,688,456	-	748,613	-	1,328,521	-
Salary and bonus payable	8,330,956	1	7,535,296	1	6,148,499	1
Accrued profit sharing to employees and bonus to directors and supervisors (Note 24)	12,738,801	1	11,186,591	1	9,081,293	1
Payables to contractors and equipment suppliers	89,810,160	7	44,831,798	5	35,540,526	5
Income tax payable (Note 31)	22,563,286	2	15,635,594	2	10,656,124	1
Provisions (Notes 5 and 19)	7,603,781	1	6,038,003	-	5,068,263	1
Accrued expenses and other current liabilities (Notes 15 and 22)	16,693,484	1	13,148,944	1	13,218,235	2
Current portion of bonds payable and long-term bank loans (Notes 20 and 21)	-	-	128,125	-	4,562,500	1
Total current liabilities	189,777,934	15	148,473,947	16	122,074,950	16
NONCURRENT LIABILITIES						
Hedging derivative financial liabilities (Note 10)	5,481,616	-	-	-	-	-
Bonds payable (Note 20)	210,767,625	17	80,000,000	8	18,000,000	3
Long-term bank loans (Note 21)	40,000	-	1,359,375	-	1,587,500	-
Provisions (Note 19)	10,452	-	4,891	-	2,889	-
Other long-term payables (Note 22)	36,000	-	54,000	-	-	-
Obligations under finance leases (Note 15)	776,230	-	748,115	-	870,993	-
Accrued pension cost (Notes 5 and 23)	7,589,926	1	6,921,234	1	6,241,024	1
Guarantee deposits	151,660	-	203,890	-	443,983	-
Others	648,449	-	495,150	-	400,831	-
Total noncurrent liabilities	225,501,958	18	89,786,655	9	27,547,220	4
Total liabilities	415,279,892	33	238,260,602	25	149,622,170	20
EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT						
Capital stock (Note 24)	259,286,171	21	259,244,357	27	259,162,226	33
Capital surplus (Note 24)	55,858,626	4	55,675,340	6	55,471,662	7
Retained earnings (Note 24)						
Appropriated as legal capital reserve	132,436,003	11	115,820,123	12	102,399,995	13
Appropriated as special capital reserve	2,785,741	-	7,606,224	1	6,433,874	1
Unappropriated earnings	382,971,408	30	284,985,121	29	211,630,458	27
	518,193,152	41	408,411,468	42	320,464,327	41
Others (Note 24)	14,170,306	1	(2,780,485)	-	(7,606,219)	(1)
Equity attributable to shareholders of the parent	847,508,255	67	720,550,680	75	627,491,996	80
NONCONTROLLING INTERESTS (Note 24)	266,830	-	2,543,226	-	2,436,649	-
Total equity	847,775,085	67	723,093,906	75	629,928,645	80
TOTAL	$ 1,263,054,977	100	$ 961,354,508	100	$ 779,550,815	100

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2013		2012	
	Amount	%	Amount	%
NET REVENUE (Notes 5, 26, 37 and 42)	$ 597,024,197	100	$ 506,745,234	100
COST OF REVENUE (Notes 12, 33 and 37)	316,057,820	53	262,583,098	52
GROSS PROFIT BEFORE UNREALIZED GROSS PROFIT ON SALES TO ASSOCIATES	280,966,377	47	244,162,136	48
UNREALIZED GROSS PROFIT ON SALES TO ASSOCIATES	(20,870)	-	(25,029)	-
GROSS PROFIT	280,945,507	47	244,137,107	48
OPERATING EXPENSES (Notes 5, 33 and 37)				
Research and development	48,118,165	8	40,383,195	8
General and administrative	18,928,544	3	17,631,694	3
Marketing	4,516,525	1	4,495,986	1
Total operating expenses	71,563,234	12	62,510,875	12
OTHER OPERATING INCOME AND EXPENSES, NET (Notes 27 and 33)	47,090	-	(449,364)	-
INCOME FROM OPERATIONS (Note 42)	209,429,363	35	181,176,868	36
NON-OPERATING INCOME AND EXPENSES				
Share of profits of associates and joint venture (Notes 14 and 42)	3,972,031	1	2,073,729	-
Other income (Note 28)	2,342,123	-	1,716,093	-
Foreign exchange gain, net	285,460	-	582,498	-
Finance costs (Notes 10 and 29)	(2,646,776)	-	(1,020,422)	-
Other gains and losses (Notes 30 and 37)	2,104,921	-	(2,852,310)	-
Total non-operating income and expenses	6,057,759	1	499,588	-
INCOME BEFORE INCOME TAX	215,487,122	36	181,676,456	36
INCOME TAX EXPENSE (Notes 31 and 42)	27,468,185	5	15,552,654	3
NET INCOME	188,018,937	31	166,123,802	33
OTHER COMPREHENSIVE INCOME (LOSS) (Notes 10, 14, 23, 24 and 31)				
Exchange differences arising on translation of foreign operations	3,668,509	1	(4,322,697)	(1)
Changes in fair value of available-for-sale financial assets	13,290,385	2	9,534,269	2
Cash flow hedges	-	-	232	-
Share of other comprehensive income (loss) of associates and joint venture	(59,740)	-	53,748	-
Actuarial loss from defined benefit plans	(662,074)	-	(685,978)	-
Income tax benefit (expense) related to components of other comprehensive income	115,168	-	(326,942)	-
Other comprehensive income for the year, net of income tax	16,352,248	3	4,252,632	1
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	$ 204,371,185	34	$ 170,376,434	34
NET INCOME (LOSS) ATTRIBUTABLE TO:				
Shareholders of the parent	$ 188,146,790	31	$ 166,318,286	33
Noncontrolling interests	(127,853)	-	(194,484)	-
	$ 188,018,937	31	$ 166,123,802	33
TOTAL COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO:				
Shareholders of the parent	$ 204,505,782	34	$ 170,521,543	34
Noncontrolling interests	(134,597)	-	(145,109)	-
	$ 204,371,185	34	$ 170,376,434	34

	2013	2012
	Income Attributable to Shareholders of the Parent	Income Attributable to Shareholders of the Parent
EARNINGS PER SHARE (NT$, Note 32)		
Basic earnings per share	$ 7.26	$ 6.42
Diluted earnings per share	$ 7.26	$ 6.41

The accompanying notes are an integral part of the consolidated financial statements

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(In Thousands of New Taiwan Dollars, Except Dividends Per Share)

	Equity Attributable to Shareholders of the Parent												Noncontrolling Interests	Total Equity
	Capital Stock - Common Stock			Retained Earnings				Others						
	Shares (In Thousands)	Amount	Capital Surplus	Legal Capital Reserve	Special Capital Reserve	Unappropriated Earnings	Total	Foreign Currency Translation Reserve	Unrealized Gain/Loss from Available-for-sale Financial Assets	Cash Flow Hedges Reserve	Total	Total		
BALANCE, JANUARY 1, 2012	25,916,222	$ 259,162,226	$ 55,471,662	$ 102,399,995	$ 6,433,874	$ 211,630,458	$ 320,464,327	$ (6,433,364)	$ (1,172,762)	$ (93)	$ (7,606,219)	$ 627,491,996	$ 2,436,649	$ 629,928,645
Appropriations of prior year's earnings														
Legal capital reserve	-	-	-	13,420,128	-	(13,420,128)	-	-	-	-	-	-	-	-
Special capital reserve	-	-	-	-	1,172,350	(1,172,350)	-	-	-	-	-	-	-	-
Cash dividends to shareholders - NT$3.00 per share	-	-	-	-	-	(77,748,668)	(77,748,668)	-	-	-	-	(77,748,668)	-	(77,748,668)
Total	-	-	-	13,420,128	1,172,350	(92,341,146)	(77,748,668)	-	-	-	-	(77,748,668)	-	(77,748,668)
Net income in 2012	-	-	-	-	-	166,318,286	166,318,286	-	-	-	-	166,318,286	(194,484)	166,123,802
Other comprehensive income in 2012, net of income tax	-	-	-	-	-	(622,477)	(622,477)	(4,320,442)	9,146,083	93	4,825,734	4,203,257	49,375	4,252,632
Total comprehensive income in 2012	-	-	-	-	-	165,695,809	165,695,809	(4,320,442)	9,146,083	93	4,825,734	170,521,543	(145,109)	170,376,434
Issuance of stock from exercise of employee stock options	8,213	82,131	160,357	-	-	-	-	-	-	-	-	242,488	-	242,488
Stock option compensation cost of subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	6,219	6,219
Adjustments to share of changes in equity of associates and joint venture	-	-	2,588	-	-	-	-	-	-	-	-	2,588	-	2,588
Adjustments arising from changes in percentage of ownership in subsidiaries	-	-	40,733	-	-	-	-	-	-	-	-	40,733	(40,733)	-
Increase in noncontrolling interests	-	-	-	-	-	-	-	-	-	-	-	-	286,200	286,200
BALANCE, DECEMBER 31, 2012	25,924,435	259,244,357	55,675,340	115,820,123	7,606,224	284,985,121	408,411,468	(10,753,806)	7,973,321	-	(2,780,485)	720,550,680	2,543,226	723,093,906
Appropriations of prior year's earnings														
Legal capital reserve	-	-	-	16,615,880	-	(16,615,880)	-	-	-	-	-	-	-	-
Reversal of special capital reserve	-	-	-	-	(4,820,483)	4,820,483	-	-	-	-	-	-	-	-
Cash dividends to shareholders - NT$3.00 per share	-	-	-	-	-	(77,773,307)	(77,773,307)	-	-	-	-	(77,773,307)	-	(77,773,307)
Total	-	-	-	16,615,880	(4,820,483)	(89,568,704)	(77,773,307)	-	-	-	-	(77,773,307)	-	(77,773,307)
Net income in 2013	-	-	-	-	-	188,146,790	188,146,790	-	-	-	-	188,146,790	(127,853)	188,018,937

(Continued)

	Equity Attributable to Shareholders of the Parent													
	Capital Stock - Common Stock			Retained Earnings				Others						
	Shares (In Thousands)	Amount	Capital Surplus	Legal Capital Reserve	Special Capital Reserve	Unappropriated Earnings	Total	Foreign Currency Translation Reserve	Unrealized Gain/Loss from Available-for-sale Financial Assets	Cash Flow Hedges Reserve	Total	Total	Noncontrolling Interests	Total Equity
Other comprehensive income in 2013, net of income tax	-	$ -	$ -	$ -	$ -	$ (591,799)	$ (591,799)	$ 3,613,444	$ 13,337,460	$ (113)	$ 16,950,791	$ 16,358,992	$ (6,744)	$ 16,352,248
Total comprehensive income in 2013	-	-	-	-	-	187,554,991	187,554,991	3,613,444	13,337,460	(113)	16,950,791	204,505,782	(134,597)	204,371,185
Issuance of stock from exercise of employee stock options	4,182	41,814	82,756	-	-	-	-	-	-	-	-	124,570	-	124,570
Stock option compensation cost of subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	5,312	5,312
Adjustments to share of changes in equity of associates and joint venture	-	-	38,084	-	-	-	-	-	-	-	-	38,084	-	38,084
Adjustments arising from changes in percentage of ownership in subsidiaries	-	-	62,446	-	-	-	-	-	-	-	-	62,446	(62,446)	-
Increase in noncontrolling interests	-	-	-	-	-	-	-	-	-	-	-	-	188,488	188,488
Effect of deconsolidation of subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	(2,273,153)	(2,273,153)
BALANCE, DECEMBER 31, 2013	25,928,617	$ 259,286,171	$ 55,858,626	$ 132,436,003	$ 2,785,741	$ 382,971,408	$ 518,193,152	$ (7,140,362)	$ 21,310,781	$ (113)	$ 14,170,306	$ 847,508,255	$ 266,830	$ 847,775,085

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In Thousands of New Taiwan Dollars)

	2013	2012
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	$ 215,487,122	$ 181,676,456
Adjustments for:		
Depreciation expense	153,979,847	129,168,514
Amortization expense	2,202,022	2,180,775
Stock option compensation cost of subsidiary	5,312	6,219
Finance costs	2,646,776	1,020,422
Share of profits of associates and joint venture	(3,972,031)	(2,073,729)
Interest income	(1,835,980)	(1,645,036)
Gain on disposal of property, plant and equipment and intangible assets, net	(48,848)	(103)
Impairment loss on property, plant and equipment	-	444,505
Impairment loss of financial assets	352,214	4,231,602
Gain on disposal of available-for-sale financial assets, net	(1,267,086)	(399,598)
Gain on disposal of financial assets carried at cost, net	(44,721)	(141,491)
Loss (gain) on disposal of investments in associates	733	(4,977)
Gain on deconsolidation of subsidiary	(293,578)	-
Unrealized gross profit on sales to associates	20,870	25,029
Loss (gain) on foreign exchange, net	317,547	(3,219,144)
Dividend income	(506,143)	(71,057)
Income from receipt of equity securities in settlement of trade receivables	(9,977)	(886)
Loss on hedging instruments	5,602,779	-
Gain on arising from changes in fair value of available-for-sale financial assets in hedge effective portion	(5,071,118)	-
Changes in operating assets and liabilities:		
Derivative financial instruments	(32,189)	(22,311)
Notes and accounts receivable, net	(14,131,066)	(11,947,191)
Receivables from related parties	(204,278)	(168,047)
Other receivables from related parties	50,589	(63,258)
Inventories	122,472	(12,989,916)
Other financial assets	18,578	53,182
Other current assets	(312,251)	648,051
Accounts payable	346,401	3,656,358
Payables to related parties	850,094	(605,182)
Salary and bonus payable	883,925	1,386,797
Accrued profit sharing to employees and bonus to directors and supervisors	1,552,210	2,105,298
Accrued expenses and other current liabilities	3,531,017	2,051,785
Provisions	1,595,810	977,901
Accrued pension cost	9,554	(5,769)
Cash generated from operations	361,846,606	296,275,199
Income taxes paid	(14,463,069)	(11,312,039)
Net cash generated by operating activities	347,383,537	284,963,160
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisitions of:		
Available-for-sale financial assets	(21,303)	(31,525,876)
Held-to-maturity financial assets	(1,795,949)	-
Financial assets carried at cost	(27,165)	(56,512)
Property, plant and equipment	(287,594,773)	(246,137,361)
Intangible assets	(2,750,361)	(1,782,299)
Proceeds from disposal or redemption of:		
Available-for-sale financial assets	2,418,578	964,367
Held-to-maturity financial assets	5,145,850	2,711,440
Financial assets carried at cost	67,986	353,656
Property, plant and equipment	173,554	157,484
Other assets	-	26,688
Costs from entering into hedging transactions	(143,982)	-
Interest received	1,790,725	1,719,026
Other dividends received	506,143	71,057
Dividends received from associates	2,141,881	2,088,472
Refundable deposits paid	(98,888)	(517,162)
Refundable deposits refunded	113,399	2,609,313
Net cash outflow from deconsolidation of subsidiary (Note 34)	(979,910)	-
Net cash used in investing activities	(281,054,215)	(269,317,707)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of bonds	130,844,821	62,000,000
Repayment of bonds	-	(4,500,000)
Increase (decrease) in short-term loans	(19,636,240)	9,747,094
Increase in long-term bank loans	690,000	50,000
Repayment of long-term bank loans	(62,500)	(212,500)
Repayment of other long-term payables	(853,788)	(2,367,866)
Interest paid	(1,330,886)	(736,607)
Guarantee deposits received	41,519	15,671
Guarantee deposits refunded	(113,087)	(255,764)
Decrease in obligations under finance leases	(27,796)	(108,863)
Proceeds from exercise of employee stock options	124,570	242,488
Cash dividends	(77,773,307)	(77,748,668)
Increase in noncontrolling interests	202,619	286,200
Net cash generated by (used in) financing activities	32,105,925	(13,588,815)
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	849,612	(2,118,327)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	99,284,859	(61,689)
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	143,410,588	143,472,277
CASH AND CASH EQUIVALENTS, END OF YEAR	$ 242,695,447	$ 143,410,588

The accompanying notes are an integral part of the consolidated financial statements.

APPENDIX

B Specimen Financial Statements: Nestlé SA

Consolidated income statement
for the year ended 31 December 2013

In millions of CHF

	Notes	2013	2012 [a]
Sales	3	**92 158**	**89 721**
Other revenue		215	210
Cost of goods sold		(48 111)	(47 500)
Distribution expenses		(8 156)	(8 017)
Marketing and administration expenses		(19 711)	(19 041)
Research and development costs		(1 503)	(1 413)
Other trading income	4	120	141
Other trading expenses	4	(965)	(637)
Trading operating profit	3	**14 047**	**13 464**
Other operating income	4	616	146
Other operating expenses	4	(1 595)	(222)
Operating profit		**13 068**	**13 388**
Financial income	5	219	120
Financial expense	5	(850)	(825)
Profit before taxes, associates and joint ventures		**12 437**	**12 683**
Taxes	15	(3 256)	(3 259)
Share of results of associates and joint ventures	16	1 264	1 253
Profit for the year		**10 445**	**10 677**
of which attributable to non-controlling interests		430	449
of which attributable to shareholders of the parent (Net profit)		10 015	10 228
As percentages of sales			
Trading operating profit		15.2%	15.0%
Profit for the year attributable to shareholders of the parent (Net profit)		10.9%	11.4%
Earnings per share (in CHF)			
Basic earnings per share	17	3.14	3.21
Diluted earnings per share	17	3.13	3.20

(a) 2012 comparatives have been restated following the implementation of IFRS 11 and IAS 19 revised (see Note 22).

Consolidated statement of comprehensive income for the year ended 31 December 2013

In millions of CHF

	Notes	2013	2012 [a]
Profit for the year recognised in the income statement		**10 445**	**10 677**
Currency retranslations			
– Recognised in translation reserve		(3 160)	(1 053)
– Reclassified from translation reserve to income statement		214	—
Fair value adjustments on available-for-sale financial instruments			
– Recognised in fair value reserve		9	310
– Reclassified from fair value reserve to income statement		(532)	15
Fair value adjustments on cash flow hedges			
– Recognised in hedging reserve		161	(116)
– Reclassified from hedging reserve		85	266
Taxes	15	290	(31)
Share of other comprehensive income of associates and joint ventures	16	40	578
Items that are or may be reclassified subsequently to the income statement		(2 893)	(31)
Remeasurement of defined benefit plans	11	1 632	(1 534)
Taxes	15	(848)	386
Share of other comprehensive income of associates and joint ventures	16	47	(76)
Items that will never be reclassified to the income statement		831	(1 224)
Other comprehensive income for the year	19	**(2 062)**	**(1 255)**
Total comprehensive income for the year		**8 383**	**9 422**
of which attributable to non-controlling interests		371	393
of which attributable to shareholders of the parent		8 012	9 029

(a) 2012 comparatives have been restated following the implementation of IFRS 11 and IAS 19 revised (see Note 22).

Consolidated balance sheet as at 31 December 2013

before appropriations

In millions of CHF

	Notes	2013	2012 [a][b]
Assets			
Current assets			
Cash and cash equivalents	14/18	6 415	5 713
Short-term investments	14	638	3 583
Inventories	6	8 382	8 939
Trade and other receivables	7/14	12 206	13 048
Prepayments and accrued income		762	821
Derivative assets	14	230	576
Current income tax assets		1 151	972
Assets held for sale	2	282	368
Total current assets		**30 066**	**34 020**
Non-current assets			
Property, plant and equipment	8	26 895	26 576
Goodwill	9	31 039	32 688
Intangible assets	10	12 673	13 018
Investments in associates and joint ventures	16	12 315	11 586
Financial assets	14	4 550	4 979
Employee benefits assets	11	537	84
Current income tax assets		124	27
Deferred tax assets	15	2 243	2 899
Total non-current assets		**90 376**	**91 857**
Total assets		**120 442**	**125 877**

(a) 2012 comparatives have been restated following the implementation of IFRS 11 and IAS 19 revised (see Note 22).
(b) 2012 comparatives have been adjusted following the final valuation of the Wyeth Nutrition acquisition (see Note 22).

Consolidated balance sheet as at 31 December 2013

In millions of CHF

	Notes	2013	2012 (a)(b)
Liabilities and equity			
Current liabilities			
Financial debt	14	11 380	18 408
Trade and other payables	14	16 072	14 627
Accruals and deferred income		3 185	3 078
Provisions	13	523	452
Derivative liabilities	14	381	423
Current income tax liabilities		1 276	1 608
Liabilities directly associated with assets held for sale	2	100	1
Total current liabilities		**32 917**	**38 597**
Non-current liabilities			
Financial debt	14	10 363	9 008
Employee benefits liabilities	11	6 279	8 360
Provisions	13	2 714	2 827
Deferred tax liabilities	15	2 643	2 240
Other payables	14	1 387	2 181
Total non-current liabilities		**23 386**	**24 616**
Total liabilities		**56 303**	**63 213**
Equity	19		
Share capital		322	322
Treasury shares		(2 196)	(2 078)
Translation reserve		(20 811)	(17 924)
Retained earnings and other reserves		85 260	80 687
Total equity attributable to shareholders of the parent		**62 575**	**61 007**
Non-controlling interests		1 564	1 657
Total equity		**64 139**	**62 664**
Total liabilities and equity		**120 442**	**125 877**

(a) 2012 comparatives have been restated following the implementation of IFRS 11 and IAS 19 revised (see Note 22).
(b) 2012 comparatives have been adjusted following the final valuation of the Wyeth Nutrition acquisition (see Note 22).

Consolidated cash flow statement for the year ended 31 December 2013

In millions of CHF

	Notes	2013	2012 [(a)]
Operating activities			
Operating profit	18	13 068	13 388
Non-cash items of income and expense	18	4 352	3 217
Cash flow before changes in operating assets and liabilities		**17 420**	**16 605**
Decrease/(increase) in working capital	18	1 360	2 015
Variation of other operating assets and liabilities	18	(574)	(95)
Cash generated from operations		**18 206**	**18 525**
Net cash flows from treasury activities	18	(351)	(324)
Taxes paid		(3 520)	(3 118)
Dividends and interest from associates and joint ventures	16	657	585
Operating cash flow		**14 992**	**15 668**
Investing activities			
Capital expenditure	8	(4 928)	(5 273)
Expenditure on intangible assets	10	(402)	(325)
Sale of property, plant and equipment		86	130
Acquisition of businesses	2	(321)	(10 916)
Disposal of businesses	2	421	142
Investments (net of divestments) in associates and joint ventures	16	(28)	(79)
Outflows from non-current treasury investments		(244)	(192)
Inflows from non-current treasury investments		2 644	1 561
Inflows/(outflows) from short-term treasury investments		400	677
Inflows from other investing activities [(b)]		1 187	89
Outflows from other investing activities		(421)	(305)
Cash flow from investing activities		**(1 606)**	**(14 491)**
Financing activities			
Dividend paid to shareholders of the parent	19	(6 552)	(6 213)
Dividends paid to non-controlling interests		(328)	(204)
Acquisition (net of disposal) of non-controlling interests		(337)	(165)
Purchase of treasury shares		(481)	(532)
Sale of treasury shares		60	1 199
Inflows from bonds and other non-current financial debt		3 814	5 226
Outflows from bonds and other non-current financial debt		(2 271)	(1 650)
Inflows/(outflows) from current financial debt		(6 063)	2 325
Cash flow from financing activities		**(12 158)**	**(14)**
Currency retranslations		(526)	(219)
Increase/(decrease) in cash and cash equivalents		**702**	**944**
Cash and cash equivalents at beginning of year		5 713	4 769
Cash and cash equivalents at end of year		**6 415**	**5 713**

(a) 2012 comparatives have been restated following the implementation of IFRS 11 and IAS 19 revised (see Note 22).
(b) Mainly relates to the disposal of Givaudan shares.

Consolidated statement of changes in equity for the year ended 31 December 2013

In millions of CHF

	Share capital	Treasury shares	Translation reserve	Retained earnings and other reserves	**Total equity attributable to shareholders of the parent**	Non-controlling interests	**Total equity**
Equity as at 31 December 2011 as originally published	330	(6 722)	(16 927)	80 116	56 797	1 477	58 274
First application of IAS 19 revised	—	—	—	68	**68**	—	**68**
Equity restated as at 1 January 2012	330	(6 722)	(16 927)	80 184	56 865	1 477	58 342
Profit for the year [a]	—	—	—	10 228	**10 228**	449	**10 677**
Other comprehensive income for the year [a]	—	—	(997)	(202)	**(1 199)**	(56)	**(1 255)**
Total comprehensive income for the year [a]	—	—	(997)	10 026	**9 029**	393	**9 422**
Dividend paid to shareholders of the parent	—	—	—	(6 213)	**(6 213)**	—	**(6 213)**
Dividends paid to non-controlling interests	—	—	—	—	**—**	(204)	**(204)**
Movement of treasury shares [b]	—	501	—	599	**1 100**	—	**1 100**
Equity compensation plans	—	212	—	(39)	**173**	—	**173**
Changes in non-controlling interests	—	—	—	(94)	**(94)**	(9)	**(103)**
Reduction in share capital	(8)	3 931	—	(3 923)	**—**	—	**—**
Total transactions with owners	(8)	4 644	—	(9 670)	**(5 034)**	(213)	**(5 247)**
Other movements [c]	—	—	—	147	**147**	—	**147**
Equity restated as at 31 December 2012 [a]	322	(2 078)	(17 924)	80 687	61 007	1 657	62 664
Profit for the year	—	—	—	10 015	**10 015**	430	**10 445**
Other comprehensive income for the year	—	—	(2 887)	884	**(2 003)**	(59)	**(2 062)**
Total comprehensive income for the year	—	—	(2 887)	10 899	**8 012**	371	**8 383**
Dividend paid to shareholders of the parent	—	—	—	(6 552)	**(6 552)**	—	**(6 552)**
Dividends paid to non-controlling interests	—	—	—	—	**—**	(328)	**(328)**
Movement of treasury shares	—	(612)	—	190	**(422)**	—	**(422)**
Equity compensation plans	—	214	—	(39)	**175**	—	**175**
Other transactions settled with treasury shares [d]	—	280	—	—	**280**	—	**280**
Changes in non-controlling interests	—	—	—	(297)	**(297)**	(136)	**(433)**
Total transactions with owners	—	(118)	—	(6 698)	**(6 816)**	(464)	**(7 280)**
Other movements [c]	—	—	—	372	**372**	—	**372**
Equity as at 31 December 2013	**322**	**(2 196)**	**(20 811)**	**85 260**	**62 575**	**1 564**	**64 139**

(a) 2012 comparatives have been restated following the implementation of IFRS 11 and IAS 19 revised (see Note 22).
(b) Movements reported under retained earnings and other reserves mainly relate to written put options on own shares.
(c) Relates mainly to the adjustment for hyperinflation in Venezuela, considered as a hyperinflationary economy.
(d) The other transactions relate to the acquisition of a business (see Note 2).

APPENDIX C

Specimen Financial Statements: Petra Foods Limited

Consolidated Income Statement

for the financial year ended 31 December 2013

		THE GROUP	
	Note	2013 US$'000	Restated 2012 US$'000
Continuing operations			
Revenue	4	508,800	471,647
Cost of sales		(345,954)	(326,058)
Gross profit		162,846	145,589
Other operating income	4	6,913	970
Selling and distribution costs		(64,562)	(54,257)
Administrative expenses		(20,042)	(14,437)
Finance costs	6	(1,651)	(1,372)
Other operating expenses		(600)	(806)
Share of results of associated companies	19(a)	(81)	384
Profit before income tax		82,823	76,071
Income tax expense	8	(23,514)	(21,619)
Profit from continuing operations		59,309	54,452
Discontinued operations			
Loss from discontinued operations after income tax	10	(38,754)	(28,626)
Total profit		20,555	25,826
Profit/(loss) attributable to:			
Equity holders of the Company		20,593	25,939
Non-controlling interest		(38)	(113)
		20,555	25,826
Earnings/(losses) per ordinary share (1) (expressed in US cents per share)			
Basic and Diluted	11		
– From continuing operations		9.71	8.93
– From discontinued operations		(6.34)	(4.68)

Note:

(1) Diluted earnings per share for financial years 2013 and 2012 are the same as basic earnings per share as there were no potentially dilutive ordinary shares.

The accompanying notes form an integral part of these financial statements.

Consolidated Statement of Comprehensive Income

for the financial year ended 31 December 2013

	THE GROUP 2013 US$'000	Restated 2012 US$'000
Profit for the year	**20,555**	25,826
Other comprehensive income:		
Continuing operations		
Items that may be reclassified to profit or loss:		
Foreign currency translation reserve		
– Currency translation differences arising from consolidation	**(35,674)**	(4,891)
Items that will not be reclassified to profit or loss:		
Defined pension benefits obligation		
As previously reported	–	–
Effect of change in accounting policy:		
– Remeasurements of defined pension benefits obligation	**2,484**	(1,616)
– Tax on remeasurements	**(623)**	408
	1,861	(1,208)
Discontinued operations		
Items that were reclassified to profit or loss:		
Cash flow hedges		
– Fair value (losses)/gains	**(9,458)**	17,969
– Transfer to profit or loss	**5,276**	24,534
– Tax on fair value adjustments	**26**	(6,917)
– Disposal of subsidiaries	**2,451**	–
	(1,705)	35,586
Foreign currency translation reserve		
– Reclassification on disposal of subsidiaries	**4,117**	–
– Currency translation differences arising from consolidation	–	521
	4,117	521
Other comprehensive (expense)/income, net of tax	**(31,401)**	30,008
Total comprehensive (expense)/income for the year	**(10,846)**	55,834
Total comprehensive (expense)/income attributable to:		
Equity holders of the Company	**(10,799)**	55,927
Non-controlling interest	**(47)**	(93)
	(10,846)	55,834

The accompanying notes form an integral part of these financial statements.

Balance Sheets

as at 31 December 2013

		THE GROUP		THE COMPANY	
	Note	2013 US$'000	Restated 2012 US$'000	2013 US$'000	Restated 2012 US$'000
ASSETS					
Current assets					
Cash and cash equivalents	12	196,707	33,040	186,862	5,978
Derivative assets	15	25	3,721	25	3,719
Trade receivables	13	76,742	67,515	4,284	24,644
Loans to subsidiaries	20	–	–	–	17,470
Inventories	14	65,506	61,393	17	96
Tax recoverable	16	2,500	9,577	–	–
Other current assets	17	31,557	13,058	24,310	6,206
		373,037	188,304	215,498	58,113
Disposal group classified as held-for-sale	10	–	941,355	–	482,854
		373,037	1,129,659	215,498	540,967
Non-current assets					
Investments in subsidiaries	18	–	–	42,996	44,591
Investments in associated companies and joint venture	19	2,604	3,678	3,000	3,140
Loans to associated company and joint venture	21	2,925	3,059	351	336
Property, plant and equipment	22	81,796	78,360	1,519	2,040
Intangible assets	23	4,982	4,884	4,616	1,784
Deferred income tax assets	8(b)	340	–	–	–
Other non-current assets	25	212	130	–	–
		92,859	90,111	52,482	51,891
Total assets		465,896	1,219,770	267,980	592,858
LIABILITIES					
Current liabilities					
Trade payables	26	42,165	34,126	2,936	5,099
Other payables	27	77,508	38,903	67,845	10,603
Current income tax liabilities		3,004	6,222	–	–
Derivative liabilities	15	12	8,023	–	8,023
Borrowings	28	38,989	424,844	85	302,728
		161,678	512,118	70,866	326,453
Liabilities directly associated with disposal group classified as held-for-sale	10	–	364,370	–	56,413
		161,678	876,488	70,866	382,866
Non-current liabilities					
Borrowings	28	400	2,100	245	522
Deferred income tax liabilities	8(b)	5,367	3,592	4	469
Provisions for other liabilities and charges	30	8,065	10,773	–	–
		13,832	16,465	249	991
Total liabilities		175,510	892,953	71,115	383,857
NET ASSETS		290,386	326,817	196,865	209,001
EQUITY					
Capital and reserves attributable to the equity holders of the Company					
Share capital	31	155,951	155,951	155,951	155,951
Foreign currency translation reserve	32	(42,877)	(11,329)	–	–
Other reserves		2,515	2,262	–	3,172
Retained earnings	33	174,596	179,685	40,914	49,878
		290,185	326,569	196,865	209,001
Non-controlling interest		201	248	–	–
TOTAL EQUITY		290,386	326,817	196,865	209,001

The accompanying notes form an integral part of these financial statements.

Consolidated Statement of Changes in Equity

for the financial year ended 31 December 2013

		Attributable to equity holders of the Company								
	Note	Share capital US$'000	Foreign currency translation reserve US$'000	Cash flow hedge reserve US$'000	General reserve US$'000	Defined pension benefits obligation US$'000	Retained earnings US$'000	Total US$'000	Non-controlling interest US$'000	Total equity US$'000
The Group										
Balance at 1 January 2013										
– As previously reported		**155,951**	**(11,329)**	**1,705**	**1,890**	**–**	**179,685**	**327,902**	**248**	**328,150**
– Effect of change in accounting policy	2.1	–	–	–	–	(1,333)	–	(1,333)	–	(1,333)
As restated		155,951	(11,329)	1,705	1,890	(1,333)	179,685	326,569	248	326,817
Total comprehensive (expense)/income for the year		–	(31,548)	(1,705)	–	1,861	20,593	(10,799)	(47)	(10,846)
Transfer to general reserve	33(a)	–	–	–	97	–	(97)	–	–	–
Final dividend relating to 2012 paid	34	–	–	–	–	–	(11,368)	(11,368)	–	(11,368)
Interim dividend relating to 2013 paid	34	–	–	–	–	–	(14,217)	(14,217)	–	(14,217)
Balance at 31 December 2013		**155,951**	**(42,877)**	**–**	**1,987**	**528**	**174,596**	**290,185**	**201**	**290,386**
Balance at 1 January 2012										
– As previously reported		155,951	(6,939)	(33,881)	1,664	–	179,787	296,582	341	296,923
– Effect of change in accounting policy	2.1	–	–	–	–	(125)	–	(125)	–	(125)
As restated		155,951	(6,939)	(33,881)	1,664	(125)	179,787	296,457	341	296,798
Total comprehensive (expense)/income for the year		–	(4,390)	35,586	–	–	25,939	57,135	(93)	57,042
Effect of change in accounting policy	2.1	–	–	–	–	(1,208)	–	(1,208)	–	(1,208)
		–	(4,390)	35,586	–	(1,208)	25,939	55,927	(93)	55,834
Transfer to general reserve	33(a)	–	–	–	226	–	(226)	–	–	–
Final dividend relating to 2011 paid	34	–	–	–	–	–	(12,956)	(12,956)	–	(12,956)
Interim dividend relating to 2012 paid	34	–	–	–	–	–	(12,859)	(12,859)	–	(12,859)
Balance at 31 December 2012 (restated)		155,951	(11,329)	1,705	1,890	(1,333)	179,685	326,569	248	326,817

The accompanying notes form an integral part of these financial statements.

Consolidated Statement of Cash Flows

for the financial year ended 31 December 2013

	Note	2013 US$'000	2012 US$'000
Cash flows from operating activities			
Total profit		20,555	25,826
Adjustments:			
Income tax expense	8(a)	26,080	18,824
Depreciation and amortisation		8,271	21,030
Property, plant and equipment written off		292	195
Gain on disposal of property, plant and equipment		(270)	(336)
Gain on disposal of subsidiaries	10(b)	(80,949)	–
Interest income		(1,230)	(176)
Interest expense		15,809	29,665
Fair value (gain)/loss on derivatives		(10,796)	12,045
Share of loss/(profit) from associated companies		81	(384)
Operating cash flow before working capital changes		(22,157)	106,689
Change in working capital, net of effects from disposal of subsidiaries:			
Inventories		161,521	(119,419)
Trade and other receivables		(34,193)	17,653
Trade and other payables		(95,200)	47,553
Cash provided by operations		9,971	52,476
Interest received		1,230	176
Income tax paid		(18,488)	(22,152)
Net cash (used in)/provided by operating activities		(7,287)	30,500
Cash flows from investing activities			
Purchases of property, plant and equipment		(35,371)	(53,590)
Investment in joint venture		–	(140)
Payments for patents and trademarks		(107)	(115)
Disposal of subsidiaries, net of cash disposed	12	645,133	–
Proceeds from disposal of property, plant and equipment		370	437
Net cash provided by/(used in) investing activities		610,025	(53,408)
Cash flows from financing activities			
Proceeds from term loans		3,675	76,362
(Repayment of)/proceeds from trade finance and short term advances		(162,215)	13,016
Proceeds from issuance of Medium Term Notes		–	87,931
Repayment of term loans		(80,854)	(37,530)
Repayment of Medium Term Notes		(160,032)	(39,139)
Repayment of lease liabilities		(2,597)	(2,669)
Interest paid		(19,775)	(29,665)
Dividends paid to equity holders of the Company		(25,585)	(25,815)
Net cash (used in)/provided by financing activities		(447,383)	42,491
Net increase in cash and cash equivalents		155,355	19,583
Cash and cash equivalents			
Beginning of financial year		23,118	3,948
Effects of currency translation on cash and cash equivalents		(692)	(413)
End of financial year	12	177,781	23,118

The accompanying notes form an integral part of these financial statements.

APPENDIX D Specimen Financial Statements: Apple Inc.

CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except number of shares which are reflected in thousands and per share amounts)

	Years ended September 28, 2013	Years ended September 29, 2012	Years ended September 24, 2011
Net sales	$ 170,910	$ 156,508	$ 108,249
Cost of sales	106,606	87,846	64,431
Gross margin	64,304	68,662	43,818
Operating expenses:			
Research and development	4,475	3,381	2,429
Selling, general and administrative	10,830	10,040	7,599
Total operating expenses	15,305	13,421	10,028
Operating income	48,999	55,241	33,790
Other income/(expense), net	1,156	522	415
Income before provision for income taxes	50,155	55,763	34,205
Provision for income taxes	13,118	14,030	8,283
Net income	$ 37,037	$ 41,733	$ 25,922
Earnings per share:			
Basic	$ 40.03	$ 44.64	$ 28.05
Diluted	$ 39.75	$ 44.15	$ 27.68
Shares used in computing earnings per share:			
Basic	925,331	934,818	924,258
Diluted	931,662	945,355	936,645
Cash dividends declared per common share	$ 11.40	$ 2.65	$ 0.00

See accompanying Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years ended		
	September 28, 2013	**September 29, 2012**	**September 24, 2011**
Net income	$37,037	$41,733	$25,922
Other comprehensive income/(loss):			
Change in foreign currency translation, net of tax effects of $35, $13 and $18, respectively	(112)	(15)	(12)
Change in unrecognized gains/losses on derivative instruments:			
Change in fair value of derivatives, net of tax benefit/(expense) of $(351), $73 and $(50), respectively	522	(131)	92
Adjustment for net losses/(gains) realized and included in net income, net of tax expense/(benefit) of $255, $220 and $(250), respectively	(458)	(399)	450
Total change in unrecognized gains/losses on derivative instruments, net of tax	64	(530)	542
Change in unrealized gains/losses on marketable securities:			
Change in fair value of marketable securities, net of tax benefit/(expense) of $458, $(421) and $17, respectively	(791)	715	29
Adjustment for net losses/(gains) realized and included in net income, net of tax expense/(benefit) of $82, $68 and $(40), respectively	(131)	(114)	(70)
Total change in unrealized gains/losses on marketable securities, net of tax	(922)	601	(41)
Total other comprehensive income/(loss)	(970)	56	489
Total comprehensive income	$36,067	$41,789	$26,411

See accompanying Notes to Consolidated Financial Statements.

CONSOLIDATED BALANCE SHEETS
(In millions, except number of shares which are reflected in thousands)

	September 28, 2013	September 29, 2012
ASSETS:		
Current assets:		
Cash and cash equivalents	$ 14,259	$ 10,746
Short-term marketable securities	26,287	18,383
Accounts receivable, less allowances of $99 and $98, respectively	13,102	10,930
Inventories	1,764	791
Deferred tax assets	3,453	2,583
Vendor non-trade receivables	7,539	7,762
Other current assets	6,882	6,458
Total current assets	73,286	57,653
Long-term marketable securities	106,215	92,122
Property, plant and equipment, net	16,597	15,452
Goodwill	1,577	1,135
Acquired intangible assets, net	4,179	4,224
Other assets	5,146	5,478
Total assets	$ 207,000	$ 176,064
LIABILITIES AND SHAREHOLDERS' EQUITY:		
Current liabilities:		
Accounts payable	$ 22,367	$ 21,175
Accrued expenses	13,856	11,414
Deferred revenue	7,435	5,953
Total current liabilities	43,658	38,542
Deferred revenue – non-current	2,625	2,648
Long-term debt	16,960	0
Other non-current liabilities	20,208	16,664
Total liabilities	83,451	57,854
Commitments and contingencies		
Shareholders' equity:		
Common stock, no par value; 1,800,000 shares authorized; 899,213 and 939,208 shares issued and outstanding, respectively	19,764	16,422
Retained earnings	104,256	101,289
Accumulated other comprehensive income/(loss)	(471)	499
Total shareholders' equity	123,549	118,210
Total liabilities and shareholders' equity	$ 207,000	$ 176,064

See accompanying Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In millions, except number of shares which are reflected in thousands)

	Common Stock				
	Shares	Amount	Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Shareholders' Equity
Balances as of September 25, 2010	915,970	$10,668	$ 37,169	$ (46)	$ 47,791
Net income	0	0	25,922	0	25,922
Other comprehensive income/(loss)	0	0	0	489	489
Share-based compensation	0	1,168	0	0	1,168
Common stock issued under stock plans, net of shares withheld for employee taxes	13,307	561	(250)	0	311
Tax benefit from equity awards, including transfer pricing adjustments	0	934	0	0	934
Balances as of September 24, 2011	929,277	13,331	62,841	443	76,615
Net income	0	0	41,733	0	41,733
Other comprehensive income/(loss)	0	0	0	56	56
Dividends and dividend equivalent rights declared	0	0	(2,523)	0	(2,523)
Share-based compensation	0	1,740	0	0	1,740
Common stock issued under stock plans, net of shares withheld for employee taxes	9,931	200	(762)	0	(562)
Tax benefit from equity awards, including transfer pricing adjustments	0	1,151	0	0	1,151
Balances as of September 29, 2012	939,208	16,422	101,289	499	118,210
Net income	0	0	37,037	0	37,037
Other comprehensive income/(loss)	0	0	0	(970)	(970)
Dividends and dividend equivalent rights declared	0	0	(10,676)	0	(10,676)
Repurchase of common stock	(46,976)	0	(22,950)	0	(22,950)
Share-based compensation	0	2,253	0	0	2,253
Common stock issued under stock plans, net of shares withheld for employee taxes	6,981	(143)	(444)	0	(587)
Tax benefit from equity awards, including transfer pricing adjustments	0	1,232	0	0	1,232
Balances as of September 28, 2013	899,213	$19,764	$104,256	$ (471)	$123,549

See accompanying Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Years ended September 28, 2013	September 29, 2012	September 24, 2011
Cash and cash equivalents, beginning of the year	$ 10,746	$ 9,815	$ 11,261
Operating activities:			
Net income	37,037	41,733	25,922
Adjustments to reconcile net income to cash generated by operating activities:			
Depreciation and amortization	6,757	3,277	1,814
Share-based compensation expense	2,253	1,740	1,168
Deferred income tax expense	1,141	4,405	2,868
Changes in operating assets and liabilities:			
Accounts receivable, net	(2,172)	(5,551)	143
Inventories	(973)	(15)	275
Vendor non-trade receivables	223	(1,414)	(1,934)
Other current and non-current assets	1,080	(3,162)	(1,391)
Accounts payable	2,340	4,467	2,515
Deferred revenue	1,459	2,824	1,654
Other current and non-current liabilities	4,521	2,552	4,495
Cash generated by operating activities	53,666	50,856	37,529
Investing activities:			
Purchases of marketable securities	(148,489)	(151,232)	(102,317)
Proceeds from maturities of marketable securities	20,317	13,035	20,437
Proceeds from sales of marketable securities	104,130	99,770	49,416
Payments made in connection with business acquisitions, net	(496)	(350)	(244)
Payments for acquisition of property, plant and equipment	(8,165)	(8,295)	(4,260)
Payments for acquisition of intangible assets	(911)	(1,107)	(3,192)
Other	(160)	(48)	(259)
Cash used in investing activities	(33,774)	(48,227)	(40,419)
Financing activities:			
Proceeds from issuance of common stock	530	665	831
Excess tax benefits from equity awards	701	1,351	1,133
Taxes paid related to net share settlement of equity awards	(1,082)	(1,226)	(520)
Dividends and dividend equivalent rights paid	(10,564)	(2,488)	0
Repurchase of common stock	(22,860)	0	0
Proceeds from issuance of long-term debt, net	16,896	0	0
Cash generated by/(used in) financing activities	(16,379)	(1,698)	1,444
Increase/(decrease) in cash and cash equivalents	3,513	931	(1,446)
Cash and cash equivalents, end of the year	$ 14,259	$ 10,746	$ 9,815
Supplemental cash flow disclosure:			
Cash paid for income taxes, net	$ 9,128	$ 7,682	$ 3,338

See accompanying Notes to Consolidated Financial Statements.

APPENDIX

E Time Value of Money

LEARNING OBJECTIVES

After studying this appendix, you should be able to:

1. Distinguish between simple and compound interest.
2. Solve for future value of a single amount.
3. Solve for future value of an annuity.
4. Identify the variables fundamental to solving present value problems.
5. Solve for present value of a single amount.
6. Solve for present value of an annuity.
7. Compute the present value of notes and bonds.
8. Compute the present values in capital budgeting situations.
9. Use a financial calculator to solve time value of money problems.

APPENDIX PREVIEW

Would you rather receive NT$1,000 today or a year from now? You should prefer to receive the NT$1,000 today because you can invest the NT$1,000 and earn interest on it. As a result, you will have more than NT$1,000 a year from now. What this example illustrates is the concept of the **time value of money**. Everyone prefers to receive money today rather than in the future because of the interest factor.

Nature of Interest

Learning Objective 1
Distinguish between simple and compound interest.

Interest is payment for the use of another person's money. It is the difference between the amount borrowed or invested (called the **principal**) and the amount repaid or collected. The amount of interest to be paid or collected is usually stated as a rate over a specific period of time. The rate of interest is generally stated as an annual rate.

The amount of interest involved in any financing transaction is based on three elements:

1. **Principal (p):** The original amount borrowed or invested.
2. **Interest Rate (i):** An annual percentage of the principal.
3. **Time (n):** The number of periods that the principal is borrowed or invested.

Simple Interest

Simple interest is computed on the principal amount only. It is the return on the principal for one period. Simple interest is usually expressed as shown in Illustration E-1.

will receive €1,000 cash annually for three years at a time when the discount rate is 10%. This situation is depicted in the time diagram in Illustration E-14. Illustration E-15 shows the computation of its present value in this situation.

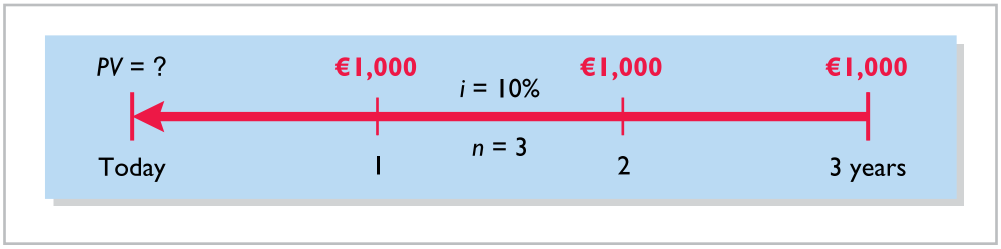


Illustration E-14
Time diagram for a three-year annuity

Illustration E-15
Present value of a series of future amounts computation

Future Amount	×	Present Value of 1 Factor at 10%	=	Present Value
€1,000 (one year away)		.90909		€ 909.09
1,000 (two years away)		.82645		826.45
1,000 (three years away)		.75132		751.32
		2.48686		**€2,486.86**

This method of calculation is required when the periodic cash flows are not uniform in each period. However, when the future receipts are the same in each period, an annuity table can be used. As illustrated in Table 4 below, an annuity table shows the present value of 1 to be received periodically for a given number of payments. It assumes that each payment is made at the end of each period.

TABLE 4 Present Value of an Annuity of 1

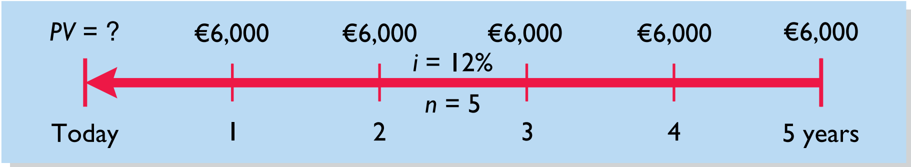
(*n*) Payments	4%	5%	6%	7%	8%	9%	10%	11%	12%	15%
1	.96154	.95238	.94340	.93458	.92593	.91743	.90909	.90090	.89286	.86957
2	1.88609	1.85941	1.83339	1.80802	1.78326	1.75911	1.73554	1.71252	1.69005	1.62571
3	2.77509	2.72325	2.67301	2.62432	2.57710	2.53130	2.48685	2.44371	2.40183	2.28323
4	3.62990	3.54595	3.46511	3.38721	3.31213	3.23972	3.16986	3.10245	3.03735	2.85498
5	4.45182	4.32948	4.21236	4.10020	3.99271	3.88965	3.79079	3.69590	3.60478	3.35216
6	5.24214	5.07569	4.91732	4.76654	4.62288	4.48592	4.35526	4.23054	4.11141	3.78448
7	6.00205	5.78637	5.58238	5.38929	5.20637	5.03295	4.86842	4.71220	4.56376	4.16042
8	6.73274	6.46321	6.20979	5.97130	5.74664	5.53482	5.33493	5.14612	4.96764	4.48732
9	7.43533	7.10782	6.80169	6.51523	6.24689	5.99525	5.75902	5.53705	5.32825	4.77158
10	8.11090	7.72173	7.36009	7.02358	6.71008	6.41766	6.14457	5.88923	5.65022	5.01877
11	8.76048	8.30641	7.88687	7.49867	7.13896	6.80519	6.49506	6.20652	5.93770	5.23371
12	9.38507	8.86325	8.38384	7.94269	7.53608	7.16073	6.81369	6.49236	6.19437	5.42062
13	9.98565	9.39357	8.85268	8.35765	7.90378	7.48690	7.10336	6.74987	6.42355	5.58315
14	10.56312	9.89864	9.29498	8.74547	8.24424	7.78615	7.36669	6.98187	6.62817	5.72448
15	11.11839	10.37966	9.71225	9.10791	8.55948	8.06069	7.60608	7.19087	6.81086	5.84737
16	11.65230	10.83777	10.10590	9.44665	8.85137	8.31256	7.82371	7.37916	6.97399	5.95424
17	12.16567	11.27407	10.47726	9.76322	9.12164	8.54363	8.02155	7.54879	7.11963	6.04716
18	12.65930	11.68959	10.82760	10.05909	9.37189	8.75563	8.20141	7.70162	7.24967	6.12797
19	13.13394	12.08532	11.15812	10.33560	9.60360	8.95012	8.36492	7.83929	7.36578	6.19823
20	13.59033	12.46221	11.46992	10.59401	9.81815	9.12855	8.51356	7.96333	7.46944	6.25933

Table 4 shows that the present value of an annuity of 1 factor for three payments at 10% is 2.48685.[1] This present value factor is the total of the three individual present value factors, as shown in Illustration E-15. Applying this amount to the annual cash flow of €1,000 produces a present value of €2,486.85.

The following demonstration problem (Illustration E-16) illustrates how to use Table 4.

Illustration E-16
Demonstration problem—Using Table 4 for *PV* of an annuity of 1

Kildare Company has just signed a capitalizable lease contract for equipment that requires rental payments of €6,000 each, to be paid at the end of each of the next 5 years. The appropriate discount rate is 12%. What is the present value of the rental payments—that is, the amount used to capitalize the leased equipment?



Answer: The present value factor from Table 4 is 3.60478 (5 payments at 12%). The present value of 5 payments of €6,000 each discounted at 12% is **€21,628.68** (€6,000 × 3.60478).

Time Periods and Discounting

In the preceding calculations, the discounting was done on an annual basis using an annual interest rate. Discounting may also be done over shorter periods of time such as monthly, quarterly, or semiannually.

When the time frame is less than one year, it is necessary to convert the annual interest rate to the applicable time frame. Assume, for example, that the investor in Illustration E-14 received €500 **semiannually** for three years instead of €1,000 annually. In this case, the number of periods becomes six (3 × 2), the discount rate is 5% (10% ÷ 2), the present value factor from Table 4 is 5.07569 (6 periods at 5%), and the present value of the future cash flows is €2,537.85 (5.07569 × €500). This amount is slightly higher than the €2,486.86 computed in Illustration E-15 because interest is computed twice during the same year. That is, during the second half of the year, interest is earned on the first half-year's interest.

Computing the Present Value of a Long-Term Note or Bond

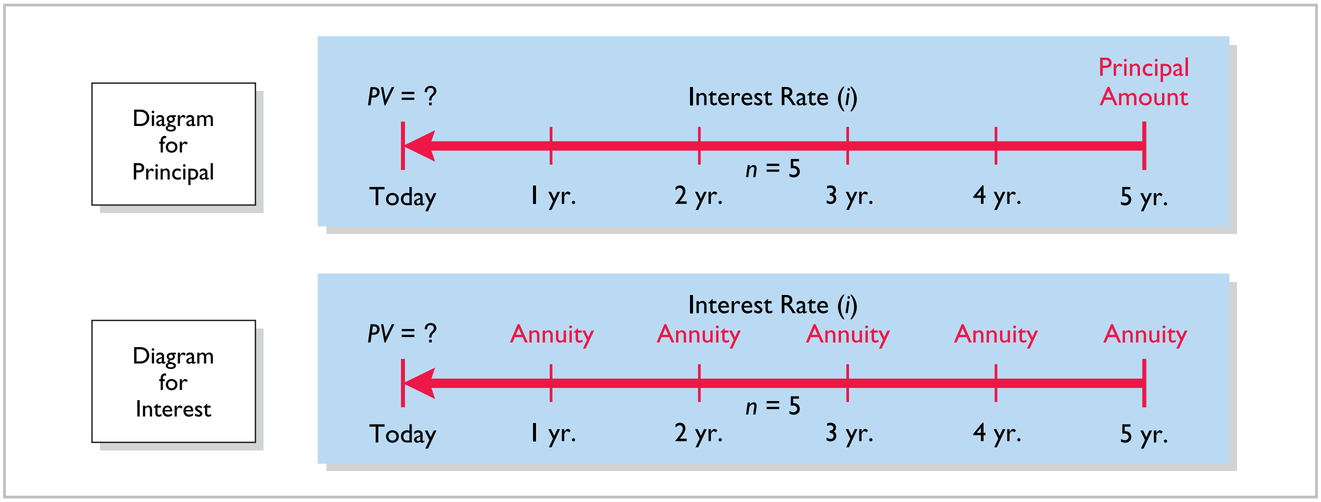
Learning Objective 7
Compute the present value of notes and bonds.

The present value (or market price) of a long-term note or bond is a function of three variables: (1) the payment amounts, (2) the length of time until the amounts are paid, and (3) the discount rate. Our example uses a five-year bond issue.

[1]The difference of .00001 between 2.48686 and 2.48685 is due to rounding.

The first variable (amounts to be paid) is made up of two elements: (1) a series of interest payments (an annuity) and (2) the principal amount (a single sum). To compute the present value of the bond, both the interest payments and the principal amount must be discounted—two different computations. The time diagrams for a bond due in five years are shown in Illustration E-17.

Illustration E-17
Present value of a bond time diagram



When the investor's market interest rate is equal to the bond's contractual interest rate, the present value of the bonds will equal the face value of the bonds. To illustrate, assume a bond issue of 10%, five-year bonds with a face value of NT$100,000 with interest payable **semiannually** on January 1 and July 1. If the discount rate is the same as the contractual rate, the bonds will sell at face value. In this case, the investor will receive (1) NT$100,000 at maturity and (2) a series of ten NT$5,000 interest payments [(NT$100,000 × 10%) ÷ 2] over the term of the bonds. The length of time is expressed in terms of interest periods—in this case—10, and the discount rate per interest period, 5%. The following time diagram (Illustration E-18) depicts the variables involved in this discounting situation.

Illustration E-18
Time diagram for present value of a 10%, five-year bond paying interest semiannually

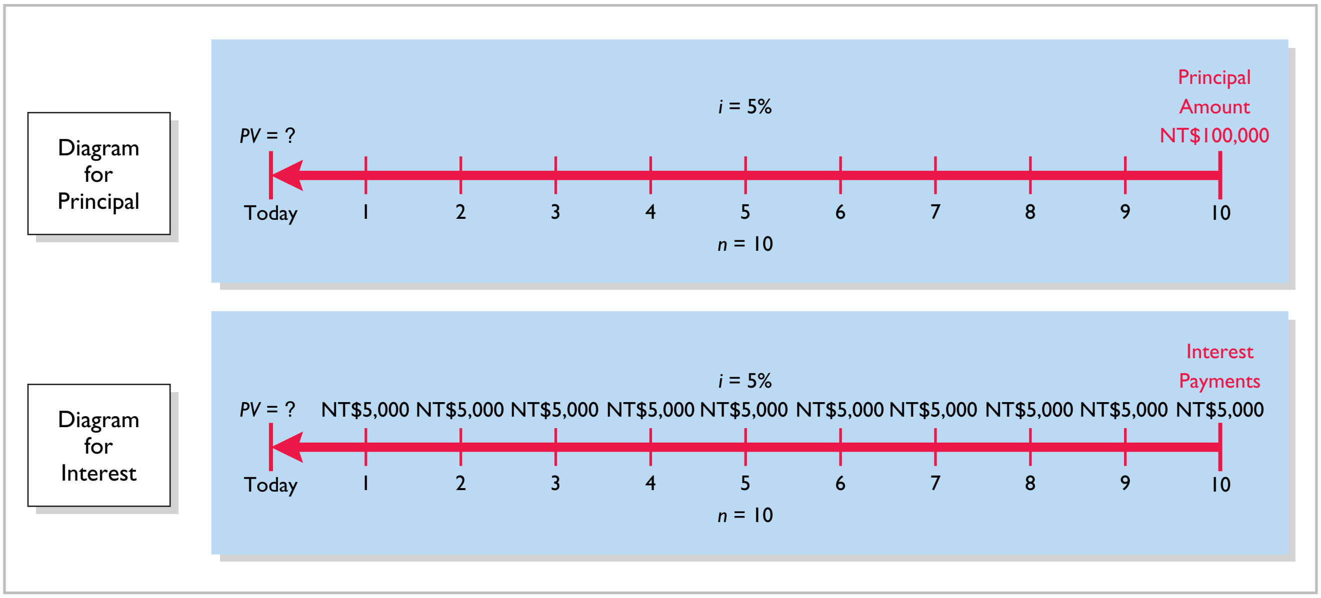


Illustration E-19 shows the computation of the present value of these bonds.

Illustration E-19
Present value of principal and interest—face value

10% Contractual Rate—10% Discount Rate	
Present value of principal to be received at maturity	
NT$100,000 × *PV* of 1 due in 10 periods at 5%	
NT$100,000 × .61391 (Table 3)	NT$ 61,391
Present value of interest to be received periodically over the term of the bonds	
NT$5,000 × *PV* of 1 due periodically for 10 periods at 5%	
NT$5,000 × 7.72173 (Table 4)	38,609*
Present value of bonds	**NT$100,000**

*Rounded

Now assume that the investor's required rate of return is 12%, not 10%. The future amounts are again NT$100,000 and NT$5,000, respectively, but now a discount rate of 6% (12% ÷ 2) must be used. The present value of the bonds is NT$92,639, as computed in Illustration E-20.

Illustration E-20
Present value of principal and interest—discount

10% Contractual Rate—12% Discount Rate	
Present value of principal to be received at maturity	
NT$100,000 × .55839 (Table 3)	NT$ 55,839
Present value of interest to be received periodically over the term of the bonds	
NT$5,000 × 7.36009 (Table 4)	36,800
Present value of bonds	**NT$92,639**

Conversely, if the discount rate is 8% and the contractual rate is 10%, the present value of the bonds is NT$108,111, computed as shown in Illustration E-21.

Illustration E-21
Present value of principal and interest—premium

10% Contractual Rate—8% Discount Rate	
Present value of principal to be received at maturity	
NT$100,000 × .67556 (Table 3)	NT$ 67,556
Present value of interest to be received periodically over the term of the bonds	
NT$5,000 × 8.11090 (Table 4)	40,555
Present value of bonds	**NT$108,111**

The above discussion relied on present value tables in solving present value problems. Calculators may also be used to compute present values without the use of these tables. Many calculators, especially financial calculators, have present value (*PV*) functions that allow you to calculate present values by merely inputting the proper amount, discount rate, periods, and pressing the PV key. We discuss the use of financial calculators in a later section.

Computing the Present Values in a Capital Budgeting Decision

Learning Objective 8

Compute the present values in capital budgeting situations.

The decision to make long-term capital investments is best evaluated using discounting techniques that recognize the time value of money. To do this, many companies calculate the present value of the cash flows involved in a capital investment.

To illustrate, Nagel-Siebert Trucking Company, a cross-country freight carrier, is considering adding another truck to its fleet because of a purchasing opportunity. Nagel-Siebert's primary supplier of overland rigs is overstocked and offers to sell its biggest rig for £154,000 cash payable upon delivery. Nagel-Siebert knows that the rig will produce a net cash flow per year of £40,000 for five years (received at the end of each year), at which time it will be sold for an estimated residual value of £35,000. Nagel-Siebert's discount rate in evaluating capital expenditures is 10%. Should Nagel-Siebert commit to the purchase of this rig?

The cash flows that must be discounted to present value by Nagel-Siebert are as follows.

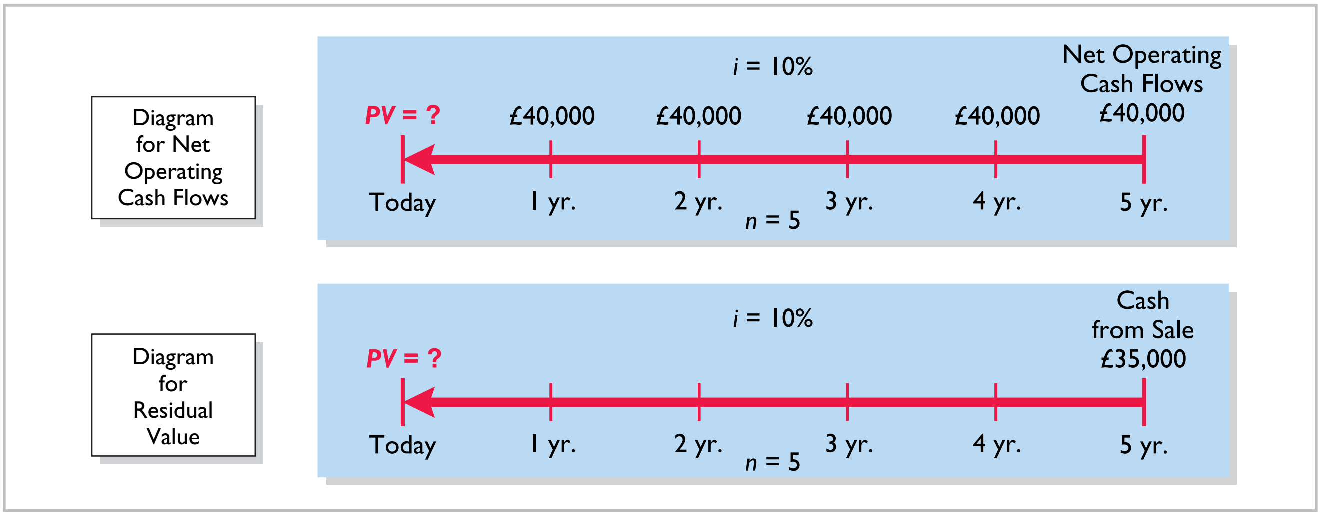
Cash payable on delivery (today): £154,000.

Net cash flow from operating the rig: £40,000 for 5 years (at the end of each year).

Cash received from sale of rig at the end of 5 years: £35,000.

The time diagrams for the latter two cash flows are shown in Illustration E-22.

Illustration E-22
Time diagrams for Nagel-Siebert Trucking Company



Notice from the diagrams that computing the present value of the net operating cash flows (£40,000 at the end of each year) is **discounting an annuity** (Table 4), while computing the present value of the £35,000 residual value is **discounting a single sum** (Table 3). The computation of these present values is shown in Illustration E-23 (page E-15).

Illustration E-23
Present value computations at 10%

Present Values—10% Discount Rate

Present value of net operating cash flows received annually over 5 years	
£40,000 × *PV* of 1 received annually for 5 years at 10%	
£40,000 × 3.79079 (Table 4)	£ 151,631.60
Present value of residual value (cash) to be received in 5 years	
£35,000 × *PV* of 1 received in 5 years at 10%	
£35,000 × .62092 (Table 3)	21,732.20
Present value of cash **inflows**	173,363.80
Present value of cash **outflows** (purchase price due today at 10%)	
£154,000 × *PV* of 1 due today	
£154,000 × 1.00000	(154,000.00)
Net present value	**£ 19,363.80**

Because the present value of the cash receipts (inflows) of £173,363.80 (£151,631.60 + £21,732.20) exceeds the present value of the cash payments (outflows) of £154,000.00, the net present value of £19,363.80 is positive, and **the decision to invest should be accepted**.

Now assume that Nagel-Siebert uses a discount rate of 15%, not 10%, because it wants a greater return on its investments in capital assets. The cash receipts and cash payments by Nagel-Siebert are the same. The present values of these receipts and cash payments discounted at 15% are shown in Illustration E-24.

Illustration E-24
Present value computations at 15%

Present Values—15% Discount Rate

Present value of net operating cash flows received annually over 5 years at 15%	
£40,000 × 3.35216 (Table 4)	£ 134,086.40
Present value of residual value (cash) to be received in 5 years at 15%	
£35,000 × .49718 (Table 3)	17,401.30
Present value of cash **inflows**	151,487.70
Present value of cash **outflows** (purchase price due today at 15%)	
£154,000 × 1.00000	(154,000.00)
Net present value	**£ (2,512.30)**

Because the present value of the cash payments (outflows) of £154,000.00 exceeds the present value of the cash receipts (inflows) of £151,487.70 (£134,086.40 + £17,401.30), the net present value of £2,512.30 is negative, and **the investment should be rejected**.

The above discussion relied on present value tables in solving present value problems. As we show in the next section, calculators may also be used to compute present values without the use of these tables. Some calculators, especially the "business" or financial calculators, have present value (PV) functions that allow you to calculate present values by merely identifying the proper amount, discount rate, periods, and pressing the PV key.

Using Financial Calculators

Learning Objective 9
Use a financial calculator to solve time value of money problems.

Business professionals, once they have mastered the underlying time value of money concepts, often use a financial calculator to solve these types of problems. In most cases, they use calculators if interest rates or time periods do not correspond with the information provided in the compound interest tables.

To use financial calculators, you enter the time value of money variables into the calculator. Illustration E-25 shows the five most common keys used to solve time value of money problems.[2]

N	I	PV	PMT	FV

Illustration E-25
Financial calculator keys

where:

N	=	number of periods
I	=	interest rate per period (some calculators use I/YR or i)
PV	=	present value (occurs at the beginning of the first period)
PMT	=	payment (all payments are equal, and none are skipped)
FV	=	future value (occurs at the end of the last period)

In solving time value of money problems in this appendix, you will generally be given three of four variables and will have to solve for the remaining variable. The fifth key (the key not used) is given a value of zero to ensure that this variable is not used in the computation.

Present Value of a Single Sum

To illustrate how to solve a present value problem using a financial calculator, assume that you want to know the present value of €84,253 to be received in five years, discounted at 11% compounded annually. Illustration E-26 depicts this problem.

Inputs:	5	11	?	0	84,253
	N	I	PV	PMT	FV
Answer:			–50,000		

Illustration E-26
Calculator solution for present value of a single sum

[2]On many calculators, these keys are actual buttons on the face of the calculator; on others, they appear on the display after the user accesses a present value menu.

Illustration E-26 shows you the information (inputs) to enter into the calculator: N = 5, I = 11, PMT = 0, and FV = 84,253. You then press PV for the answer: −€50,000. As indicated, the PMT key was given a value of zero because a series of payments did not occur in this problem.

PLUS AND MINUS

The use of plus and minus signs in time value of money problems with a financial calculator can be confusing. Most financial calculators are programmed so that the positive and negative cash flows in any problem offset each other. In the present value problem above, we identified the €84,253 future value initial investment as a positive (inflow); the answer −€50,000 was shown as a negative amount, reflecting a cash outflow. If the 84,253 were entered as a negative, then the final answer would have been reported as a positive 50,000.

Hopefully, the sign convention will not cause confusion. If you understand what is required in a problem, you should be able to interpret a positive or negative amount in determining the solution to a problem.

COMPOUNDING PERIODS

In the previous problem, we assumed that compounding occurs once a year. Some financial calculators have a default setting, which assumes that compounding occurs 12 times a year. You must determine what default period has been programmed into your calculator and change it as necessary to arrive at the proper compounding period.

ROUNDING

Most financial calculators store and calculate using 12 decimal places. As a result, because compound interest tables generally have factors only up to five decimal places, a slight difference in the final answer can result. In most time value of money problems, the final answer will not include more than two decimal places.

Present Value of an Annuity

To illustrate how to solve a present value of an annuity problem using a financial calculator, assume that you are asked to determine the present value of rental receipts of €6,000 each to be received at the end of each of the next five years, when discounted at 12%, as pictured in Illustration E-27.

Illustration E-27
Calculator solution for present value of an annuity

Inputs:	5	12	?	6,000	0
	N	**I**	**PV**	**PMT**	**FV**
Answer:			**–21,628.66**		

In this case, you enter N = 5, I = 12, PMT = 6,000, FV = 0, and then press PV to arrive at the answer of −€21,628.66.

Useful Applications of the Financial Calculator

With a financial calculator, you can solve for any interest rate or for any number of periods in a time value of money problem. Here are some examples of these applications.

AUTO LOAN

Assume you are financing the purchase of a used car with a three-year loan. The loan has a 9.5% stated annual interest rate, compounded monthly. The price of the car is €6,000, and you want to determine the monthly payments, assuming that the payments start one month after the purchase. This problem is pictured in Illustration E-28.

Inputs:	36	9.5	6,000	?	0
	N	**I**	**PV**	**PMT**	**FV**
Answer:				–192.20	

Illustration E-28
Calculator solution for auto loan payments

To solve this problem, you enter N = 36 (12 × 3), I = 9.5, PV = 6,000, FV = 0, and than press PMT. You will find that the monthly payments will be €192.20. Note that the payment key is usually programmed for 12 payments per year. Thus, you must change the default (compounding period) if the payments are other than monthly.

MORTGAGE LOAN AMOUNT

Say you are evaluating financing options for a loan on a house (a mortgage). You decide that the maximum mortgage payment you can afford is €700 per month. The annual interest rate is 8.4%. If you get a mortgage that requires you to make monthly payments over a 15-year period, what is the maximum home loan you can afford? Illustration E-29 depicts this problem.

Inputs:	180	8.4	?	–700	0
	N	**I**	**PV**	**PMT**	**FV**
Answer:			71,509.81		

Illustration E-29
Calculator solution for mortgage amount

You enter N = 180 (12 × 15 years), I = 8.4, PMT = −700, FV = 0, and press PV. With the payments-per-year key set at 12, you find a present value of €71,509.81—the maximum home loan you can afford, given that you want to keep your mortgage payments at €700. Note that by changing any of the variables, you can quickly conduct "what-if" analyses for different situations.

REVIEW

LEARNING OBJECTIVES REVIEW

1 **Distinguish between simple and compound interest.** Simple interest is computed on the principal only, while compound interest is computed on the principal and any interest earned that has not been withdrawn.

2 **Solve for future value of a single amount.** Prepare a time diagram of the problem. Identify the principal amount, the number of compounding periods, and the interest rate. Using the future value of 1 table, multiply the principal amount by the future value factor specified at the intersection of the number of periods and the interest rate.

3 **Solve for future value of an annuity.** Prepare a time diagram of the problem. Identify the amount of the periodic payments (receipts), the number of payments (receipts), and the interest rate. Using the future value of an annuity of 1 table, multiply the amount of the payments by the future value factor specified at the intersection of the number of periods and the interest rate.

4 **Identify the variables fundamental to solving present value problems.** The following three variables are fundamental to solving present value problems: (1) the future amount, (2) the number of periods, and (3) the interest rate (the discount rate).

5 **Solve for present value of a single amount.** Prepare a time diagram of the problem. Identify the future amount, the number of discounting periods, and the discount (interest) rate. Using the present value of a single amount table, multiply the future amount by the present value factor specified at the intersection of the number of periods and the discount rate.

6 **Solve for present value of an annuity.** Prepare a time diagram of the problem. Identify the amount of future periodic receipts or payment (annuities), the number of payments (receipts), and the discount (interest) rate. Using the present value of an annuity of 1 table, multiply the amount of the annuity by the present value factor specified at the intersection of the number of payments and the interest rate.

7 **Compute the present value of notes and bonds.** Determine the present value of the principal amount: Multiply the principal amount (a single future amount) by the present value factor (from the present value of 1 table) intersecting at the number of periods (number of interest payments) and the discount rate. Determine the present value of the series of interest payments: Multiply the amount of the interest payment by the present value factor (from the present value of an annuity of 1 table) intersecting at the number of periods (number of interest payments) and the discount rate. Add the present value of the principal amount to the present value of the interest payments to arrive at the present value of the note or bond.

8 **Compute the present values in capital budgeting situations.** Compute the present values of all cash inflows and all cash outflows related to the capital budgeting proposal (an investment-type decision). If the **net** present value is positive, accept the proposal (make the investment). If the **net** present value is negative, reject the proposal (do not make the investment).

9 **Use a financial calculator to solve time value of money problems.** Financial calculators can be used to solve the same and additional problems as those solved with time value of money tables. Enter into the financial calculator the amounts for all of the known elements of a time value of money problem (periods, interest rate, payments, future or present value), and it solves for the unknown element. Particularly useful situations involve interest rates and compounding periods not presented in the tables.

GLOSSARY REVIEW

Annuity A series of equal dollar amounts to be paid or received at evenly spaced time intervals (periodically). (p. E-4).

Compound interest The interest computed on the principal and any interest earned that has not been paid or withdrawn. (p. E-2).

Discounting the future amount(s) The process of determining present value. (p. E-7).

Future value of an annuity The sum of all the payments (receipts) plus the accumulated compound interest on them. (p. E-5).

Future value of a single amount The value at a future date of a given amount invested, assuming compound interest. (p. E-3).

Interest Payment for the use of another person's money. (p. E-1).

Present value The value now of a given amount to be paid or received in the future assuming compound interest. (p. E-7).

Present value of an annuity The value now of a series of future receipts or payments, discounted assuming compound interest. (p. E-9).

Principal The amount borrowed or invested. (p. E-1).

Simple interest The interest computed on the principal only. (p. E-1).

Illustration E-1
Interest computation

$$\text{Interest} = \underset{p}{\text{Principal}} \times \underset{i}{\text{Rate}} \times \underset{n}{\text{Time}}$$

For example, if you borrowed NT$5,000 for 2 years at a simple interest rate of 6% annually, you would pay NT$600 in total interest, computed as follows.

$$\begin{aligned} \text{Interest} &= p \times i \times n \\ &= \text{NT\$5,000} \times .06 \times 2 \\ &= \text{NT\$600} \end{aligned}$$

Compound Interest

Compound interest is computed on principal **and** on any interest earned that has not been paid or withdrawn. It is the return on (or growth of) the principal for two or more time periods. Compounding computes interest not only on the principal but also on the interest earned to date on that principal, assuming the interest is left on deposit.

To illustrate the difference between simple and compound interest, assume that you deposit €1,000 in Bank Two, where it will earn simple interest of 9% per year, and you deposit another €1,000 in Citizens Bank, where it will earn compound interest of 9% per year compounded annually. Also assume that in both cases you will not withdraw any cash until three years from the date of deposit. Illustration E-2 shows the computation of interest to be received and the accumulated year-end balances.

Illustration E-2
Simple versus compound interest

Bank Two		
Simple Interest Calculation	Simple Interest	Accumulated Year-End Balance
Year 1 €1,000.00 × 9%	€ 90.00	€1,090.00
Year 2 €1,000.00 × 9%	90.00	€1,180.00
Year 3 €1,000.00 × 9%	90.00	€1,270.00
	€ 270.00	

Citizens Bank		
Compound Interest Calculation	Compound Interest	Accumulated Year-End Balance
Year 1 €1,000.00 × 9%	€ 90.00	€1,090.00
Year 2 €1,090.00 × 9%	98.10	€1,188.10
Year 3 €1,188.10 × 9%	106.93	€1,295.03
	€ 295.03	

€25.03 Difference

Note in Illustration E-2 that simple interest uses the initial principal of €1,000 to compute the interest in all three years. Compound interest uses the accumulated balance (principal plus interest to date) at each year-end to compute interest in the succeeding year—which explains why your compound interest account is larger.

Obviously, if you had a choice between investing your money at simple interest or at compound interest, you would choose compound interest, all other things—especially risk—being equal. In the example, compounding provides €25.03 of additional interest income. For practical purposes, compounding assumes that unpaid interest earned becomes a part of the principal, and the accumulated balance at the end of each year becomes the new principal on which interest is earned during the next year.

Illustration E-2 indicates that you should invest your money at the bank that compounds interest. Most business situations use compound interest. Simple interest is generally applicable only to short-term situations of one year or less.

BRIEF EXERCISES

(Use tables to solve exercises BEE-1 to BEE-23.)

BEE-1 Randy Owen invested €9,000 at 5% annual interest, and left the money invested without withdrawing any of the interest for 15 years. At the end of the 15 years, Randy withdrew the accumulated amount of money. (a) What amount did Randy withdraw, assuming the investment earns simple interest? (b) What amount did Randy withdraw, assuming the investment earns interest compounded annually?

Compute the future value of a single amount. (LO 2)

BEE-2 For each of the following cases, indicate (a) to what interest rate columns and (b) to what number of periods you would refer in looking up the future value factor.

Use future value tables. (LO 2, 3)

(1) In Table 1 (future value of 1):

	Annual Rate	Number of Years Invested	Compounded
Case A	5%	3	Annually
Case B	12%	4	Semiannually

(2) In Table 2 (future value of an annuity of 1):

	Annual Rate	Number of Years Invested	Compounded
Case A	3%	8	Annually
Case B	8%	6	Semiannually

BEE-3 Joyce Ltd. signed a lease for an office building for a period of 8 years. Under the lease agreement, a security deposit of £8,400 is made. The deposit will be returned at the expiration of the lease with interest compounded at 4% per year. What amount will Joyce receive at the time the lease expires?

Compute the future value of a single amount. (LO 2)

BEE-4 Bates Company issued $1,000,000, 12-year bonds and agreed to make annual sinking fund deposits of $60,000. The deposits are made at the end of each year into an account paying 6% annual interest. What amount will be in the sinking fund at the end of 12 years?

Compute the future value of an annuity. (LO 3)

BEE-5 Frank and Maureen Fantazzi invested €8,000 in a savings account paying 5% annual interest when their daughter, Angela, was born. They also deposited €1,000 on each of her birthdays until she was 18 (including her 18th birthday). How much was in the savings account on her 18th birthday (after the last deposit)?

Compute the future value of a single amount and of an annuity. (LO 2, 3)

BEE-6 Hugh Curtin borrowed $35,000 on July 1, 2017. This amount plus accrued interest at 8% compounded annually is to be repaid on July 1, 2022. How much will Hugh have to repay on July 1, 2022?

Compute the future value of a single amount. (LO 2)

BEE-7 For each of the following cases, indicate (a) to what interest rate columns and (b) to what number of periods you would refer in looking up the discount rate.

Use present value tables. (LO 5, 6)

(1) In Table 3 (present value of 1):

	Annual Rate	Number of Years Involved	Discounts per Year
Case A	12%	7	Semiannually
Case B	8%	11	Annually
Case C	6%	8	Semiannually

(2) In Table 4 (present value of an annuity of 1):

	Annual Rate	Number of Years Involved	Number of Payments Involved	Frequency of Payments
Case A	10%	20	20	Annually
Case B	10%	7	7	Annually
Case C	8%	5	10	Semiannually

Determine present values.
(LO 5, 6)

BEE-8 (a) What is the present value of $25,000 due 9 periods from now, discounted at 10%?
(b) What is the present value of $25,000 to be received at the end of each of 6 periods, discounted at 9%?

Compute the present value of a single amount investment.
(LO 5)

BEE-9 Pingtung Ltd. is considering an investment that will return a lump sum of NT$750,000 eight years from now. What amount should Pingtung pay for this investment to earn an 5% return?

Compute the present value of a single amount investment.
(LO 5)

BEE-10 Lloyd Company earns 6% on an investment that will return $450,000 eight years from now. What is the amount Lloyd should invest now to earn this rate of return?

Compute the present value of an annuity investment.
(LO 6)

BEE-11 Arthur plc is considering investing in an annuity contract that will return £46,000 annually at the end of each year for 12 years. What amount should Arthur pay for this investment if it earns an 7% return?

Compute the present value of an annual investment.
(LO 6)

BEE-12 Kaehler Enterprises earns 5% on an investment that pays back $80,000 at the end of each of the next 6 years. What is the amount Kaehler invested to earn the 5% rate of return?

Compute the present value of bonds.
(LO 5, 6, 7)

BEE-13 Hanna Railroad Co. is about to issue €300,000 of 10-year bonds paying an 11% interest rate, with interest payable semiannually. The discount rate for such securities is 10%. How much can Hanna expect to receive for the sale of these bonds?

Compute the present value of bonds.
(LO 5, 6, 7)

BEE-14 Assume the same information as BEE-13 except that the discount rate is 12% instead of 10%. In this case, how much can Hanna expect to receive from the sale of these bonds?

Compute the present value of a note.
(LO 5, 6, 7)

BEE-15 Yilan Ltd. receives a NT$48,000, 5-year note bearing interest of 4% (paid annually) from a customer at a time when the discount rate is 6%. What is the present value of the note received by Yilan?

Compute the present value of bonds.
(LO 5, 6, 7)

BEE-16 Gleason Enterprises issued 6%, 8-year, $2,500,000 par value bonds that pay interest semiannually on October 1 and April 1. The bonds are dated April 1, 2017, and are issued on that date. The discount rate of interest for such bonds on April 1, 2017, is 8%. What cash proceeds did Gleason receive from issuance of the bonds?

Compute the present value of a machine for purposes of making a purchase decision.
(LO 6, 7)

BEE-17 Mark Barton owns a garage and is contemplating purchasing a tire retreading machine for $20,000. After estimating costs and revenues, Mark projects a net cash flow from the retreading machine of $3,200 annually for 8 years. Mark hopes to earn a return of 7% on such investments. What is the present value of the retreading operation? Should Mark purchase the retreading machine?

Compute the present value of a note.
(LO 6)

BEE-18 Frazier Company issues a 10%, 5-year mortgage note on January 1, 2017, to obtain financing for new equipment. Land is used as collateral for the note. The terms provide for semiannual installment payments of $48,850. What were the cash proceeds received from the issuance of the note?

Compute the maximum price to pay for a machine.
(LO 6, 7)

BEE-19 Wei Ltd. is considering purchasing equipment. The equipment will produce the following cash flows: Year 1, ¥40,000; Year 2, ¥43,000; and Year 3, ¥45,000. Wei requires a minimum rate of return of 8%. What is the maximum price Wei should pay for this equipment?

Compute the interest rate on a single amount.
(LO 5)

BEE-20 If Colleen Mooney invests $4,765.50 now and she will receive $12,000 at the end of 12 years, what annual rate of interest will Colleen earn on her investment? (*Hint:* Use Table 3.)

Compute the number of periods of a single amount.
(LO 5)

BEE-21 Wayne Kurt has been offered the opportunity of investing $31,681 now. The investment will earn 9% per year and at the end of that time will return Wayne $75,000. How many years must Wayne wait to receive $75,000? (*Hint:* Use Table 3.)

Compute the interest rate on an annuity.
(LO 6)

BEE-22 Joanne Quick made an investment of $10,271.38. From this investment, she will receive $1,200 annually for the next 15 years starting one year from now. What rate of interest will Joanne's investment be earning for her? (*Hint:* Use Table 4.)

BEE-23 Patty Schleis invests €6,673.16 now for a series of €1,400 annual returns beginning one year from now. Patty will earn a return of 7% on the initial investment. How many annual payments of €1,400 will Patty receive? (*Hint:* Use Table 4.)

Compute the number of payments of an annuity.
(LO 6)

BEE-24 Carly Simon wishes to invest $18,000 on July 1, 2017, and have it accumulate to $50,000 by July 1, 2027. Use a financial calculator to determine at what exact annual rate of interest Carly must invest the $18,000.

Determine interest rate.
(LO 9)

BEE-25 On July 17, 2017, James Taylor borrowed $66,000 from his grandfather to open a clothing store. Starting July 17, 2018, James has to make 8 equal annual payments of $11,225 each to repay the loan. Use a financial calculator to determine what interest rate James is paying.

Determine interest rate.
(LO 9)

BEE-26 As the purchaser of a new house, Carrie Underwood has signed a mortgage note to pay the Nashville National Bank and Trust Co. $8,400 every 6 months for 20 years, at the end of which time she will own the house. At the date the mortgage is signed, the purchase price was $198,000 and Underwood made a down payment of $20,000. The first payment will be made 6 months after the date the mortgage is signed. Using a financial calculator, compute the exact rate of interest earned on the mortgage by the bank.

Determine interest rate.
(LO 9)

BEE-27 Using a financial calculator, solve for the unknowns in each of the following situations.

(a) On June 1, 2016, Holly Golightly purchases lakefront property from her neighbor, George Peppard, and agrees to pay the purchase price in seven payments of $22,000 each, the first payment to be payable June 1, 2017. (Assume that interest compounded at an annual rate of 5.4% is implicit in the payments.) What is the purchase price of the property?

(b) On January 1, 2016, Sammis Corporation purchased 200 of the $1,000 face value, 7% coupon, 10-year bonds of Malone Inc. The bonds mature on January 1, 2026, and pay interest annually beginning January 1, 2017. Sammis purchased the bonds to yield 8.65%. How much did Sammis pay for the bonds?

Various time value of money situations.
(LO 9)

BEE-28 Using a financial calculator, provide a solution to each of the following situations.

(a) Lynn Anglin owes a debt of $42,000 from the purchase of her new sport utility vehicle. The debt bears annual interest of 7.8% compounded monthly. Lynn wishes to pay the debt and interest in equal monthly payments over 8 years, beginning one month hence. What equal monthly payments will pay off the debt and interest?

(b) On January 1, 2017, Roger Molony offers to buy Dave Feeney's used snowmobile for $8,000, payable in five equal annual installments, which are to include 7.25% interest on the unpaid balance and a portion of the principal. If the first payment is to be made on December 31, 2017, how much will each payment be?

Various time value of money situations.
(LO 9)

Future Value Concepts

Learning Objective 2

Solve for future value of a single amount.

Future Value of a Single Amount

The **future value of a single amount** is the value at a future date of a given amount invested, assuming compound interest. For example, in Illustration E-2, €1,295.03 is the future value of the €1,000 investment earning 9% for three years. The €1,295.03 is determined more easily by using the following formula.

Illustration E-3
Formula for future value

$$FV = p \times (1 + i)^n$$

where:

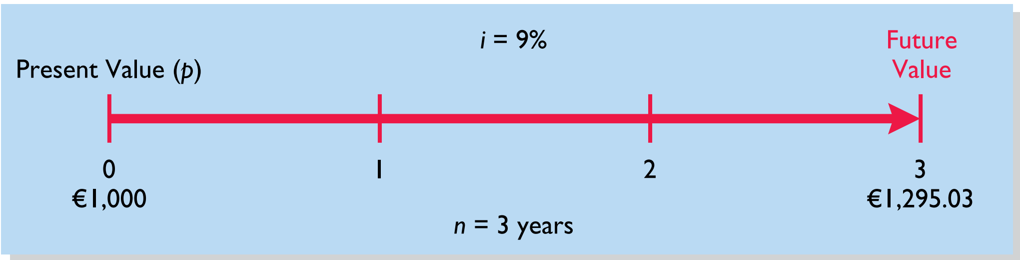
FV = future value of a single amount
p = principal (or present value; the value today)
i = interest rate for one period
n = number of periods

The €1,295.03 is computed as follows.

$$\begin{aligned} FV &= \quad p \quad \times (1 + i)^n \\ &= €1{,}000 \times (1 + .09)^3 \\ &= €1{,}000 \times 1.29503 \\ &= €1{,}295.03 \end{aligned}$$

The 1.29503 is computed by multiplying (1.09 × 1.09 × 1.09). The amounts in this example can be depicted in the time diagram shown in Illustration E-4.

Illustration E-4
Time diagram



Another method used to compute the future value of a single amount involves a compound interest table. This table shows the future value of 1 for n periods. Table 1 (page E-4) is such a table.

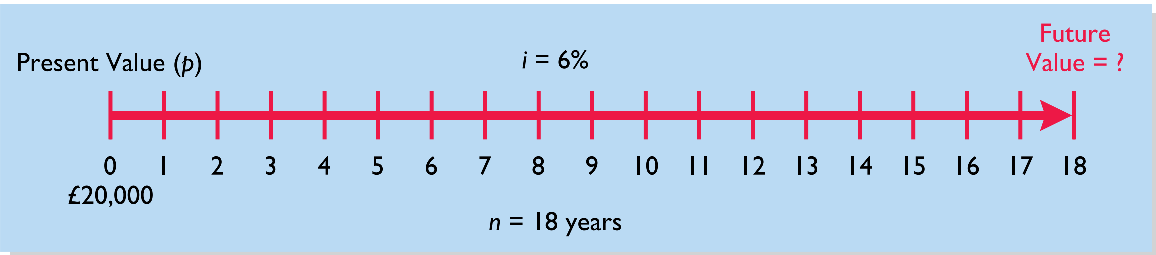
In Table 1, n is the number of compounding periods, the percentages are the periodic interest rates, and the 5-digit decimal numbers in the respective columns are the future value of 1 factors. To use Table 1, you multiply the principal amount by the future value factor for the specified number of periods and interest rate. For example, the future value factor for two periods at 9% is 1.18810. Multiplying this factor by €1,000 equals €1,188.10—which is the accumulated balance at the end of year 2 in the Citizens Bank example in Illustration E-2. The €1,295.03 accumulated balance at the end of the third year is calculated from Table 1 by multiplying the future value factor for three periods (1.29503) by the €1,000.

TABLE 1 Future Value of 1

(*n*) Periods	4%	5%	6%	7%	8%	9%	10%	11%	12%	15%
0	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
1	1.04000	1.05000	1.06000	1.07000	1.08000	1.09000	1.10000	1.11000	1.12000	1.15000
2	1.08160	1.10250	1.12360	1.14490	1.16640	1.18810	1.21000	1.23210	1.25440	1.32250
3	1.12486	1.15763	1.19102	1.22504	1.25971	1.29503	1.33100	1.36763	1.40493	1.52088
4	1.16986	1.21551	1.26248	1.31080	1.36049	1.41158	1.46410	1.51807	1.57352	1.74901
5	1.21665	1.27628	1.33823	1.40255	1.46933	1.53862	1.61051	1.68506	1.76234	2.01136
6	1.26532	1.34010	1.41852	1.50073	1.58687	1.67710	1.77156	1.87041	1.97382	2.31306
7	1.31593	1.40710	1.50363	1.60578	1.71382	1.82804	1.94872	2.07616	2.21068	2.66002
8	1.36857	1.47746	1.59385	1.71819	1.85093	1.99256	2.14359	2.30454	2.47596	3.05902
9	1.42331	1.55133	1.68948	1.83846	1.99900	2.17189	2.35795	2.55803	2.77308	3.51788
10	1.48024	1.62889	1.79085	1.96715	2.15892	2.36736	2.59374	2.83942	3.10585	4.04556
11	1.53945	1.71034	1.89830	2.10485	2.33164	2.58043	2.85312	3.15176	3.47855	4.65239
12	1.60103	1.79586	2.01220	2.25219	2.51817	2.81267	3.13843	3.49845	3.89598	5.35025
13	1.66507	1.88565	2.13293	2.40985	2.71962	3.06581	3.45227	3.88328	4.36349	6.15279
14	1.73168	1.97993	2.26090	2.57853	2.93719	3.34173	3.79750	4.31044	4.88711	7.07571
15	1.80094	2.07893	2.39656	2.75903	3.17217	3.64248	4.17725	4.78459	5.47357	8.13706
16	1.87298	2.18287	2.54035	2.95216	3.42594	3.97031	4.59497	5.31089	6.13039	9.35762
17	1.94790	2.29202	2.69277	3.15882	3.70002	4.32763	5.05447	5.89509	6.86604	10.76126
18	2.02582	2.40662	2.85434	3.37993	3.99602	4.71712	5.55992	6.54355	7.68997	12.37545
19	2.10685	2.52695	3.02560	3.61653	4.31570	5.14166	6.11591	7.26334	8.61276	14.23177
20	2.19112	2.65330	3.20714	3.86968	4.66096	5.60441	6.72750	8.06231	9.64629	16.36654

The demonstration problem in Illustration E-5 shows how to use Table 1.

John and Mary Rich invested £20,000 in a savings account paying 6% interest at the time their son, Mike, was born. The money is to be used by Mike for his college education. On his 18th birthday, Mike withdraws the money from his savings account. How much did Mike withdraw from his account?



Answer: The future value factor from Table 1 is 2.85434 (18 periods at 6%). The future value of £20,000 earning 6% per year for 18 years is **£57,086.80** (£20,000 × 2.85434).

Illustration E-5
Demonstration problem—Using Table 1 for *FV* of 1

Future Value of an Annuity

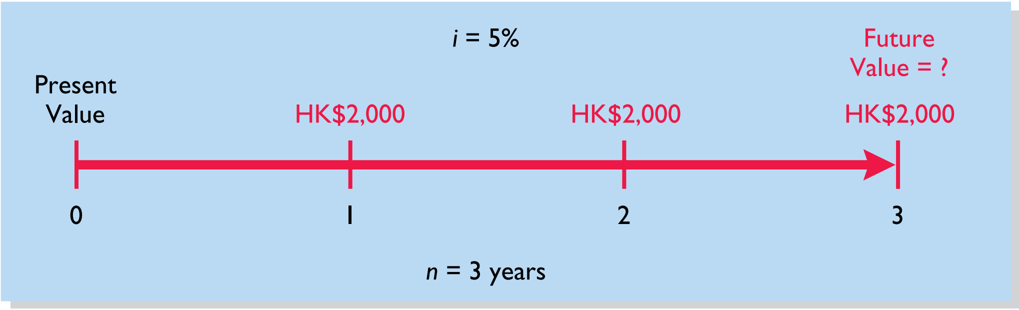
Learning Objective 3
Solve for future value of an annuity.

The preceding discussion involved the accumulation of only a single principal sum. Individuals and businesses frequently encounter situations in which a **series** of equal amounts are to be paid or received at evenly spaced time intervals (periodically), such as loans or lease (rental) contracts. A series of payments or receipts of equal amounts is referred to as an **annuity**.

The **future value of an annuity** is the sum of all the payments (receipts) plus the accumulated compound interest on them. In computing the future value of an annuity, it is necessary to know (1) the interest rate, (2) the number of payments (receipts), and (3) the amount of the periodic payments (receipts).

To illustrate the computation of the future value of an annuity, assume that you invest HK$2,000 at the end of each year for three years at 5% interest compounded annually. This situation is depicted in the time diagram in Illustration E-6.

Illustration E-6
Time diagram for a three-year annuity



The HK$2,000 invested at the end of year 1 will earn interest for two years (years 2 and 3), and the HK$2,000 invested at the end of year 2 will earn interest for one year (year 3). However, the last HK$2,000 investment (made at the end of year 3) will not earn any interest. Using the future value factors from Table 1, the future value of these periodic payments is computed as shown in Illustration E-7.

Illustration E-7
Future value of periodic payment computation

Invested at End of Year	Number of Compounding Periods	Amount Invested	×	Future Value of 1 Factor at 5%	=	Future Value
1	2	HK$2,000	×	1.10250		HK$ 2,205
2	1	HK$2,000	×	1.05000		2,100
3	0	HK$2,000	×	1.00000		2,000
				3.15250		**HK$6,305**

The first HK$2,000 investment is multiplied by the future value factor for two periods (1.1025) because two years' interest will accumulate on it (in years 2 and 3). The second HK$2,000 investment will earn only one year's interest (in year 3) and therefore is multiplied by the future value factor for one year (1.0500). The final HK$2,000 investment is made at the end of the third year and will not earn any interest. Thus, $n = 0$ and the future value factor is 1.00000. Consequently, the future value of the last HK$2,000 invested is only HK$2,000 since it does not accumulate any interest.

Calculating the future value of each individual cash flow is required when the periodic payments or receipts are not equal in each period. However, when the periodic payments (receipts) are **the same in each period**, the future value can be computed by using a future value of an annuity of 1 table. Table 2 (page E-6) is such a table.

TABLE 2 Future Value of an Annuity of 1

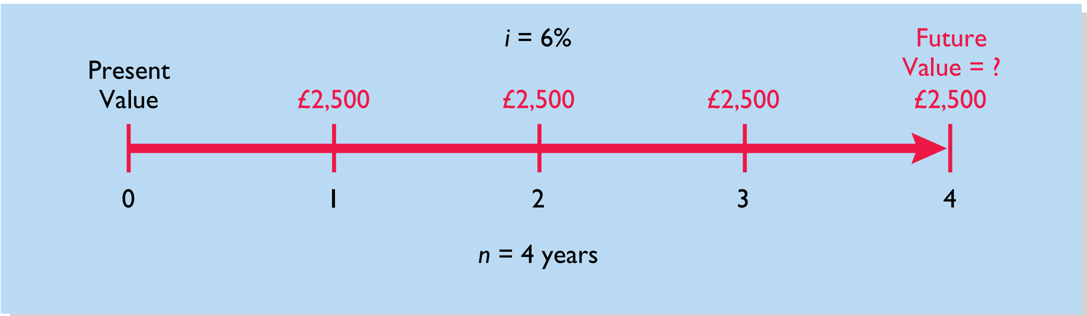
(*n*) Payments	4%	5%	6%	7%	8%	9%	10%	11%	12%	15%
1	1.00000	1.00000	1.00000	1.0000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
2	2.04000	2.05000	2.06000	2.0700	2.08000	2.09000	2.10000	2.11000	2.12000	2.15000
3	3.12160	3.15250	3.18360	3.2149	3.24640	3.27810	3.31000	3.34210	3.37440	3.47250
4	4.24646	4.31013	4.37462	4.4399	4.50611	4.57313	4.64100	4.70973	4.77933	4.99338
5	5.41632	5.52563	5.63709	5.7507	5.86660	5.98471	6.10510	6.22780	6.35285	6.74238
6	6.63298	6.80191	6.97532	7.1533	7.33592	7.52334	7.71561	7.91286	8.11519	8.75374
7	7.89829	8.14201	8.39384	8.6540	8.92280	9.20044	9.48717	9.78327	10.08901	11.06680
8	9.21423	9.54911	9.89747	10.2598	10.63663	11.02847	11.43589	11.85943	12.29969	13.72682
9	10.58280	11.02656	11.49132	11.9780	12.48756	13.02104	13.57948	14.16397	14.77566	16.78584
10	12.00611	12.57789	13.18079	13.8164	14.48656	15.19293	15.93743	16.72201	17.54874	20.30372
11	13.48635	14.20679	14.97164	15.7836	16.64549	17.56029	18.53117	19.56143	20.65458	24.34928
12	15.02581	15.91713	16.86994	17.8885	18.97713	20.14072	21.38428	22.71319	24.13313	29.00167
13	16.62684	17.71298	18.88214	20.1406	21.49530	22.95339	24.52271	26.21164	28.02911	34.35192
14	18.29191	19.59863	21.01507	22.5505	24.21492	26.01919	27.97498	30.09492	32.39260	40.50471
15	20.02359	21.57856	23.27597	25.1290	27.15211	29.36092	31.77248	34.40536	37.27972	47.58041
16	21.82453	23.65749	25.67253	27.8881	30.32428	33.00340	35.94973	39.18995	42.75328	55.71747
17	23.69751	25.84037	28.21288	30.8402	33.75023	36.97351	40.54470	44.50084	48.88367	65.07509
18	25.64541	28.13238	30.90565	33.9990	37.45024	41.30134	45.59917	50.39593	55.74972	75.83636
19	27.67123	30.53900	33.75999	37.3790	41.44626	46.01846	51.15909	56.93949	63.43968	88.21181
20	29.77808	33.06595	36.78559	40.9955	45.76196	51.16012	57.27500	64.20283	72.05244	102.44358

Table 2 shows the future value of 1 to be received periodically for a given number of payments. It assumes that each payment is made at the **end** of each period. We can see from Table 2 that the future value of an annuity of 1 factor for three payments at 5% is 3.15250. The future value factor is the total of the three individual future value factors as shown in Illustration E-7. Multiplying this amount by the annual investment of HK$2,000 produces a future value of HK$6,305.

The demonstration problem in Illustration E-8 shows how to use Table 2.

Illustration E-8
Demonstration problem—Using Table 2 for *FV* of an annuity of 1

John and Char Lewis' daughter, Debra, has just started high school. They decide to start a college fund for her and will invest £2,500 in a savings account at the end of each year she is in high school (4 payments total). The account will earn 6% interest compounded annually. How much will be in the college fund at the time Debra graduates from high school?



Answer: The future value factor from Table 2 is 4.37462 (4 payments at 6%). The future value of £2,500 invested each year for 4 years at 6% interest is **£10,936.55** (£2,500 × 4.37462).

Present Value Concepts

Learning Objective 4
Identify the variables fundamental to solving present value problems.

Present Value Variables

The **present value** is the value now of a given amount to be paid or received in the future, assuming compound interest. The present value, like the future value, is based on three variables: (1) the dollar amount to be received (future amount), (2) the length of time until the amount is received (number of periods), and (3) the interest rate (the discount rate). The process of determining the present value is referred to as **discounting the future amount**.

Present value computations are used in measuring many items. For example, the present value of principal and interest payments is used to determine the market price of a bond. Determining the amount to be reported for notes payable and lease liabilities also involves present value computations. In addition, capital budgeting and other investment proposals are evaluated using present value computations. Finally, all rate of return and internal rate of return computations involve present value techniques.

Present Value of a Single Amount

Learning Objective 5
Solve for present value of a single amount.

To illustrate present value, assume that you want to invest a sum of money today that will provide €1,000 at the end of one year. What amount would you need to invest today to have €1,000 one year from now? If you want a 10% rate of return, the investment or present value is €909.09 (€1,000 ÷ 1.10). The formula for calculating present value is shown in Illustration E-9.

Illustration E-9
Formula for present value

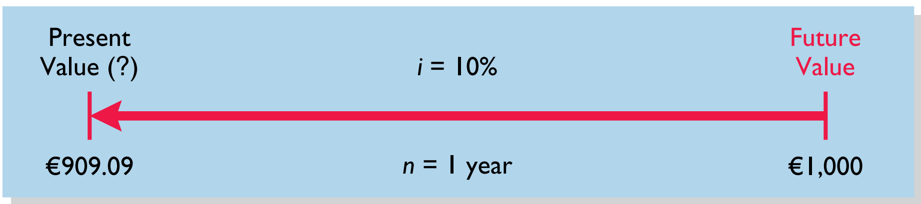
Present Value (PV) = Future Value (FV) ÷ (1 + i)^n

The computation of €1,000 discounted at 10% for one year is as follows.

$$\begin{aligned} PV &= \quad FV \quad \div (1 + i)^n \\ &= €1{,}000 \div (1 + .10)^1 \\ &= €1{,}000 \div 1.10 \\ &= €909.09 \end{aligned}$$

The future amount (€1,000), the discount rate (10%), and the number of periods (1) are known. The variables in this situation can be depicted in the time diagram in Illustration E-10.

Illustration E-10
Finding present value if discounted for one period



If the single amount of €1,000 is to be received **in two years** and discounted at 10% [PV = €1,000 ÷ (1 + .10)^2], its present value is €826.45 [(€1,000 ÷ 1.21), depicted in Illustration E-11.

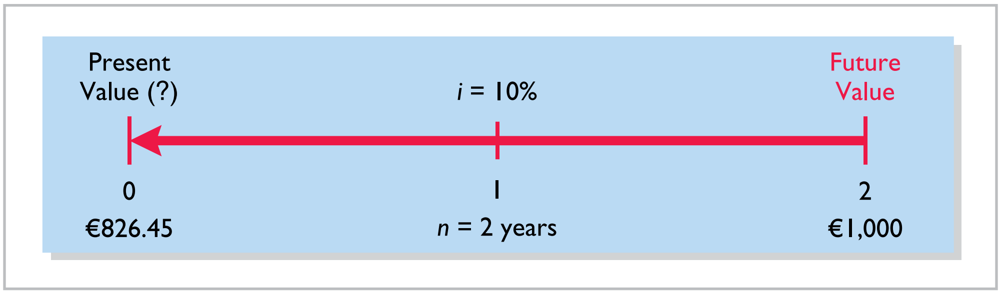


Illustration E-11
Finding present value if discounted for two periods

The present value of 1 may also be determined through tables that show the present value of 1 for *n* periods. In Table 3 below, *n* is the number of discounting periods involved. The percentages are the periodic interest rates or discount rates, and the 5-digit decimal numbers in the respective columns are the present value of 1 factors.

TABLE 3 Present Value of 1

(*n*) Periods	4%	5%	6%	7%	8%	9%	10%	11%	12%	15%
1	.96154	.95238	.94340	.93458	.92593	.91743	.90909	.90090	.89286	.86957
2	.92456	.90703	.89000	.87344	.85734	.84168	.82645	.81162	.79719	.75614
3	.88900	.86384	.83962	.81630	.79383	.77218	.75132	.73119	.71178	.65752
4	.85480	.82270	.79209	.76290	.73503	.70843	.68301	.65873	.63552	.57175
5	.82193	.78353	.74726	.71299	.68058	.64993	.62092	.59345	.56743	.49718
6	.79031	.74622	.70496	.66634	.63017	.59627	.56447	.53464	.50663	.43233
7	.75992	.71068	.66506	.62275	.58349	.54703	.51316	.48166	.45235	.37594
8	.73069	.67684	.62741	.58201	.54027	.50187	.46651	.43393	.40388	.32690
9	.70259	.64461	.59190	.54393	.50025	.46043	.42410	.39092	.36061	.28426
10	.67556	.61391	.55839	.50835	.46319	.42241	.38554	.35218	.32197	.24719
11	.64958	.58468	.52679	.47509	.42888	.38753	.35049	.31728	.28748	.21494
12	.62460	.55684	.49697	.44401	.39711	.35554	.31863	.28584	.25668	.18691
13	.60057	.53032	.46884	.41496	.36770	.32618	.28966	.25751	.22917	.16253
14	.57748	.50507	.44230	.38782	.34046	.29925	.26333	.23199	.20462	.14133
15	.55526	.48102	.41727	.36245	.31524	.27454	.23939	.20900	.18270	.12289
16	.53391	.45811	.39365	.33873	.29189	.25187	.21763	.18829	.16312	.10687
17	.51337	.43630	.37136	.31657	.27027	.23107	.19785	.16963	.14564	.09293
18	.49363	.41552	.35034	.29586	.25025	.21199	.17986	.15282	.13004	.08081
19	.47464	.39573	.33051	.27615	.23171	.19449	.16351	.13768	.11611	.07027
20	.45639	.37689	.31180	.25842	.21455	.17843	.14864	.12403	.10367	.06110

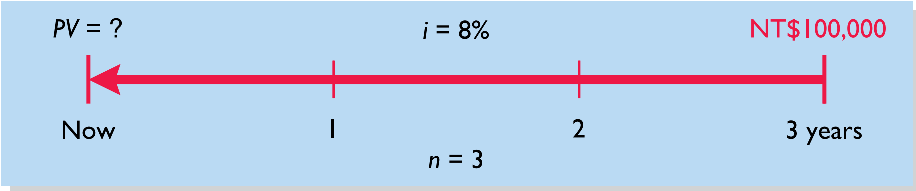
When using Table 3, the future value is multiplied by the present value factor specified at the intersection of the number of periods and the discount rate. For example, the present value factor for one period at a discount rate of 10% is .90909, which equals the €909.09 (€1,000 × .90909) computed in Illustration E-10. For two periods at a discount rate of 10%, the present value factor is .82645, which equals the €826.45 (€1,000 × .82645) computed previously.

Note that a higher discount rate produces a smaller present value. For example, using a 15% discount rate, the present value of €1,000 due one year from now is €869.57, versus €909.09 at 10%. Also note that the further removed from the present the future value is, the smaller the present value. For example, using the same discount rate of 10%, the present value of €1,000 due in **five years** is €620.92. The present value of €1,000 due in **one year** is €909.09, a difference of €288.17.

The following two demonstration problems (Illustrations E-12 and E-13) illustrate how to use Table 3.

Illustration E-12
Demonstration problem—Using Table 3 for *PV* of 1

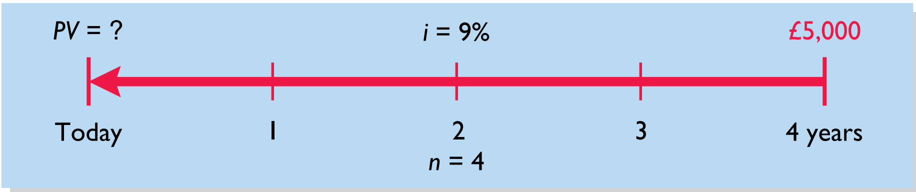
Suppose you have a winning lottery ticket. You have the option of taking NT$100,000 three years from now or taking the present value of NT$100,000 now. Assuming an 8% rate in discounting, how much will you receive if you accept your winnings now?



Answer: The present value factor from Table 3 is .79383 (3 periods at 8%). The present value of NT$100,000 to be received in 3 years discounted at 8% is **NT$79,383** (NT$100,000 × .79383).

Illustration E-13
Demonstration problem—Using Table 3 for *PV* of 1

Determine the amount you must deposit today in your super savings account, paying 9% interest, in order to accumulate £5,000 for a down payment 4 years from now on a new car.



Answer: The present value factor from Table 3 is .70843 (4 periods at 9%). The present value of £5,000 to be received in 4 years discounted at 9% is **£3,542.15** (£5,000 × .70843).

Present Value of an Annuity

Learning Objective 6
Solve for present value of an annuity.

The preceding discussion involved the discounting of only a single future amount. Businesses and individuals frequently engage in transactions in which a series of equal amounts are to be received or paid at evenly spaced time intervals (periodically). Examples of a series of periodic receipts or payments are loan agreements, installment sales, mortgage notes, lease (rental) contracts, and pension obligations. As discussed earlier, these periodic receipts or payments are **annuities**.

The **present value of an annuity** is the value now of a series of future receipts or payments, discounted assuming compound interest. In computing the present value of an annuity, it is necessary to know (1) the discount rate, (2) the number of payments (receipts), and (3) the amount of the periodic payments or receipts. To illustrate the computation of the present value of an annuity, assume that you

APPENDIX

F | Accounting for Partnerships

LEARNING OBJECTIVES

After studying this appendix, you should be able to:

1. Identify the characteristics of the partnership form of business organization.
2. Explain the accounting entries for the formation of a partnership.
3. Identify the bases for dividing net income or net loss.
4. Describe the form and content of partnership financial statements.
5. Explain the effects of the entries to record the liquidation of a partnership.

APPENDIX PREVIEW

In this appendix, we discuss reasons why businesses select the partnership form of organization. We also explain the major issues in accounting for partnerships.

Partnership Form of Organization

Learning Objective 1

Identify the characteristics of the partnership form of business organization.

A **partnership** is an association of two or more persons to carry on as co-owners of a business for profit. Partnerships are common in retail establishments and in small manufacturing companies. Also, accountants, lawyers, and doctors find it desirable to form partnerships with other professionals in their field. Professional partnerships vary in size from a medical partnership of 3 to 5 doctors, to 150 to 200 partners in a large law firm, to more than 2,000 partners in an international accounting firm.

Characteristics of Partnerships

Partnerships are fairly easy to form. They can be formed simply by a verbal agreement or, more formally, by putting in writing the rights and obligations of the partners. Partners who have not put their agreement in writing sometimes have found that the characteristics of partnerships can lead to later difficulties. The principal characteristics of the partnership form of business organization are shown in Illustration F-1 and explained in the following sections.

ASSOCIATION OF INDIVIDUALS

The voluntary association of two or more individuals in a partnership may be based on as simple an act as a handshake. However, it is preferable to state the agreement in writing. In many jurisdictions, a partnership is a legal entity for certain purposes. For instance, property (land, buildings, equipment) can be owned in the name of the partnership, and the firm can sue or be sued. **A partnership is also an accounting entity for financial reporting purposes.** Thus,

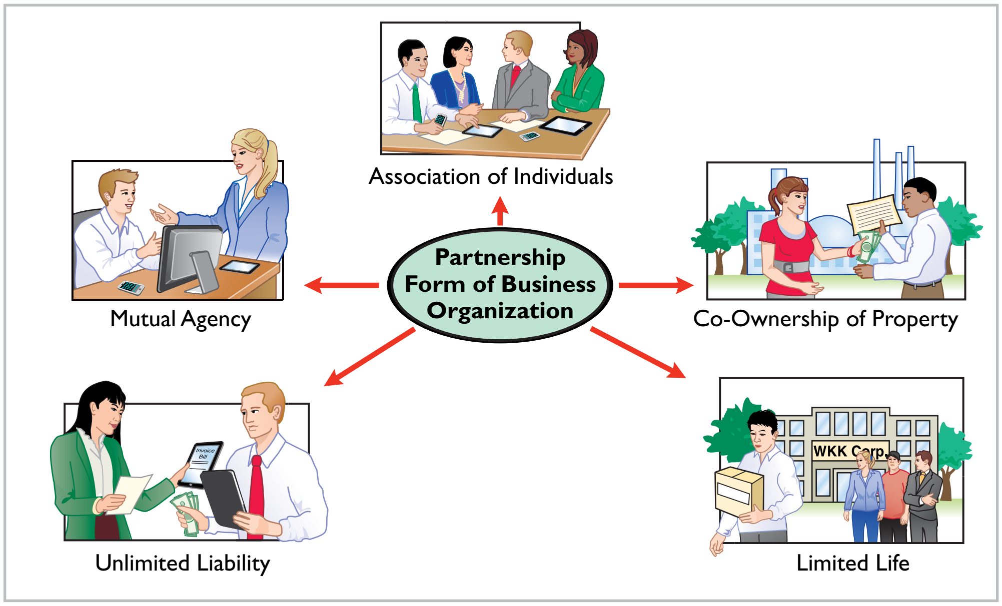


Illustration F-1
Partnership characteristics

the purely personal assets, liabilities, and transactions of the partners are excluded from the accounting records of the partnership.

The net income of a partnership is not taxed as a separate entity. But, a partnership must file an information tax return showing partnership net income and each partner's share of that net income. Each partner's share is taxable at personal tax rates, regardless of the amount of net income withdrawn from the business during the year.

MUTUAL AGENCY

Mutual agency means that each partner acts on behalf of the partnership when engaging in partnership business. The act of any partner is binding on all other partners. This is true even when partners act beyond the scope of their authority, so long as the act appears to be appropriate for the partnership. For example, a partner of a grocery store who purchases a delivery truck creates a binding contract in the name of the partnership, even if the partnership agreement denies this authority. On the other hand, if a partner in a law firm purchased a snowmobile for the partnership, such an act would not be binding on the partnership. The purchase is clearly outside the scope of partnership business.

• HELPFUL HINT
Because of mutual agency, an individual should be extremely cautious in selecting partners.

LIMITED LIFE

A partnership does not have unlimited life. It may be ended voluntarily at any time through the acceptance of a new partner or the withdrawal of a partner. A partnership may be ended involuntarily by the death or incapacity of a partner. Thus, the life of a partnership is indefinite. **Partnership dissolution** occurs whenever a partner withdraws or a new partner is admitted. Dissolution of a partnership does not necessarily mean that the business ends. If the continuing partners agree, operations can continue without interruption by forming a new partnership.

UNLIMITED LIABILITY

Each partner is **personally and individually liable** for all partnership liabilities. Creditors' claims attach first to partnership assets. If these are insufficient, the claims then attach to the personal resources of any partner, irrespective of that partner's equity in the partnership. Because each partner is responsible for all the debts of the partnership, each partner is said to have **unlimited liability**.

CO-OWNERSHIP OF PROPERTY

Partnership assets are owned jointly by the partners. If the partnership is dissolved, the assets do not legally revert to the original contributor. Each partner has a claim on total assets equal to the balance in his or her respective capital account. This claim does not attach to specific assets that an individual partner contributed to the firm. Similarly, if a partner invests a building in the partnership valued at €100,000 and the building is later sold at a gain of €20,000, that partner does not personally receive the entire gain.

Partnership net income (or net loss) is also co-owned. **If the partnership contract does not specify to the contrary, all net income or net loss is shared equally by the partners.** As you will see later, though, partners may agree to unequal sharing of net income or net loss.

Organizations with Partnership Characteristics

With surprising speed, special forms of business organizations have been created that have partnership characteristics. These new organizations are being adopted by many small companies. Examples of these special forms are limited partnerships, limited liability partnerships, limited liability companies, and "S" corporations.

LIMITED PARTNERSHIPS

In a **limited partnership**, one or more partners have **unlimited liability** and one or more partners have **limited liability** for the debts of the firm. Those with unlimited liability are called **general partners**. Those with limited liability are called **limited partners**. Limited partners are responsible for the debts of the partnership up to the limit of their investment in the firm. This organization is identified in its name with the words "Limited Partnership" or "Ltd." or "LP." For the privilege of limited liability, the limited partner usually accepts less compensation than a general partner and exercises less influence in the affairs of the firm.

LIMITED LIABILITY PARTNERSHIP

A **limited liability partnership**, or "LLP," is designed to protect innocent partners from malpractice or negligence claims resulting from the acts of another partner. LLPs generally carry large insurance policies in case the partnership is guilty of malpractice.

LIMITED LIABILITY COMPANIES

A newer, hybrid form of business organization with certain features like a corporation and others like a limited partnership is the **limited liability company**, or "LLC" (or "LC"). An LLC usually has a limited life. The owners, called **members**, have limited liability like owners of a corporation. Whereas limited partners do not actively participate in the management of a limited partnership (LP), the members of a limited liability company (LLC) can assume an active management role. Most taxing authorities usually classify an LLC as a partnership.

"S" CORPORATIONS

An **"S" corporation** is a corporation that is taxed in the same way that a partnership is taxed. To qualify as an "S" corporation, the company usually is limited to 75 or fewer shareholders, all of whom must be citizens or residents of the country. The advantage of an "S" corporation (also called a subchapter "S" corporation) is that, like a partnership and unlike a corporation, it does not pay income taxes.

Advantages and Disadvantages of Partnerships

Why do people choose partnerships? One major advantage of a partnership is that the **skills and resources of two or more individuals can be combined**. For example, a large public accounting firm such as Ernst & Young (GBR) must have expertise in auditing, taxation, and management consulting. In addition, a partnership is **easily formed and is relatively free from governmental regulations and restrictions**. A partnership does not have to contend with the "red tape" that a corporation must face. Also, decisions can be made quickly on substantive matters affecting the firm; there is no board of directors that must be consulted.

On the other hand, partnerships also have some major disadvantages: **mutual agency**, **limited life**, and **unlimited liability**. Unlimited liability is particularly troublesome. Many individuals fear they may lose not only their initial investment but also their personal assets if those assets are needed to pay partnership creditors. As a result, partnerships often find it difficult to obtain large amounts of investment capital. That is one reason why the largest businesses in the United States are corporations, not partnerships.

The advantages and disadvantages of the partnership form of business organization are summarized in Illustration F-2.

Illustration F-2
Advantages and disadvantages of a partnership

Advantages	Disadvantages
Combining skills and resources of two or more individuals	Mutual agency
Ease of formation	Limited life
Freedom from governmental regulations and restrictions	Unlimited liability
Ease of decision-making	

The Partnership Agreement

Ideally, the agreement of two or more individuals to form a partnership should be expressed in writing. This written contract is often called the **partnership agreement** or **articles of co-partnership**. The partnership agreement contains such basic information as the name and principal location of the firm, the purpose of the business, and date of inception. In addition, relationships among the partners should be specified, such as:

1. Names and capital contributions of partners.
2. Rights and duties of partners.
3. Basis for sharing net income or net loss.
4. Provision for withdrawals of assets.
5. Procedures for submitting disputes to arbitration.
6. Procedures for the withdrawal or addition of a partner.
7. Rights and duties of surviving partners in the event of a partner's death.

We cannot overemphasize the importance of a written contract. The agreement should be drawn with care and should attempt to anticipate all possible situations, contingencies, and disagreements. The help of a lawyer is highly desirable in preparing the agreement.

Basic Partnership Accounting

Learning Objective 2
Explain the accounting entries for the formation of a partnership.

We now turn to the basic accounting for partnerships. The major accounting issues relate to forming the partnership, dividing income or loss, and preparing financial statements.

Forming a Partnership

Each partner's initial investment in a partnership is entered in the partnership records. These investments should be recorded at the **fair value of the assets at**

the date of their transfer to the partnership. The values assigned must be agreed to by all of the partners.

To illustrate, assume that A. Rolfe and T. Shea combine their proprietorships to start a partnership named U.K. Software. The firm will specialize in developing financial modeling software packages. Rolfe and Shea have the following assets prior to the formation of the partnership.

Illustration F-3
Book and fair values of assets invested

	Book Value		Fair Value	
	A. Rolfe	**T. Shea**	**A. Rolfe**	**T. Shea**
Cash	£ 8,000	£ 9,000	**£ 8,000**	**£ 9,000**
Equipment	5,000		**4,000**	
Accumulated depreciation—equipment	(2,000)			
Accounts receivable		4,000		**4,000**
Allowance for doubtful accounts		(700)		**(1,000)**
	£11,000	£12,300	**£12,000**	**£12,000**

The entries to record the investments are:

A = L + E
+8,000
+4,000
+12,000
Cash Flows
+8,000

Investment of A. Rolfe

Cash	8,000	
Equipment	4,000	
A. Rolfe, Capital		12,000
(To record investment of Rolfe)		

A = L + E
+9,000
+4,000
−1,000
+12,000
Cash Flows
+9,000

Investment of T. Shea

Cash	9,000	
Accounts Receivable	4,000	
Allowance for Doubtful Accounts		1,000
T. Shea, Capital		12,000
(To record investment of Shea)		

Note that neither the original cost of the equipment (£5,000) nor its book value (£5,000 − £2,000) is recorded by the partnership. The equipment is recorded at its fair value, £4,000. Because the equipment has not been used by the partnership, there is no accumulated depreciation.

In contrast, the gross claims on customers (£4,000) are carried forward to the partnership. The allowance for doubtful accounts is adjusted to £1,000 to arrive at a cash (net) realizable value of £3,000. A partnership may start with an allowance for doubtful accounts because it will continue to collect existing accounts receivable, some of which are expected to be uncollectible. In addition, this procedure maintains the control and subsidiary relationship between Accounts Receivable and the accounts receivable subsidiary ledger.

After the partnership has been formed, the accounting for transactions is similar to any other type of business organization. For example, all transactions with outside parties, such as the purchase or sale of merchandise inventory and the payment or receipt of cash, should be recorded the same for a partnership as for a corporation.

The steps in the accounting cycle described in Chapter 4 also apply to a partnership. For example, the partnership prepares a trial balance and journalizes and posts adjusting entries. A worksheet may be used. There are minor differences in journalizing and posting closing entries and in preparing financial statements, as explained in the following sections.

Dividing Net Income or Net Loss

Learning Objective 3
Identify the bases for dividing net income or net loss.

Partnership net income or net loss is shared equally unless the partnership contract indicates otherwise. The same basis of division usually applies to both net income and net loss. It is customary to refer to this basis as the **income ratio**, the **income and loss ratio**, or the **profit and loss (P&L) ratio**. Because of its wide acceptance, we will use the term **income ratio** to identify the basis for dividing net income and net loss. A partner's share of net income or net loss is recognized in the capital accounts through closing entries.

CLOSING ENTRIES

Four entries are required in preparing closing entries for a partnership. The entries are:

1. Debit each revenue account for its balance, and credit Income Summary for total revenues.
2. Debit Income Summary for total expenses, and credit each expense account for its balance.
3. Debit Income Summary for its balance, and credit each partner's capital account for his or her share of net income. Or, credit Income Summary, and debit each partner's capital account for his or her share of net loss.
4. Debit each partner's capital account for the balance in that partner's drawing account, and credit each partner's drawing account for the same amount.

The first two entries are the same as in a corporation. The last two entries are different because (1) there are two or more owners' capital and drawing accounts, and (2) it is necessary to divide net income (or net loss) among the partners.

To illustrate the last two closing entries, assume that AB Company has net income of £32,000 for 2017. The partners, L. Arbor and D. Barnett, share net income and net loss equally. Drawings for the year were Arbor £8,000 and Barnett £6,000. The last two closing entries are:

Dec. 31	Income Summary	32,000	
	L. Arbor, Capital (£32,000 × 50%)		16,000
	D. Barnett, Capital (£32,000 × 50%)		16,000
	(To transfer net income to partners' capital accounts)		
31	L. Arbor, Capital	8,000	
	D. Barnett, Capital	6,000	
	L. Arbor, Drawing		8,000
	D. Barnett, Drawing		6,000
	(To close drawing accounts to capital accounts)		

Assume that the beginning capital balance is £47,000 for Arbor and £36,000 for Barnett. The capital and drawing accounts will show the following after posting the closing entries.

Illustration F-4
Partners' capital and drawing accounts after closing

L. Arbor, Capital

Debit	Credit
12/31 Clos. 8,000	1/1 Bal. 47,000
	12/31 Clos. 16,000
	12/31 Bal. 55,000

D. Barnett, Capital

Debit	Credit
12/31 Clos. 6,000	1/1 Bal. 36,000
	12/31 Clos. 16,000
	12/31 Bal. 46,000

L. Arbor, Drawing

Debit	Credit
12/31 Bal. 8,000	12/31 Clos. 8,000

D. Barnett, Drawing

Debit	Credit
12/31 Bal. 6,000	12/31 Clos. 6,000

The partners' capital accounts are permanent accounts; their drawing accounts are temporary accounts. Normally, the capital accounts will have credit balances and the drawing accounts will have debit balances. Drawing accounts are debited when partners withdraw cash or other assets from the partnership for personal use.

INCOME RATIOS

As noted earlier, the partnership agreement should specify the basis for sharing net income or net loss. The following are typical income ratios.

1. A fixed ratio, expressed as a proportion (6:4), a percentage (70% and 30%), or a fraction (2/3 and 1/3).
2. A ratio based either on capital balances at the beginning of the year or on average capital balances during the year.
3. Salaries to partners and the remainder on a fixed ratio.
4. Interest on partners' capital balances and the remainder on a fixed ratio.
5. Salaries to partners, interest on partners' capital, and the remainder on a fixed ratio.

The objective is to settle on a basis that will equitably reflect the partners' capital investment and service to the partnership.

A fixed ratio is easy to apply, and it may be an equitable basis in some circumstances. Assume, for example, that Hughes and Lane are partners. Each contributes the same amount of capital, but Hughes expects to work full-time in the partnership and Lane expects to work only half-time. Accordingly, the partners agree to a fixed ratio of 2/3 to Hughes and 1/3 to Lane.

A ratio based on capital balances may be appropriate when the funds invested in the partnership are considered the critical factor. Capital ratios may also be equitable when a manager is hired to run the business and the partners do not plan to take an active role in daily operations.

The three remaining ratios (items 3, 4, and 5) give specific recognition to differences among partners. These ratios provide salary allowances for time worked and interest allowances for capital invested. Then, any remaining net income or net loss is allocated on a fixed ratio. Some caution needs to be exercised in working with these types of income ratios. These ratios pertain exclusively to **the computations that are required in dividing net income or net loss** among the partners.

Salaries to partners and interest on partners' capital are not expenses of the partnership. Therefore, these items do not enter into the matching of expenses with revenues and the determination of net income or net loss. For a partnership, as for other entities, salaries expense pertains to the cost of services performed by employees. Likewise, interest expense relates to the cost of borrowing from creditors. But partners, as owners, are not considered either **employees** or **creditors**. Therefore, when the income ratio includes a salary allowance for partners, some partnership agreements permit the partner to make monthly withdrawals of cash based on their "salary." Such withdrawals are debited to the partner's drawing account.

SALARIES, INTEREST, AND REMAINDER ON A FIXED RATIO

Under income ratio (5) in the list above, the provisions for salaries and interest must be applied **before** the remainder is allocated on the specified fixed ratio. **This is true even if the provisions exceed net income. It is also true even if the partnership has suffered a net loss for the year.** Detailed information concerning the division of net income or net loss should be shown below net income on the income statement.

To illustrate this income ratio, assume that Sara King and Ray Lee are copartners in Kingslee Company. The partnership agreement provides for (1) salary allowances of €8,400 to King and €6,000 to Lee, (2) interest allowances of 10% on capital balances at the beginning of the year, and (3) dividing the remainder equally. Capital balances on January 1 were King €28,000, and Lee €24,000. In 2017, partnership net income is €22,000. The division of net income is as follows.

Illustration F-5
Income statement with division of net income

KINGSLEE COMPANY
Income Statement (partial)
For the Year Ended December 31, 2017

Sales revenue	€200,000
Net income	€ 22,000

Division of Net Income

	Sara King	Ray Lee	Total
Salary allowance	€ 8,400	€6,000	€14,400
Interest allowance on partners' capital			
Sara King (€28,000 × 10%)	2,800		
Ray Lee (€24,000 × 10%)		2,400	
Total interest allowance			5,200
Total salaries and interest	11,200	8,400	19,600
Remaining income, €2,400			
(€22,000 − €19,600)			
Sara King (€2,400 × 50%)	1,200		
Ray Lee (€2,400 × 50%)		1,200	
Total remainder			2,400
Total division of net income	**€12,400**	**€9,600**	**€22,000**

The entry to record the division of net income is:

Dec. 31	Income Summary	22,000	
	Sara King, Capital		12,400
	Ray Lee, Capital		9,600
	(To close net income to partners' capital)		

A	=	L	+	E
				−22,000
				+12,400
				+9,600

Cash Flows
no effect

Now let's look at a situation in which the salary and interest allowances exceed net income. Assume that Kingslee's net income is only €18,000. In this case, the salary and interest allowances will create a deficiency of €1,600 (€19,600 − €18,000). The computations of the allowances are the same as those in the preceding example. Beginning with total salaries and interest, we complete the division of net income as follows.

Illustration F-6
Division of net income—income deficiency

	Sara King	Ray Lee	Total
Total salaries and interest	€ 11,200	€ 8,400	€ 19,600
Remaining deficiency (€1,600)			
(€18,000 − €19,600)			
Sara King (€1,600 × 50%)	(800)		
Ray Lee (€1,600 × 50%)		(800)	
Total remainder			(1,600)
Total division	**€10,400**	**€7,600**	**€18,000**

Partnership Financial Statements

Learning Objective 4

Describe the form and content of partnership financial statements.

The financial statements of a partnership are similar to those of a corporation. The income statement for a partnership is identical to the income statement for a corporation except for the additional section that reports the division of net income, as shown earlier.

The statement of changes in equity for a partnership is called the **partners' capital statement**. Its function is to explain the changes in each partner's capital account and in total partnership capital during the year. The partners' capital statement for Kingslee Company is shown below. It is based on the division of €22,000 of net income in Illustration F-5 (page F-8). The statement includes assumed data for the additional investment and drawings.

Illustration F-7
Partners' capital statement

KINGSLEE COMPANY
Partners' Capital Statement
For the Year Ended December 31, 2017

	Sara King	Ray Lee	Total
Capital, January 1	€ 28,000	€ 24,000	€ 52,000
Add: Additional investment	2,000		2,000
Net income	12,400	9,600	22,000
	42,400	33,600	76,000
Less: Drawings	7,000	5,000	12,000
Capital, December 31	**€35,400**	**€28,600**	**€64,000**

• HELPFUL HINT
Partners' capital may change due to (1) additional investment, (2) drawings, and (3) net income or net loss.

The partners' capital statement is prepared from the income statement and the partners' capital and drawing accounts.

The statement of financial position for a partnership is the same as for a corporation except for the equity section. In a partnership, the capital balances of each partner are shown in the statement of financial position. The equity section for Kingslee is shown in Illustration F-8.

Illustration F-8
Equity section of a partnership statement of financial position

KINGSLEE COMPANY
Statement of Financial Position (partial)
December 31, 2017

Equity		
Sara King, Capital	€35,400	
Ray Lee, Capital	28,600	
Total equity		€ 64,000
Total liabilities (assumed amount)		115,000
Total equity and liabilities		€179,000

Admission and Withdrawal of Partners

We have seen how the basic accounting for a partnership works. Another issue relates to the accounting for the addition or withdrawal of a partner. From an economic standpoint, the admission or withdrawal of a partner is often of minor significance in the continuity of the business. For example, in large public accounting or law firms, partners are added or dropped without any change in operating policies. Because the accounting for the admission or withdrawal of a partner is complex, it is discussed in more advanced accounting courses.

Liquidation of a Partnership

Learning Objective 5

Explain the effects of the entries to record the liquidation of a partnership.

The liquidation of a partnership terminates the business. It involves selling the assets of the firm, paying liabilities, and distributing any remaining assets to the partners. Liquidation may result from the sale of the business by mutual agreement of the partners, from the death of a partner, or from bankruptcy. In contrast to partnership dissolution, **partnership liquidation** ends both the legal and economic life of the entity.

From an accounting standpoint, liquidation should be preceded by completing the accounting cycle for the final operating period. This includes preparing adjusting entries and financial statements. It also involves preparing closing entries and a post-closing trial balance. Thus, only statement of financial position accounts should be open as the liquidation process begins.

In liquidation, the sale of non-cash assets for cash is called **realization**. Any difference between book value and the cash proceeds is called the **gain or loss on realization**. To liquidate a partnership, it is necessary to:

1. Sell non-cash assets for cash and recognize a gain or loss on realization.
2. Allocate gain/loss on realization to the partners based on their income ratios.
3. Pay partnership liabilities in cash.
4. Distribute remaining cash to partners on the basis of their **capital balances**.

Each of the steps must be performed in sequence. Creditors must be paid **before** partners receive any cash distributions. Each step also must be recorded by an accounting entry.

When a partnership is liquidated, all partners may have credit balances in their capital accounts. This situation is called **no capital deficiency**. Or, at least one partner's capital account may have a debit balance. This situation is termed a **capital deficiency**. To illustrate each of these conditions, assume that the Ace Company is liquidated when its ledger shows the assets, liabilities, and equity accounts listed in Illustration F-9.

Illustration F-9
Account balances prior to liquidation

Assets		Equity and Liabilities	
Inventory	€18,000	R. Arnet, Capital	€15,000
Equipment	35,000	P. Carey, Capital	17,800
Accum. depr.—equipment	(8,000)	W. Eaton, Capital	1,200
Accounts receivable	15,000	Accounts payable	16,000
Cash	5,000	Notes payable	15,000
	€65,000		€65,000

No Capital Deficiency

The partners of Ace Company agree to liquidate the partnership on the following terms. (1) The non-cash assets of the partnership will be sold to Jackson Enterprises for €75,000 cash. (2) The partnership will pay its partnership liabilities. The income ratios of the partners are 3:2:1, respectively. The steps in the liquidation process are as follows.

1. The non-cash assets (accounts receivable, inventory, and equipment) are sold for €75,000. The book value of these assets is €60,000 (€15,000 + €18,000 + €35,000 − €8,000). Thus, a gain of €15,000 is realized on the sale. The entry is:

A	= L	+ E
+75,000		
+8,000		
−15,000		
−18,000		
−35,000		
		+15,000

Cash Flows
+75,000

(1)

Cash	75,000	
Accumulated Depreciation—Equipment	8,000	
Accounts Receivable		15,000
Inventory		18,000
Equipment		35,000
Gain on Realization		15,000
(To record realization of non-cash assets)		

2. The gain on realization of €15,000 is allocated to the partners on their income ratios, which are 3:2:1. The entry is:

A	= L	+ E
		−15,000
		+7,500
		+5,000
		+2,500

Cash Flows
no effect

(2)

Gain on Realization	15,000	
R. Arnet, Capital (€15,000 × 3/6)		7,500
P. Carey, Capital (€15,000 × 2/6)		5,000
W. Eaton, Capital (€15,000 × 1/6)		2,500
(To allocate gain to partners' capital accounts)		

3. Partnership liabilities consist of Notes Payable €15,000 and Accounts Payable €16,000. Creditors are paid in full by a cash payment of €31,000. The entry is:

A	= L	+ E
	−15,000	
	−16,000	
−31,000		

Cash Flows
−31,000

(3)

Notes Payable	15,000	
Accounts Payable	16,000	
Cash		31,000
(To record payment of partnership liabilities)		

4. The remaining cash is distributed to the partners on the basis of **their capital balances**. After the entries in the first three steps are posted, all partnership accounts, including Gain on Realization, will have zero balances except for four accounts: Cash €49,000; R. Arnet, Capital €22,500; P. Carey, Capital €22,800; and W. Eaton, Capital €3,700, as shown in Illustration F-10.

Illustration F-10
Ledger balances before distribution of cash

Cash		R. Arnet, Capital		P. Carey, Capital		W. Eaton, Capital	
Bal. 5,000	(3) 31,000		Bal. 15,000		Bal. 17,800		Bal. 1,200
(1) 75,000			(2) 7,500		(2) 5,000		(2) 2,500
Bal. 49,000			**Bal. 22,500**		**Bal. 22,800**		**Bal. 3,700**

The entry to record the distribution of cash is as follows.

A	= L	+ E
−49,000		−22,500
		−22,800
		−3,700

Cash Flows
−49,000

(4)

R. Arnet, Capital	22,500	
P. Carey, Capital	22,800	
W. Eaton, Capital	3,700	
Cash		49,000
(To record distribution of cash to partners)		

After this entry is posted, all partnership accounts will have zero balances.

A word of caution: **Cash should not be distributed to partners on the basis of their income-sharing ratios.** On this basis, Arnet would receive three-sixths, or €24,500, which would produce an erroneous debit balance of €2,000. The income ratio is the proper basis for allocating net income or loss. **It is not a proper basis for making the final distribution of cash to the partners.**

• HELPFUL HINT
Zero balances after posting is a quick proof of the accuracy of the cash distribution entry.

SCHEDULE OF CASH PAYMENTS

Some accountants prepare a cash payments schedule to determine the distribution of cash to the partners in the liquidation of a partnership. The **schedule of cash payments** is organized around the basic accounting equation. The schedule for Ace Company is shown in Illustration F-11. The numbers in parentheses refer to the four required steps in the liquidation of a partnership. They also identify the accounting entries that must be made. The cash payments schedule is especially useful when the liquidation process extends over a period of time.

Illustration F-11
Schedule of cash payments, no capital deficiency

ACE COMPANY
Schedule of Cash Payments

Item		Cash	+	Non-Cash Assets	=	Liabilities	+	R. Arnet Capital	+	P. Carey Capital	+	W. Eaton Capital
Balances before liquidation		5,000	+	60,000	=	31,000	+	15,000	+	17,800	+	1,200
Sales of non-cash assets and allocation of gain	**(1)&(2)**	**75,000**	+	**(60,000)**	=			**7,500**	+	**5,000**	+	**2,500**
New balances		80,000	+	–0–	=	31,000	+	22,500	+	22,800	+	3,700
Pay liabilities	**(3)**	**(31,000)**			=	**(31,000)**						
New balances		49,000	+	–0–	=	–0–	+	22,500	+	22,800	+	3,700
Cash distribution to partners	**(4)**	**(49,000)**			=			**(22,500)**	+	**(22,800)**	+	**(3,700)**
Final balances		–0–		–0–		–0–		–0–		–0–		–0–

Capital Deficiency

A capital deficiency may be caused by recurring net losses, excessive drawings, or losses from realization suffered during liquidation. To illustrate, assume that Ace Company is on the brink of bankruptcy. The partners decide to liquidate by having a "going-out-of-business" sale. Merchandise is sold at substantial discounts, and the equipment is sold at auction. Cash proceeds from these sales and collections from customers total only €42,000. Thus, the loss from liquidation is €18,000 (€60,000 − €42,000). The steps in the liquidation process are as follows.

1. The entry for the realization of non-cash assets is:

(1)

Cash	42,000	
Accumulated Depreciation—Equipment	8,000	
Loss on Realization	18,000	
Accounts Receivable		15,000
Inventory		18,000
Equipment		35,000
(To record realization of non-cash assets)		

A	=	L	+	E
+42,000				
+8,000				
				−18,000
−15,000				
−18,000				
−35,000				

Cash Flows
+42,000

2. The loss on realization is allocated to the partners on the basis of their income ratios. The entry is:

A	=	L	+	E
				−9,000
				−6,000
				−3,000
				+18,000

Cash Flows
no effect

(2)		
R. Arnet, Capital (€18,000 × 3/6)	9,000	
P. Carey, Capital (€18,000 × 2/6)	6,000	
W. Eaton, Capital (€18,000 × 1/6)	3,000	
Loss on Realization		18,000
(To allocate loss on realization to partners)		

3. Partnership liabilities are paid. This entry is the same as in the previous example.

A	=	L	+	E
		−15,000		
		−16,000		
−13,000				

Cash Flows
−31,000

(3)		
Notes Payable	15,000	
Accounts Payable	16,000	
Cash		31,000
(To record payment of partnership liabilities)		

4. After posting the three entries, two accounts will have debit balances—Cash €16,000, and W. Eaton, Capital €1,800. Two accounts will have credit balances—R. Arnet, Capital €6,000, and P. Carey, Capital €11,800. All four accounts are shown below.

Illustration F-12
Ledger balances before distribution of cash

Cash (Dr.)	Cash (Cr.)	R. Arnet, Capital (Dr.)	R. Arnet, Capital (Cr.)	P. Carey, Capital (Dr.)	P. Carey, Capital (Cr.)	W. Eaton, Capital (Dr.)	W. Eaton, Capital (Cr.)
Bal. 5,000	(3) 31,000	(2) 9,000	Bal. 15,000	(2) 6,000	Bal. 17,800	(2) 3,000	Bal. 1,200
(1) 42,000							
			Bal. 6,000		**Bal. 11,800**	**Bal. 1,800**	
Bal. 16,000							

Eaton has a capital deficiency of €1,800, and thus owes the partnership €1,800. Arnet and Carey have a legally enforceable claim for that amount against Eaton's personal assets. The distribution of cash is still made on the basis of capital balances. But, the amount will vary depending on how Eaton's deficiency is settled. Two alternatives are presented below.

PAYMENT OF DEFICIENCY

If the partner with the capital deficiency pays the amount owed the partnership, the deficiency is eliminated. To illustrate, assume that Eaton pays €1,800 to the partnership. The entry is:

A	=	L	+	E
+1,800				
				+1,800

Cash Flows
+1,800

(a)		
Cash	1,800	
W. Eaton, Capital		1,800
(To record payment of capital deficiency by Eaton)		

After posting this entry, account balances are as follows.

Cash		R. Arnet, Capital		P. Carey, Capital		W. Eaton, Capital	
Bal. 5,000	(3) 31,000	(2) 9,000	Bal. 15,000	(2) 6,000	Bal. 17,800	(2) 3,000	Bal. 1,200
(1) 42,000			**Bal. 6,000**		**Bal. 11,800**		(a) 1,800
(a) 1,800							**Bal. –0–**
Bal. 17,800							

Illustration F-13
Ledger balances after paying capital deficiency

The cash balance of €17,800 is now equal to the credit balances in the capital accounts (Arnet €6,000 + Carey €11,800). Cash now is distributed on the basis of these balances. The entry is:

R. Arnet, Capital	6,000	
P. Carey, Capital	11,800	
Cash		17,800
(To record distribution of cash to the partners)		

A	=	L	+	E
				−6,000
				−11,800
−17,800				

Cash Flows
−17,800

After this entry is posted, all accounts will have zero balances.

NON-PAYMENT OF DEFICIENCY

If a partner with a capital deficiency is unable to pay the amount owed to the partnership, the partners with credit balances must absorb the loss. The loss is allocated on the basis of the income ratios that exist between the partners with credit balances.

For example, the income ratios of Arnet and Carey are 3:2, or 3/5 and 2/5, respectively. Thus, the following entry would be made to remove Eaton's capital deficiency.

(a)		
R. Arnet, Capital (€1,800 × 3/5)	1,080	
P. Carey, Capital (€1,800 × 2/5)	720	
W. Eaton, Capital		1,800
(To record write-off of capital deficiency)		

A	=	L	+	E
				−1,080
				−720
				+1,800

Cash Flows
no effect

After posting this entry, the cash and capital accounts will have the following balances.

Illustration F-14
Ledger balances after non-payment of capital deficiency

Cash		R. Arnet, Capital		P. Carey, Capital		W. Eaton, Capital	
Bal. 5,000	(3) 31,000	(2) 9,000	Bal. 15,000	(2) 6,000	Bal. 17,800	(2) 3,000	Bal. 1,200
(1) 42,000		(a) 1,080		(a) 720			(a) 1,800
Bal. 16,000			**Bal. 4,920**		**Bal. 11,080**		**Bal. –0–**

The cash balance of €16,000 now equals the sum of the credit balances in the capital accounts (Arnet €4,920 + Carey €11,080). The entry to record the distribution of cash is:

A	=	L	+	E
				−4,920
				−11,080
−16,000				

Cash Flows
−16,000

R. Arnet, Capital	4,920	
P. Carey, Capital	11,080	
Cash		16,000
(To record distribution of cash to the partners)		

After this entry is posted, all accounts will have zero balances.

REVIEW

LEARNING OBJECTIVES REVIEW

1 **Identify the characteristics of the partnership form of business organization.** The principal characteristics of a partnership are (a) association of individuals, (b) mutual agency, (c) limited life, (d) unlimited liability, and (e) co-ownership of property.

2 **Explain the accounting entries for the formation of a partnership.** When a partnership is formed, each partner's initial investment should be recorded at the fair value of the assets at the date of their transfer to the partnership.

3 **Identify the bases for dividing net income or net loss.** Net income or net loss is divided on the basis of the income ratio, which may be (a) a fixed ratio, (b) a ratio based on beginning or average capital balances, (c) salaries to partners and the remainder on a fixed ratio, (d) interest on partners' capital and the remainder on a fixed ratio, and (e) salaries to partners, interest on partners' capital, and the remainder on a fixed ratio.

4 **Describe the form and content of partnership financial statements.** The financial statements of a partnership are similar to those of a corporation. The principal differences are (a) the division of net income is shown on the income statement, (b) the statement of changes in equity is called a partners' capital statement, and (c) each partner's capital is reported on the statement of financial position.

5 **Explain the effects of the entries to record the liquidation of a partnership.** When a partnership is liquidated, it is necessary to record the (a) sale of non-cash assets, (b) allocation of the gain or loss on realization, (c) payment of partnership liabilities, and (d) distribution of cash to the partners on the basis of their capital balances.

GLOSSARY REVIEW

Capital deficiency A debit balance in a partner's capital account after allocation of gain or loss. (p. F-10).

General partner A partner who has unlimited liability for the debts of the firm. (p. F-3).

Income ratio The basis for dividing net income and net loss in a partnership. (p. F-6).

Limited liability company A form of business organization, usually classified as a partnership and usually with limited life, in which partners, who are called members, have limited liability. (p. F-3).

Limited liability partnership A partnership of professionals in which partners are given limited liability and the public is protected from malpractice by insurance carried by the partnership. (p. F-3).

Limited partner A partner who has limited liability for the debts of the firm. (p. F-3).

Limited partnership A partnership in which one or more general partners have unlimited liability and one or more partners have limited liability for the obligations of the firm. (p. F-3).

No capital deficiency All partners have credit balances after allocation of gain or loss. (p. F-10).

Partners' capital statement The statement of changes in equity for a partnership which shows the changes in each partner's capital balance and in total partnership capital during the year. (p. F-9).

Partnership An association of two or more persons to carry on as co-owners of a business for profit. (p. F-1).

Partnership agreement A written contract expressing the voluntary agreement of two or more individuals in a partnership. (p. F-4).

Partnership dissolution A change in partners due to withdrawal or admission, which does not necessarily terminate the business. (p. F-2).

Partnership liquidation An event that ends both the legal and economic life of a partnership. (p. F-10).

"S" corporation Corporation, with 75 or fewer shareholders, that is taxed like a partnership. (p. F-3).

Schedule of cash payments A schedule showing the distribution of cash to the partners in a partnership liquidation. (p. F-12).

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QUESTIONS

1. The characteristics of a partnership include the following: (a) association of individuals, (b) limited life, and (c) co-ownership of property. Explain each of these terms.
2. Gina Ryno is confused about the partnership characteristics of (a) mutual agency and (b) unlimited liability. Explain these two characteristics for Gina.
3. Betty Melton and Sam Kerwin are considering a business venture. They ask you to explain the advantages and disadvantages of the partnership form of organization.
4. Ellen Brown and Shelly Sampson form a partnership. Brown contributes land with a book value of £50,000 and a fair value of £75,000. Brown also contributes equipment with a book value of £52,000 and a fair value of £57,000. The partnership assumes a £20,000 mortgage on the land. What should be the balance in Brown's capital account upon formation of the partnership?
5. Sam Stevens, S. Donal, and J. Lowry have a partnership called Golden Rule. A dispute has arisen among the partners. Stevens has invested twice as much in assets as the other two partners, and he believes net income and net losses should be shared in accordance with the capital ratios. The partnership agreement does not specify the division of profits and losses. How will net income and net loss be divided?
6. Jordan Marsh and Brent Spader are discussing how income and losses should be divided in a partnership they plan to form. What factors should be considered in determining the division of net income or net loss?
7. Mandy Elston and Jeff Baker have partnership capital balances of €40,000 and €80,000, respectively. The partnership agreement indicates that net income or net loss should be shared equally. If net income for the partnership is €24,000, how should the net income be divided?
8. Debbie Hunt and Kyle Keegan share net income and net loss equally. (a) Which account(s) is (are) debited and credited to record the division of net income between the partners? (b) If Debbie Hunt withdraws £30,000 in cash for personal use in lieu of salary, which account is debited and which is credited?
9. Partners Gina Jocketty and B. Madson are provided salary allowances of €30,000 and €25,000, respectively. They divide the remainder of the partnership income in a ratio of 60:40. If partnership net income is €50,000, how much is allocated to Jocketty and Madson?
10. Are the financial statements of a partnership similar to those of a corporation? Discuss.
11. Dean Colson and Bill Linton are discussing the liquidation of a partnership. Dean maintains that all cash should be distributed to partners on the basis of their income ratios. Is he correct? Explain.
12. In continuing their discussion from Question 11, Bill says that even in the case of a capital deficiency, all cash should still be distributed on the basis of capital balances. Is Bill correct? Explain.
13. Barb, Matt, and Wendy have income ratios of 5:3:2 and capital balances of £34,000, £31,000, and £28,000, respectively. Non-cash assets are sold at a gain. After creditors are paid, £119,000 of cash is available for distribution to the partners. How much cash should be paid to Matt?
14. Before the final distribution of cash, account balances are Cash €25,000; B. Remington, Capital €19,000 (Cr.); L. Seastrom, Capital €12,000 (Cr.); and T. Luthi, Capital €6,000 (Dr.). Luthi is unable to pay any of the capital deficiency. If the income-sharing ratios are 5:3:2, respectively, how much cash should be paid to L. Seastrom?

BRIEF EXERCISES

BEF-1 Ren Li and Chen Guo decide to organize the ALL-Star partnership. Li invests HK$160,000 cash, and Guo contributes HK$110,000 cash and equipment having a book value of HK$32,000. Prepare the entry to record Guo's investment in the partnership, assuming the equipment has a fair value of HK$65,000.

Journalize entries in forming a partnership.
(LO 2)

Prepare portion of opening statement of financial position for partnership.
(LO 2)

BEF-2 C. Free and G. Mann decide to merge their proprietorships into a partnership called Freemann Ltd. The statement of financial position for Mann shows:

Equipment	£20,000	
Less: Accumulated depreciation—equipment	8,000	£12,000
Accounts receivable	16,000	
Less: Allowance for doubtful accounts	1,200	14,800

The partners agree that the net realizable value of the receivables is £12,500 and that the fair value of the equipment is £10,000. Indicate how the four accounts should appear in the opening statement of financial position of the partnership.

Journalize the division of net income using fixed income ratios.
(LO 3)

BEF-3 Guangqing Ltd. reports net income of NT$200,000. The income ratios are Guang 60% and Qing 40%. Indicate the division of net income to each partner, and prepare the entry to distribute the net income.

Compute division of net income with a salary allowance and fixed ratios.
(LO 3)

BEF-4 GER Co. reports net income of €65,000. Partner salary allowances are Grand €20,000, Easley €5,000, and Rod €5,000. Indicate the division of net income to each partner, assuming the income ratio is 50:30:20, respectively.

Show division of net income when allowances exceed net income.
(LO 3)

BEF-5 Jabb & Nabb Co. reports net income of £32,000. Interest allowances are Jabb £6,000 and Nabb £5,000, salary allowances are Jabb £15,000 and Nabb £12,000, and the remainder is shared equally. Show the distribution of income on the income statement.

Journalize final cash distribution in liquidation.
(LO 5)

BEF-6 After liquidating non-cash assets and paying creditors, account balances in the CAB Co. are Cash €21,000, C Capital (Cr.) €9,000, A Capital (Cr.) €7,000, and B Capital (Cr.) €5,000. The partners share income equally. Journalize the final distribution of cash to the partners.

EXERCISES

Journalize entry for formation of a partnership.
(LO 2)

EF-1 Liu Jiqin has owned and operated a proprietorship for several years. On January 1, he decides to terminate this business and become a partner in the firm of Feng and Jiqin. Jiqin's investment in the partnership consists of HK$140,000 in cash, and the following assets of the proprietorship: accounts receivable HK$130,000 less allowance for doubtful accounts of HK$20,000, and equipment HK$200,000 less accumulated depreciation of HK$45,000. It is agreed that the allowance for doubtful accounts should be HK$28,000 for the partnership. The fair value of the equipment is HK$175,500.

Instructions
Journalize Jiqin's admission to the firm of Feng and Jiqin.

Prepare schedule showing distribution of net income and closing entry.
(L O 3)

EF-2 B. Pedigo and W. Vernon have capital balances on January 1 of €50,000 and €40,000, respectively. The partnership income-sharing agreement provides for (1) annual salaries of €20,000 for Pedigo and €12,000 for Vernon, (2) interest at 10% on beginning capital balances, and (3) remaining income or loss to be shared 70% by Pedigo and 30% by Vernon.

Instructions
(a) Prepare a schedule showing the distribution of net income, assuming net income is (1) €55,000 and (2) €30,000.
(b) Journalize the allocation of net income in each of the situations above.

Prepare partners' capital statement and partial statement of financial position.
(LO 4)

EF-3 In Royweb Co., beginning capital balances on January 1, 2017, are Ken Rory £20,000 and Diane Webb £18,000. During the year, drawings were Rory £7,000 and Webb £3,000. Net income was £29,000, and the partners share income equally.

Instructions
(a) Prepare the partners' capital statement for the year.
(b) Prepare the equity section of the statement of financial position at December 31, 2017.

EF-4 Daynen Company at December 31 has cash £20,000, non-cash assets £100,000, liabilities £55,000, and the following capital balances: Day £45,000 and Nen £20,000. The firm is liquidated, and £120,000 in cash is received for the non-cash assets. Day and Nen income ratios are 55% and 45%, respectively.

Prepare cash distribution schedule.

(LO 5)

Instructions
Prepare a cash distribution schedule.

EF-5 Data for the Daynen partnership are presented in EF-4.

Journalize transactions in a liquidation.

(LO 5)

Instructions
Prepare the entries to record:

(a) The sale of non-cash assets.
(b) The allocation of the gain or loss on liquidation to the partners.
(c) Payment of creditors.
(d) Distribution of cash to the partners.

EF-6 Prior to the distribution of cash to the partners, the accounts in the KND Company are Cash €30,000, Kolmer Capital (Cr.) €18,000, Noble Capital (Cr.) €14,000, and Dody Capital (Dr.) €2,000. The income ratios are 5:3:2, respectively.

Journalize transactions with a capital deficiency.

(LO 5)

Instructions
(a) Prepare the entry to record (1) Dody's payment of €2,000 in cash to the partnership and (2) the distribution of cash to the partners with credit balances.
(b) Prepare the entry to record (1) the absorption of Dody's capital deficiency by the other partners and (2) the distribution of cash to the partners with credit balances.

PROBLEMS

PF-1 The post-closing trial balances of two proprietorships on January 1, 2017, are presented below.

Prepare entries for formation of a partnership and a statement of financial position.

(LO 2, 4)

	Yung Company		Olde Company	
	Dr.	**Cr.**	**Dr.**	**Cr.**
Cash	£ 14,000		£13,000	
Accounts receivable	17,500		26,000	
Allowance for doubtful accounts		£ 3,000		£ 4,400
Inventory	26,500		18,400	
Equipment	45,000		28,000	
Accumulated depreciation—equipment		24,000		12,000
Notes payable (due January 1, 2018)		22,000		15,000
Accounts payable		20,000		31,000
Yung, Capital		34,000		
Olde, Capital				23,000
	£103,000	£103,000	£85,400	£85,400

Yung and Olde decide to form a partnership, Olde Yung Company, with the following agreed upon valuations for non-cash assets.

	Yung Company	Olde Company
Accounts receivable	£17,500	£26,000
Allowance for doubtful accounts	2,500	4,000
Inventory	28,000	20,000
Equipment	25,000	18,000

All cash will be transferred to the partnership, and the partnership will assume all the liabilities of the two proprietorships. Further, it is agreed that Yung will invest an additional £3,000 in cash, and Olde will invest an additional £16,000 in cash.

(a) Yung, Capital £40,000
Olde, Capital £27,000

(c) Total assets £174,000

Instructions

(a) Prepare separate journal entries to record the transfer of each proprietorship's assets and liabilities to the partnership.
(b) Journalize the additional cash investment by each partner.
(c) Prepare a statement of financial position for the partnership on January 1, 2017.

Journalize divisions of net income and prepare a partners' capital statement.

(LO 3, 4)

PF-2 At the end of its first year of operations on December 31, 2017, ABS Company's accounts show the following.

Partner	Drawings	Capital
Jodi Ames	£23,000	£48,000
Jill Bolen	14,000	30,000
Ann Sayler	10,000	25,000

The capital balance represents each partner's initial capital investment. Therefore, net income or net loss for 2017 has not been closed to the partners' capital accounts.

(a) (1) Ames £16,800
(2) Ames £20,000
(3) Ames £18,700

(c) Ames £43,700

Instructions

(a) Journalize the entry to record the division of net income for the year 2017 under each of the following independent assumptions.
   (1) Net income is £28,000. Income is shared 6:3:1.
   (2) Net income is £34,000. Ames and Bolen are given salary allowances of £18,000 and £10,000, respectively. The remainder is shared equally.
   (3) Net income is £22,000. Each partner is allowed interest of 10% on beginning capital balances. Ames is given a £15,000 salary allowance. The remainder is shared equally.
(b) Prepare a schedule showing the division of net income under assumption (3) above.
(c) Prepare a partners' capital statement for the year under assumption (3) above.

Prepare entries with a capital deficiency in liquidation of a partnership.

(LO 5)

PF-3 The partners in RSP Company decide to liquidate the firm when the statement of financial position shows the following.

RSP COMPANY
Statement of Financial Position
May 31, 2017

Assets		Equity and Liabilities	
Inventory	€34,500	S. Ruscoe, capital	€36,000
Equipment	21,000	J. Sorenson, capital	19,000
Accumulated depreciation—equipment	(5,500)	M. Posada, capital	1,200
Accounts receivable	23,000	Accounts payable	27,000
Allowance for doubtful accounts	(1,000)	Notes payable	12,500
Cash	27,500	Salaries and wages payable	3,800
Total	€99,500	Total	€99,500

The partners share income and loss 5:3:2. During the process of liquidation, the following transactions were completed in the following sequence.

1. A total of €50,000 was received from converting non-cash assets into cash.
2. Gain or loss on realization was allocated to partners.
3. Liabilities were paid in full.
4. M. Posada paid his capital deficiency.
5. Cash was paid to the partners with credit balances.

Instructions

(a) Prepare the entries to record the transactions.
(b) Post to the cash and capital accounts.
(c) Assume that Posada is unable to pay the capital deficiency.
   (1) Prepare the entry to allocate Posada's debit balance to Ruscoe and Sorenson.
   (2) Prepare the entry to record the final distribution of cash.

APPENDIX

G Subsidiary Ledgers and Special Journals

LEARNING OBJECTIVES

After studying this appendix, you should be able to:

1. Describe the nature and purpose of a subsidiary ledger.
2. Explain how companies use special journals in journalizing.
3. Indicate how companies post a multi-column journal.

APPENDIX PREVIEW

A reliable accounting information system is a necessity for any company. Whether companies use pen, pencil, or computers in maintaining accounting records, certain principles and procedures apply. The purpose of this appendix is to explain and illustrate two components of an accounting information system: subsidiary ledgers and special journals.

Expanding the Ledger—Subsidiary Ledgers

Learning Objective 1

Describe the nature and purpose of a subsidiary ledger.

Imagine a business that has several thousand charge (credit) customers and shows the transactions with these customers in only one general ledger account—Accounts Receivable. It would be nearly impossible to determine the balance owed by an individual customer at any specific time. Similarly, the amount payable to one creditor would be difficult to locate quickly from a single Accounts Payable account in the general ledger.

Instead, companies use subsidiary ledgers to keep track of individual balances. A **subsidiary ledger** is a group of accounts with a common characteristic (for example, all accounts receivable). It is an addition to, and an expansion of, the general ledger. The subsidiary ledger frees the general ledger from the details of individual balances.

Two common subsidiary ledgers are:

1. The **accounts receivable** (or **customers**') **subsidiary ledger**, which collects transaction data of individual customers.
2. The **accounts payable** (or **creditors**') **subsidiary ledger**, which collects transaction data of individual creditors.

In each of these subsidiary ledgers, companies usually arrange individual accounts in alphabetical order.

A general ledger account summarizes the detailed data from a subsidiary ledger. For example, the detailed data from the accounts receivable subsidiary ledger are summarized in Accounts Receivable in the general ledger. The general ledger account that summarizes subsidiary ledger data is called a **control account**. Illustration G-1 presents an overview of the relationship of subsidiary ledgers to the general ledger. In Illustration G-1, the general ledger control accounts and subsidiary ledger accounts are in green. Note that Cash and Share Capital—Ordinary in this illustration are not control accounts because there are no subsidiary ledger accounts related to these accounts.

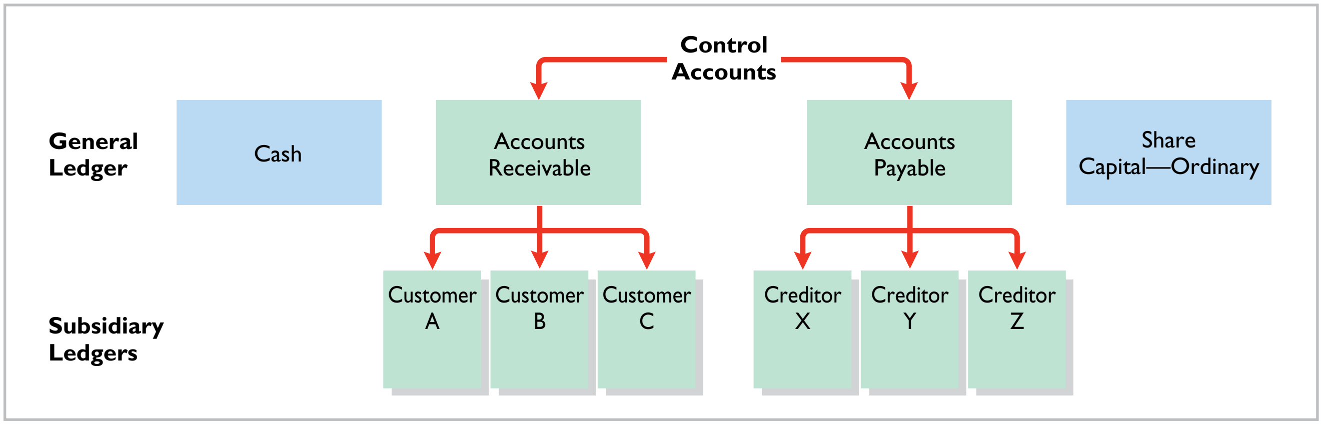

Illustration G-1
Relationship of general ledger and subsidiary ledgers

At the end of an accounting period, each general ledger control account balance must equal the composite balance of the individual accounts in the related subsidiary ledger. For example, the balance in Accounts Payable in Illustration G-1 must equal the total of the subsidiary balances of Creditors X + Y + Z.

Subsidiary Ledger Example

Illustration G-2 lists sales and collection transactions for Pujols Enterprises.

Credit Sales			Collections on Account		
Jan. 10	Aaron Co.	$ 6,000	Jan. 19	Aaron Co.	$4,000
12	Branden Inc.	3,000	21	Branden Inc.	3,000
20	Caron Co.	3,000	29	Caron Co.	1,000
		$12,000			$8,000

Illustration G-2
Sales and collection transactions

Illustration G-3 (page G-3) provides an example of a control account and subsidiary ledger based on these transactions. (Due to space considerations, the explanation column in these accounts is not shown in this and subsequent illustrations.)

Pujols can reconcile the total debits ($12,000) and credits ($8,000) in Accounts Receivable in the general ledger to the detailed debits and credits in the subsidiary accounts. Also, the balance of $4,000 in the control account agrees with the total of the balances in the individual accounts (Aaron Co. $2,000 + Branden Inc. $0 + Caron Co. $2,000) in the subsidiary ledger.

As Illustration G-3 shows, companies make monthly postings to the control accounts in the general ledger. This practice allows them to prepare monthly financial statements. Companies post to the individual accounts in the subsidiary ledger daily. Daily posting ensures that account information is current. This enables the company to monitor credit limits, bill customers, and answer inquiries from customers about their account balances.

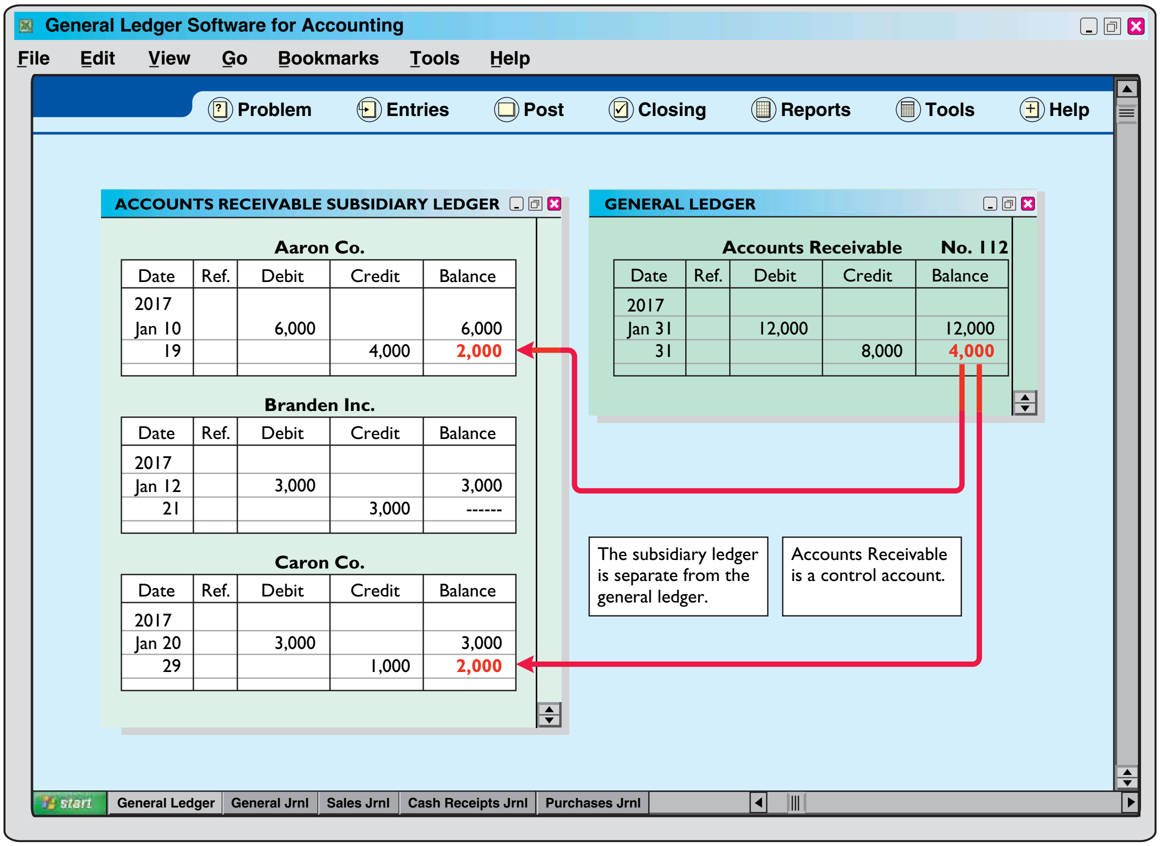

Illustration G-3
Relationship between general and subsidiary ledgers

Advantages of Subsidiary Ledgers

Subsidiary ledgers have several advantages:

1. **They show in a single account transactions affecting one customer or one creditor**, thus providing up-to-date information on specific account balances.
2. **They free the general ledger of excessive details.** As a result, a trial balance of the general ledger does not contain vast numbers of individual account balances.
3. **They help locate errors in individual accounts** by reducing the number of accounts in one ledger and by using control accounts.
4. **They make possible a division of labor in posting.** One employee can post to the general ledger while someone else posts to the subsidiary ledgers.

Expanding the Journal—Special Journals

Learning Objective 2
Explain how companies use special journals in journalizing.

So far you have learned to journalize transactions in a two-column general journal and post each entry to the general ledger. This procedure is satisfactory in only very small companies. To expedite journalizing and posting, most companies use special journals **in addition to the general journal**.

Companies use **special journals** to record similar types of transactions. Examples are all sales of merchandise on account, or all cash receipts. The types of transactions that occur frequently in a company determine what special journals the company uses. Most merchandising companies record daily transactions using the journals shown in Illustration G-4.

Sales Journal	Cash Receipts Journal	Purchases Journal	Cash Payments Journal	General Journal
Used for: All sales of merchandise on account	Used for: All cash received (including cash sales)	Used for: All purchases of merchandise on account	Used for: All cash paid (including cash purchases)	Used for: Transactions that cannot be entered in a special journal, including correcting, adjusting, and closing entries

Illustration G-4
Use of special journals and the general journal

If a transaction cannot be recorded in a special journal, the company records it in the general journal. For example, if a company had special journals for only the four types of transactions listed above, it would record purchase returns and allowances in the general journal. Similarly, **correcting, adjusting, and closing entries are recorded in the general journal**. In some situations, companies might use special journals other than those listed above. For example, when sales returns and allowances are frequent, a company might use a special journal to record these transactions.

Special journals **permit greater division of labor** because several people can record entries in different journals at the same time. For example, one employee may journalize all cash receipts, and another may journalize all credit sales. Also, the use of special journals **reduces the time needed to complete the posting process**. With special journals, companies may post some accounts monthly, instead of daily, as we will illustrate later in this appendix. On the following pages, we discuss the four special journals shown in Illustration G-4.

Sales Journal

In the **sales journal**, companies record **sales of merchandise on account**. Cash sales of merchandise go in the cash receipts journal. Credit sales of assets other than merchandise go in the general journal.

• HELPFUL HINT
Postings are also made daily to individual ledger accounts in the inventory subsidiary ledger to maintain a perpetual inventory.

JOURNALIZING CREDIT SALES

To demonstrate use of a sales journal, we will use data for Karns Wholesale Supply, which uses a **perpetual inventory system**. Under this system, each entry in the sales journal results in one entry **at selling price** and another entry **at cost**. The entry at selling price is a debit to Accounts Receivable (a control account) and a credit of equal amount to Sales Revenue. The entry at cost is a debit to Cost of Goods Sold and a credit of equal amount to Inventory (a control account). Using a sales journal with two amount columns, the company can show on only one line a sales transaction at both selling price and cost. Illustration G-5 (page G-5) shows this two-column sales journal of Karns Wholesale Supply, using assumed credit sales transactions (for sales invoices 101–107).

SALES JOURNAL S1

Date	Account Debited	Invoice No.	Ref.	Accts. Receivable Dr. Sales Revenue Cr.	Cost of Goods Sold Dr. Inventory Cr.
2017					
May 3	Abbot Sisters	101		10,600	6,360
7	Babson Co.	102		11,350	7,370
14	Carson Bros.	103		7,800	5,070
19	Deli Co.	104		9,300	6,510
21	Abbot Sisters	105		15,400	10,780
24	Deli Co.	106		21,210	15,900
27	Babson Co.	107		14,570	10,200
				90,230	62,190

Illustration G-5
Journalizing the sales journal—perpetual inventory system

Note that, unlike the general journal, an explanation is not required for each entry in a special journal. Also, use of prenumbered invoices ensures that all invoices are journalized. Finally, the reference (Ref.) column is not used in journalizing. It is used in posting the sales journal, as explained next.

POSTING THE SALES JOURNAL

Companies make daily postings from the sales journal **to the individual accounts receivable** in the subsidiary ledger. Posting **to the general ledger** is done **monthly**. Illustration G-6 shows both the daily and monthly postings.

A check mark (✔) is inserted in the reference posting column to indicate that the daily posting to the customer's account has been made. If the subsidiary ledger accounts were numbered, the account number would be entered in place of the check mark. At the end of the month, Karns posts the column totals of the sales journal to the general ledger. Here, the column totals are as follows. From the selling-price column, a debit of $90,230 to Accounts Receivable (account No. 112), and a credit of $90,230 to Sales Revenue (account No. 401). From the cost column, a debit of $62,190 to Cost of Goods Sold (account No. 505), and a credit of $62,190 to Inventory (account No. 120). Karns inserts the account numbers below the column totals to indicate that the postings have been made. In both the general ledger and subsidiary ledger accounts, the reference **S1** indicates that the posting came from page 1 of the sales journal.

General Ledger Software for Accounting

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SALES JOURNAL S1

Date	Account Debited	Invoice No.	Ref.	Accts. Receivable Dr. Sales Revenue Cr.	Cost of Goods Sold Dr. Inventory Cr.
2017					
May 3	Abbot Sisters	101	√	10,600	6,360
7	Babson Co.	102	√	11,350	7,370
14	Carson Bros.	103	√	7,800	5,070
19	Deli Co.	104	√	9,300	6,510
21	Abbot Sisters	105	√	15,400	10,780
24	Deli Co.	106	√	21,210	15,900
27	Babson Co.	107	√	14,570	10,200
				90,230	62,190
				(112) / (401)	(505) / (120)

At the end of the accounting period, the company posts totals to the general ledger.

The company posts individual amounts to the subsidiary ledger daily.

ACCOUNTS RECEIVABLE SUBSIDIARY LEDGER

Abbot Sisters

Date	Ref.	Debit	Credit	Balance
2017				
May 3	S1	10,600		10,600
21	S1	15,400		26,000

Babson Co.

Date	Ref.	Debit	Credit	Balance
2017				
May 7	S1	11,350		11,350
27	S1	14,570		25,920

Carson Bros.

Date	Ref.	Debit	Credit	Balance
2017				
May 14	S1	7,800		7,800

Deli Co.

Date	Ref.	Debit	Credit	Balance
2017				
May 19	S1	9,300		9,300
24	S1	21,210		30,510

GENERAL LEDGER

Accounts Receivable **No. 112**

Date	Ref.	Debit	Credit	Balance
2017				
May 31	S1	90,230		90,230

Inventory **No. 120**

Date	Ref.	Debit	Credit	Balance
2017				
May 31	S1		62,190	(62,190)[1]

Sales Revenue **No. 401**

Date	Ref.	Debit	Credit	Balance
2017				
May 31	S1		90,230	90,230

Cost of Goods Sold **No. 505**

Date	Ref.	Debit	Credit	Balance
2017				
May 31	S1	62,190		62,190

The subsidiary ledger is separate from the general ledger.

Accounts Receivable is a control account.

[1]The normal balance for Inventory is a debit. But, because of the sequence in which we have posted the special journals, with the sales journal first, the credits to Inventory are posted before the debits. This posting sequence explains the credit balance in Inventory, which exists only until the other journals are posted.

start General Ledger General Jrnl Sales Jrnl Cash Receipts Jrnl Purchases Jrnl

Illustration G-6
Posting the sales journal

PROVING THE LEDGERS

The next step is to "prove" the ledgers. To do so, Karns must determine two things: (1) the total of the general ledger debit balances must equal the total of the general ledger credit balances, and (2) the sum of the subsidiary ledger balances must equal the balance in the control account. Illustration G-7 shows the proof of the postings from the sales journal to the general and subsidiary ledger.

Illustration G-7
Proving the equality of the postings from the sales journal

Postings to General Ledger

General Ledger

Credits	
Inventory	$62,190
Sales Revenue	90,230
	$152,420
Debits	
Accounts Receivable	$90,230
Cost of Goods Sold	62,190
	$152,420

Debit Postings to the Accounts Receivable Subsidiary Ledger

Subsidiary Ledger

Abbot Sisters	$26,000
Babson Co.	25,920
Carson Bros.	7,800
Deli Co.	30,510
	$90,230

ADVANTAGES OF THE SALES JOURNAL

Use of a special journal to record sales on account has several advantages. First, the one-line entry for each sales transaction saves time. In the sales journal, it is not necessary to write out the four account titles for each transaction. Second, only totals, rather than individual entries, are posted to the general ledger. This saves posting time and reduces the possibilities of posting errors. Finally, a division of labor results because one individual can take responsibility for the sales journal.

Cash Receipts Journal

Learning Objective 3
Indicate how companies post a multi-column journal.

In the **cash receipts journal**, companies record all receipts of cash. The most common types of cash receipts are cash sales of merchandise and collections of accounts receivable. Many other possibilities exist, such as receipt of money from bank loans and cash proceeds from disposal of equipment. A one- or two-column cash receipts journal would not have space enough for all possible cash receipt transactions. Therefore, companies use a multi-column cash receipts journal.

Generally, a cash receipts journal includes the following columns: debit columns for Cash and Sales Discounts, and credit columns for Accounts Receivable, Sales Revenue, and "Other Accounts." Companies use the Other Accounts category when the cash receipt does not involve a cash sale or a collection of accounts receivable. Under a perpetual inventory system, each sales entry also is accompanied by an entry that debits Cost of Goods Sold and credits Inventory for the cost of the merchandise sold. Illustration G-8 shows a six-column cash receipts journal.

Companies may use additional credit columns if these columns significantly reduce postings to a specific account. For example, a loan company, such as Household International (USA), receives thousands of cash collections from customers.

Illustration G-8
Journalizing and posting the cash receipts journal

General Ledger Software for Accounting

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CASH RECEIPTS JOURNAL CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Revenue Cr.	Other Accounts Cr.	Cost of Goods Sold Dr. Inventory Cr.
2017								
May 1	Share Capital—Ordinary	311	5,000				5,000	
7			1,900			1,900		1,240
10	Abbot Sisters	√	10,388	212	10,600			
12			2,600			2,600		1,690
17	Babson Co.	√	11,123	227	11,350			
22	Notes Payable	200	6,000				6,000	
23	Carson Bros.	√	7,644	156	7,800			
28	Deli Co.	√	9,114	186	9,300			
			53,769	781	39,050	4,500	11,000	2,930
			(101)	(414)	(112)	(401)	(x)	(505)/(120)

The company posts individual amounts to the subsidiary ledger daily.

At the end of the accounting period, the company posts totals to the general ledger.

ACCOUNTS RECEIVABLE SUBSIDIARY LEDGER

Abbot Sisters

Date	Ref.	Debit	Credit	Balance
2017				
May 3	S1	10,600		10,600
10	CR1		10,600	--------
21	S1	15,400		15,400

Babson Co.

Date	Ref.	Debit	Credit	Balance
2017				
May 7	S1	11,350		11,350
17	CR1		11,350	--------
27	S1	14,570		14,570

Carson Bros.

Date	Ref.	Debit	Credit	Balance
2017				
May 14	S1	7,800		7,800
23	CR1		7,800	-------

Deli Co.

Date	Ref.	Debit	Credit	Balance
2017				
May 19	S1	9,300		9,300
24	S1	21,210		30,510
28	CR1		9,300	21,210

The subsidiary ledger is separate from the general ledger.

Accounts Receivable is a control account.

GENERAL LEDGER

Cash No. 101

Date	Ref.	Debit	Credit	Balance
2017				
May 31	CR1	53,769		53,769

Accounts Receivable No. 112

Date	Ref.	Debit	Credit	Balance
2017				
May 31	S1	90,230		90,230
31	CR1		39,050	51,180

Inventory No. 120

Date	Ref.	Debit	Credit	Balance
2017				
May 31	S1		62,190	(62,190)
31	CR1		2,930	(65,120)

Notes Payable No. 200

Date	Ref.	Debit	Credit	Balance
2017				
May 22	CR1		6,000	6,000

Share Capital—Ordinary No. 311

Date	Ref.	Debit	Credit	Balance
2017				
May 1	CR1		5,000	5,000

Sales Revenue No. 401

Date	Ref.	Debit	Credit	Balance
2017				
May 31	S1		90,230	90,230
31	CR1		4,500	94,730

Sales Discounts No. 414

Date	Ref.	Debit	Credit	Balance
2017				
May 31	CR1	781		781

Cost of Goods Sold No. 505

Date	Ref.	Debit	Credit	Balance
2017				
May 31	S1	62,190		62,190
31	CR1	2,930		65,120

start General Ledger General Jrnl Sales Jrnl Cash Receipts Jrnl Purchases Jrnl

Using separate credit columns for Loans Receivable and Interest Revenue, rather than the Other Accounts credit column, would reduce postings.

JOURNALIZING CASH RECEIPTS TRANSACTIONS

To illustrate the journalizing of cash receipts transactions, we will continue with the May transactions of Karns Wholesale Supply. Collections from customers relate to the entries recorded in the sales journal in Illustration G-5 (page G-5). The entries in the cash receipts journal are based on the following cash receipts.

May 1 Shareholders invested $5,000 in the business in exchange for ordinary shares.
7 Cash sales of merchandise total $1,900 (cost, $1,240).
10 Received a check for $10,388 from Abbot Sisters in payment of invoice No. 101 for $10,600 less a 2% discount.
12 Cash sales of merchandise total $2,600 (cost, $1,690).
17 Received a check for $11,123 from Babson Co. in payment of invoice No. 102 for $11,350 less a 2% discount.
22 Received cash by signing a note for $6,000.
23 Received a check for $7,644 from Carson Bros. in full for invoice No. 103 for $7,800 less a 2% discount.
28 Received a check for $9,114 from Deli Co. in full for invoice No. 104 for $9,300 less a 2% discount.

Further information about the columns in the cash receipts journal is listed below.

Debit Columns:

1. **Cash.** Karns enters in this column the amount of cash actually received in each transaction. The column total indicates the total cash receipts for the month.
2. **Sales Discounts.** Karns includes a Sales Discounts column in its cash receipts journal. By doing so, it does not need to enter sales discount items in the general journal. As a result, the cash receipts journal shows on one line the collection of an account receivable within the discount period.

• HELPFUL HINT
A *subsidiary ledger* account is entered when the entry involves a collection of accounts receivable. A *general ledger* account is entered when the account is not shown in a special column (and an amount must be entered in the Other Accounts column). Otherwise, no account is shown in the Account Credited column.

Credit Columns:

3. **Accounts Receivable.** Karns uses the Accounts Receivable column to record cash collections on account. The amount entered here is the amount to be credited to the individual customer's account.
4. **Sales Revenue.** The Sales Revenue column records all cash sales of merchandise. Cash sales of other assets (plant assets, for example) are not reported in this column.
5. **Other Accounts.** Karns uses the Other Accounts column whenever the credit is other than to Accounts Receivable or Sales Revenue. For example, in the first entry, Karns enters $5,000 as a credit to Share Capital—Ordinary. This column is often referred to as the sundry accounts column.

Debit and Credit Column:

6. **Cost of Goods Sold and Inventory.** This column records debits to Cost of Goods Sold and credits to Inventory.

In a multi-column journal, generally only one line is needed for each entry. Debit and credit amounts for each line must be equal. When Karns journalizes the collection from Abbot Sisters on May 10, for example, three amounts are indicated. Note also that the Account Credited column identifies both general ledger and subsidiary ledger account titles. General ledger accounts are illustrated in the May 1 and May 22 entries. A subsidiary account is illustrated in the May 10 entry for the collection from Abbot Sisters.

When Karns has finished journalizing a multi-column journal, it totals the amount columns and compares the totals to prove the equality of debits and credits. Illustration G-9 shows the proof of the equality of Karns's cash receipts journal.

Illustration G-9
Proving the equality of the cash receipts journal

Debits	
Cash	$53,769
Sales Discounts	781
Cost of Goods Sold	2,930
	$57,480

Credits	
Accounts Receivable	$39,050
Sales Revenue	4,500
Other Accounts	11,000
Inventory	2,930
	$57,480

Totaling the columns of a journal and proving the equality of the totals is called **footing** and **crossfooting** a journal.

POSTING THE CASH RECEIPTS JOURNAL

Posting a multi-column journal (Illustration G-8, page G-8) involves the following steps.

1. **At the end of the month**, the company posts all column totals, except for the Other Accounts total, to the account title(s) specified in the column heading (such as Cash or Accounts Receivable). The company then enters account numbers below the column totals to show that they have been posted. For example, Karns has posted cash to account No. 101, accounts receivable to account No. 112, inventory to account No. 120, sales revenue to account No. 401, sales discounts to account No. 414, and cost of goods sold to account No. 505.
2. The company **separately posts the individual amounts comprising the Other Accounts total** to the general ledger accounts specified in the Account Credited column. See, for example, the credit posting to Share Capital—Ordinary. The total amount of this column has not been posted. The symbol (X) is inserted below the total of this column to indicate that the amount has not been posted.
3. The individual amounts in a column, posted in total to a control account (Accounts Receivable, in this case), are posted **daily to the subsidiary ledger** account specified in the Account Credited column. See, for example, the credit posting of $10,600 to Abbot Sisters.

The symbol **CR**, used in both the subsidiary and general ledgers, identifies postings from the cash receipts journal.

PROVING THE LEDGERS

After posting of the cash receipts journal is completed, Karns proves the ledgers. As shown in Illustration G-10 (page G-11), the general ledger totals agree. Also, the sum of the subsidiary ledger balances equals the control account balance.

Illustration G-10
Proving the ledgers after posting the sales and the cash receipts journals

Schedule of Accounts Receivable
(from accounts receivable subsidiary ledger)

Abbot Sisters	$15,400
Babson Co.	14,570
Deli Co.	21,210
	$51,180

General Ledger

Debits

Cash	$53,769
Accounts Receivable	51,180
Sales Discounts	781
Cost of Goods Sold	65,120
	$170,850

Credits

Notes Payable	$ 6,000
Share Capital—Ordinary	5,000
Sales Revenue	94,730
Inventory	65,120
	$170,850

Purchases Journal

In the **purchases journal**, companies record all purchases of merchandise on account. Each entry in this journal results in a debit to Inventory and a credit to Accounts Payable. For example, consider the following credit purchase transactions for Karns Wholesale Supply in Illustration G-11.

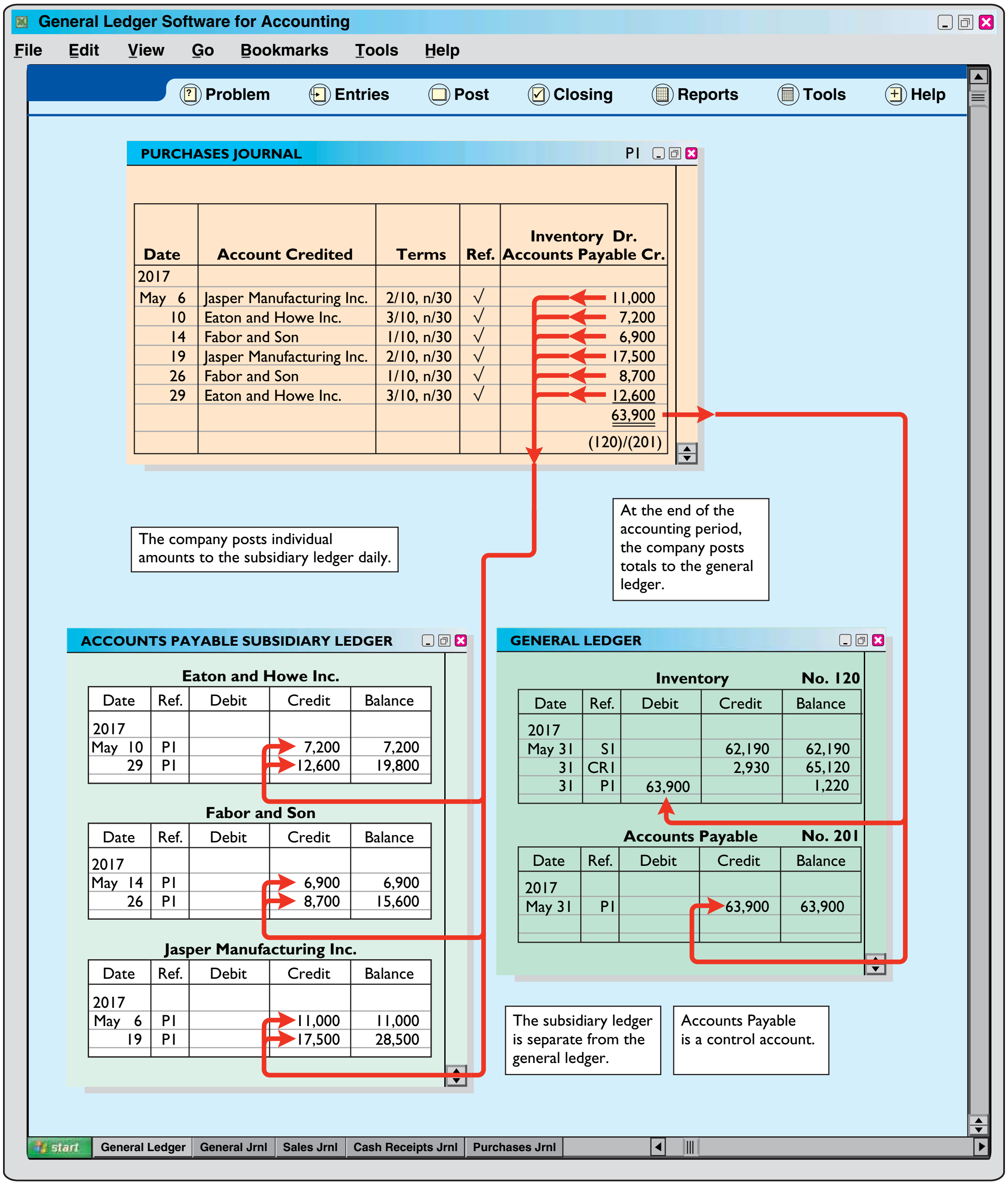
Illustration G-11
Credit purchases transactions

Date	Supplier	Amount
5/6	Jasper Manufacturing Inc.	$11,000
5/10	Eaton and Howe Inc.	7,200
5/14	Fabor and Son	6,900
5/19	Jasper Manufacturing Inc.	17,500
5/26	Fabor and Son	8,700
5/29	Eaton and Howe Inc.	12,600

Illustration G-12 shows the purchases journal for Karns based on these transactions. When using a one-column purchases journal (as in Illustration G-12), a company cannot journalize other types of purchases on account or cash purchases in it. For example, using the purchases journal shown in Illustration G-12, Karns would have to record credit purchases of equipment or supplies in the general journal. Likewise, all cash purchases would be entered in the cash payments journal. As illustrated later, companies that make numerous credit purchases for items other than merchandise often expand the purchases journal to a multi-column format. (See Illustration G-14 on page G-13.)

JOURNALIZING CREDIT PURCHASES OF MERCHANDISE

The journalizing procedure is similar to that for a sales journal. Companies make entries in the purchases journal from purchase invoices. In contrast to the sales journal, the purchases journal may not have an invoice number column because invoices received from different suppliers will not be in numerical sequence. To ensure that they record all purchase invoices, some companies consecutively number each invoice upon receipt and then use an internal document number column in the purchases journal.



PURCHASES JOURNAL P1

Date	Account Credited	Terms	Ref.	Inventory Dr. Accounts Payable Cr.
2017				
May 6	Jasper Manufacturing Inc.	2/10, n/30	√	11,000
10	Eaton and Howe Inc.	3/10, n/30	√	7,200
14	Fabor and Son	1/10, n/30	√	6,900
19	Jasper Manufacturing Inc.	2/10, n/30	√	17,500
26	Fabor and Son	1/10, n/30	√	8,700
29	Eaton and Howe Inc.	3/10, n/30	√	12,600
				63,900
				(120)/(201)

ACCOUNTS PAYABLE SUBSIDIARY LEDGER

Eaton and Howe Inc.

Date	Ref.	Debit	Credit	Balance
2017				
May 10	P1		7,200	7,200
29	P1		12,600	19,800

Fabor and Son

Date	Ref.	Debit	Credit	Balance
2017				
May 14	P1		6,900	6,900
26	P1		8,700	15,600

Jasper Manufacturing Inc.

Date	Ref.	Debit	Credit	Balance
2017				
May 6	P1		11,000	11,000
19	P1		17,500	28,500

GENERAL LEDGER

Inventory **No. 120**

Date	Ref.	Debit	Credit	Balance
2017				
May 31	S1		62,190	62,190
31	CR1		2,930	65,120
31	P1	63,900		1,220

Accounts Payable **No. 201**

Date	Ref.	Debit	Credit	Balance
2017				
May 31	P1		63,900	63,900

Illustration G-12
Journalizing and posting the purchases journal

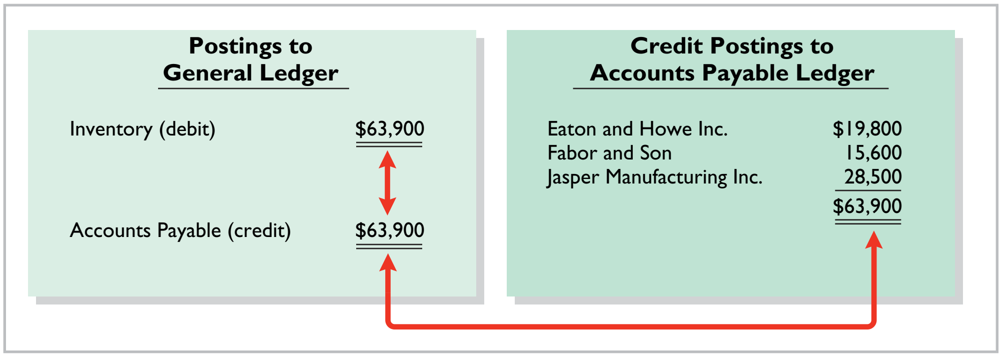
POSTING THE PURCHASES JOURNAL

The procedures for posting the purchases journal are similar to those for the sales journal. In this case, Karns makes **daily** postings to the **accounts payable ledger**; it makes **monthly** postings to Inventory and Accounts Payable in the general ledger. In both ledgers, Karns uses **P1** in the reference column to show that the postings are from page 1 of the purchases journal.

Proof of the equality of the postings from the purchases journal to both ledgers is shown in Illustration G-13 (page G-13).

• HELPFUL HINT
Postings to subsidiary ledger accounts are done daily because it is often necessary to know a current balance for the subsidiary accounts.

Illustration G-13
Proving the equality of the purchases journal



EXPANDING THE PURCHASES JOURNAL

• HELPFUL HINT
A single-column purchases journal needs only to be footed to prove the equality of debits and credits.

As noted earlier, some companies expand the purchases journal to include all types of purchases on account. Instead of one column for Inventory and Accounts Payable, they use a multi-column format. This format usually includes a credit column for Accounts Payable and debit columns for purchases of Inventory, Office Supplies, Store Supplies, and Other Accounts. Illustration G-14 shows a multi-column purchases journal for Hanover Co. The posting procedures are similar to those shown earlier for posting the cash receipts journal.

Illustration G-14
Multi-column purchases journal

PURCHASES JOURNAL P1

Date	Account Credited	Ref.	Accounts Payable Cr.	Inventory Dr.	Office Supplies Dr.	Store Supplies Dr.	Other Accounts Dr. Account	Ref.	Amount
2017									
June 1	Signe Audio	√	2,000		2,000				
3	Wight Co.	√	1,500	1,500					
5	Orange Tree Co.	√	2,600				Equipment	157	2,600
30	Sue's Business Forms	√	800			800			
			56,600	43,000	7,500	1,200			4,900

Cash Payments Journal

In a **cash payments (cash disbursements) journal**, companies record all disbursements of cash. Entries are made from prenumbered checks. Because companies make cash payments for various purposes, the cash payments journal has multiple columns. Illustration G-15 shows a four-column journal.

JOURNALIZING CASH PAYMENTS TRANSACTIONS

The procedures for journalizing transactions in this journal are similar to those for the cash receipts journal. Karns records each transaction on one line, and for each line there must be equal debit and credit amounts. The entries in the cash payments journal in Illustration G-15 are based on the following transactions for Karns Wholesale Supply.

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CASH PAYMENTS JOURNAL CP1

Date	Ck. No.	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Inventory Cr.	Cash Cr.
2017							
May 1	101	Prepaid Insurance	130	1,200			1,200
3	102	Inventory	120	100			100
8	103	Inventory	120	4,400			4,400
10	104	Jasper Manuf. Inc.	√		11,000	220	10,780
19	105	Eaton & Howe Inc.	√		7,200	216	6,984
23	106	Fabor and Son	√		6,900	69	6,831
28	107	Jasper Manuf. Inc.	√		17,500	350	17,150
30	108	Cash Dividends	332	500			500
				6,200	42,600	855	47,945
				(x)	(201)	(120)	(101)

The company posts individual amounts to the subsidiary ledger daily.

At the end of the accounting period, the company posts totals to the general ledger.

ACCOUNTS PAYABLE SUBSIDIARY LEDGER

Eaton and Howe Inc.

Date	Ref.	Debit	Credit	Balance
2017				
May 10	P1		7,200	7,200
19	CP1	7,200		-------
29	P1		12,600	12,600

Fabor and Son

Date	Ref.	Debit	Credit	Balance
2017				
May 14	P1		6,900	6,900
23	CP1	6,900		-------
26	P1		8,700	8,700

Jasper Manufacturing Inc.

Date	Ref.	Debit	Credit	Balance
2017				
May 6	P1		11,000	11,000
10	CP1	11,000		--------
19	P1		17,500	17,500
28	CP1	17,500		--------

The subsidiary ledger is separate from the general ledger.

Accounts Payable is a control account.

GENERAL LEDGER

Cash No. 101

Date	Ref.	Debit	Credit	Balance
2017				
May 31	CR1	53,769		53,769
31	CP1		47,945	5,824

Inventory No. 120

Date	Ref.	Debit	Credit	Balance
2017				
May 3	CP1	100		100
8	CP1	4,400		4,500
31	S1		62,190	57,690
31	CR1		2,930	60,620
31	P1	63,900		3,280
31	CP1		855	2,425

Prepaid Insurance No. 130

Date	Ref.	Debit	Credit	Balance
2017				
May 1	CP1	1,200		1,200

Accounts Payable No. 201

Date	Ref.	Debit	Credit	Balance
2017				
May 31	P1		63,900	63,900
31	CP1	42,600		21,300

Cash Dividends No. 332

Date	Ref.	Debit	Credit	Balance
2017				
May 30	CP1	500		500

start General Ledger General Jrnl Sales Jrnl Cash Receipts Jrnl Purchases Jrnl

Illustration G-15
Journalizing and posting the cash payments journal

May	1	Issued check No. 101 for $1,200 for the annual premium on a fire insurance policy.
	3	Issued check No. 102 for $100 in payment of freight when terms were FOB shipping point.
	8	Issued check No. 103 for $4,400 for the purchase of merchandise.
	10	Sent check No. 104 for $10,780 to Jasper Manufacturing Inc. in payment of May 6 invoice for $11,000 less a 2% discount.
	19	Mailed check No. 105 for $6,984 to Eaton and Howe Inc. in payment of May 10 invoice for $7,200 less a 3% discount.
	23	Sent check No. 106 for $6,831 to Fabor and Son in payment of May 14 invoice for $6,900 less a 1% discount.
	28	Sent check No. 107 for $17,150 to Jasper Manufacturing Inc. in payment of May 19 invoice for $17,500 less a 2% discount.
	30	Issued check No. 108 for $500 to shareholders as a dividend.

Note that whenever Karns enters an amount in the Other Accounts column, it must identify a specific general ledger account in the Account Debited column. The entries for checks No. 101, 102, 103, and 108 illustrate this situation. Similarly, Karns must identify a subsidiary account in the Account Debited column whenever it enters an amount in the Accounts Payable column. See, for example, the entry for check No. 104.

After Karns journalizes the cash payments journal, it totals the columns. The totals are then balanced to prove the equality of debits and credits.

POSTING THE CASH PAYMENTS JOURNAL

The procedures for posting the cash payments journal are similar to those for the cash receipts journal. Karns posts the amounts recorded in the Accounts Payable column individually to the subsidiary ledger and in total to the control account. It posts Inventory and Cash only in total at the end of the month. Transactions in the Other Accounts column are posted individually to the appropriate account(s) affected. The company does not post totals for the Other Accounts column.

Illustration G-15 shows the posting of the cash payments journal. Note that Karns uses the symbol **CP** as the posting reference. After postings are completed, the company proves the equality of the debit and credit balances in the general ledger. In addition, the control account balances should agree with the subsidiary ledger total balance. Illustration G-16 shows the agreement of these balances.

Illustration G-16
Proving the ledgers after postings from the sales, cash receipts, purchases, and cash payments journals

Schedule of Accounts Payable
(from accounts payable subsidiary ledger)

Eaton and Howe Inc.	$12,600
Fabor and Son	8,700
	$21,300

General Ledger

Debits	
Cash	$ 5,824
Accounts Receivable	51,180
Inventory	2,425
Prepaid Insurance	1,200
Cash Dividends	500
Sales Discounts	781
Cost of Goods Sold	65,120
	$127,030
Credits	
Notes Payable	$ 6,000
Accounts Payable	21,300
Share Capital—Ordinary	5,000
Sales Revenue	94,730
	$127,030

Effects of Special Journals on the General Journal

Special journals for sales, purchases, and cash substantially reduce the number of entries that companies make in the general journal. **Only transactions that**

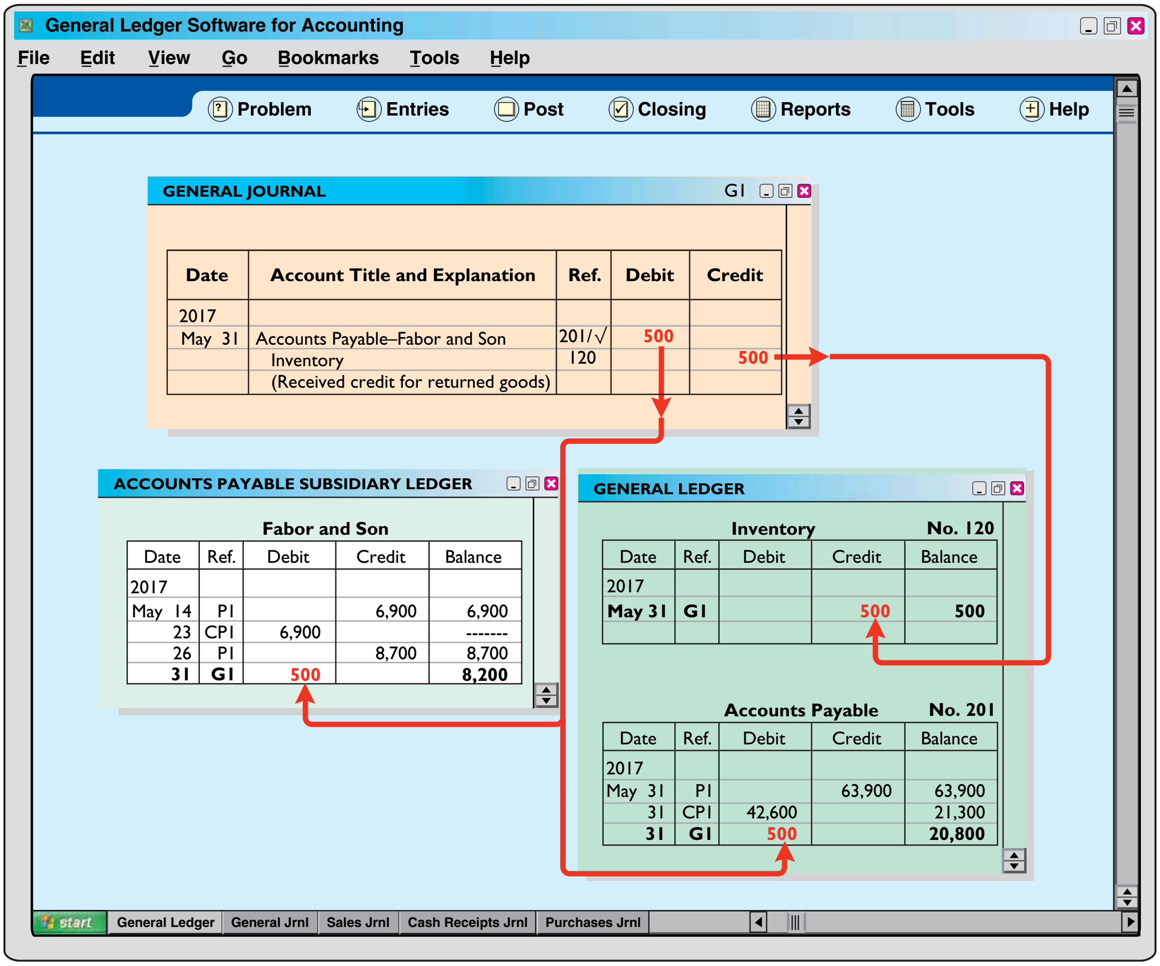
cannot be entered in a special journal are recorded in the general journal. For example, a company may use the general journal to record such transactions as granting of credit to a customer for a sales return or allowance, granting of credit from a supplier for purchases returned, acceptance of a note receivable from a customer, and purchase of equipment by issuing a note payable. Also, **correcting, adjusting, and closing entries are made in the general journal**.

The general journal has columns for date, account title and explanation, reference, and debit and credit amounts. When control and subsidiary accounts are not involved, the procedures for journalizing and posting of transactions are the same as those described in earlier chapters. When control and subsidiary accounts *are* involved, companies make two changes from the earlier procedures:

1. In **journalizing**, they identify both the control and the subsidiary accounts.
2. In **posting**, there must be a **dual posting**: once to the control account and once to the subsidiary account.

To illustrate, assume that on May 31, Karns Wholesale Supply returns $500 of merchandise for credit to Fabor and Son. Illustration G-17 shows the entry in the general journal and the posting of the entry. Note that if Karns receives cash instead of credit on this return, then it would record the transaction in the cash receipts journal.

Illustration G-17
Journalizing and posting the general journal



Note that the general journal indicates two accounts (Accounts Payable, and Fabor and Son) for the debit, and two postings ("201/✔") in the reference column. One debit is posted to the control account and another debit to the creditor's account in the subsidiary ledger.

Cyber Security: A Final Comment

Have you ever been hacked? With the increasing use of cell phones, tablets, and other social media outlets, a real risk exists that your confidential information may be stolen and used illegally. Companies, individuals, and even nations have all been victims of **cybercrime**—a crime that involves the Internet, a computer system, or computer technology.

For companies, cybercrime is clearly a major threat as the hacking of employees' or customers' records related to cybercrime can cost millions of dollars. Unfortunately, the number of security breaches are increasing. A security breach at Target (USA), for example, cost the company a minimum of $20 million, the CEO lost his job, and sales plummeted.

Here are three reasons for the rise in the successful hacks of corporate computer records.

1. Companies and their employees continue to increase their activity on the Internet, primarily due to the use of mobile devices and cloud computing.
2. Companies today collect and store unprecedented amounts of personal data on customers and employees.
3. Companies often take measures to protect themselves from cyber security attacks but then fail to check if employees are carrying out the proper security guidelines.

Note that cyber security risks extend far beyond company operations and compliance. Many hackers target highly sensitive intellectual information or other strategic assets. Illustration G-18 highlights the type of hackers and their motives, targets and impacts.

Illustration G-18
Profiles of hackers

Malicious Actors	Motives	Targets	Impacts
Nation-state	• Economic, political, and/or military advantage	• Trade secrets • Sensitive business information • Emerging technologies • Critical infrastructure	• Loss of competitive advantage • Disruption to critical infrastructure
Organized crime	• Immediate financial gain • Collect information for future financial gains	• Financial/payment systems • Personally identifiable information • Payment card information • Protected health information	• Costly regulatory inquiries and penalties • Consumer and shareholder lawsuits • Loss of consumer confidence
Hacktivists	• Influence political and/or social change • Pressure businesses to change their practices	• Corporate secrets • Sensitive business information • Information related to key executives, employees, customers, and business partners	• Disruption of business activities • Harm to brand and reputation • Loss of consumer confidence
Insiders	• Personal advantage, monetary gain • Professional revenge • Patriotism	• Sales, deals, market strategies • Corporate secrets, intellectual property • Business operations • Personnel information	• Trade secret disclosure • Operational disruption • Harm to brand and reputation • National security impact

Source: PriceWaterhouseCoopers. "Answering Your Cybersecurity Questions" (January 2014).

Companies now recognize that cyber security systems that protect confidential data must be implemented. It follows that companies (and nations and individuals) must continually verify that their cyber security defenses are sound and uncompromised.

REVIEW

LEARNING OBJECTIVES REVIEW

1 Describe the nature and purpose of a subsidiary ledger. A subsidiary ledger is a group of accounts with a common characteristic. It facilitates the recording process by freeing the general ledger from details of individual balances.

2 Explain how companies use special journals in journalizing. Companies use special journals to group similar types of transactions. In a special journal, generally only one line is used to record a complete transaction.

3 Indicate how companies post a multi-column journal. In posting a multi-column journal:

(a) Companies post all column totals except for the Other Accounts column once at the end of the month to the account title specified in the column heading.

(b) Companies do not post the total of the Other Accounts column. Instead, the individual amounts comprising the total are posted separately to the general ledger accounts specified in the Account Credited (Debited) column.

(c) The individual amounts in a column posted in total to a control account are posted daily to the subsidiary ledger accounts specified in the Account Credited (Debited) column.

GLOSSARY REVIEW

Accounts payable (creditors') subsidiary ledger A subsidiary ledger that collects transaction data of individual creditors. (p. G-1).

Accounts receivable (customers') subsidiary ledger A subsidiary ledger that collects transaction data of individual customers. (p. G-1).

Cash payments (cash disbursements) journal A special journal that records all cash paid. (p. G-13).

Cash receipts journal A special journal that records all cash received. (p. G-7).

Control account An account in the general ledger that summarizes subsidiary ledger data. (p. G-1).

Cybercrime A crime that involves the Internet, a computer system, or computer technology. (p. G-17).

Purchases journal A special journal that records all purchases of merchandise on account. (p. G-11).

Sales journal A special journal that records all sales of merchandise on account. (p. G-4).

Special journal A journal that records similar types of transactions, such as all credit sales. (p. G-3).

Subsidiary ledger A group of accounts with a common characteristic. (p. G-1).

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QUESTIONS

1. What are the advantages of using subsidiary ledgers?
2. (a) When do companies normally post to (1) the subsidiary accounts and (2) the general ledger control accounts? (b) Describe the relationship between a control account and a subsidiary ledger.
3. Identify and explain the four special journals discussed in this appendix. List an advantage of using each of these journals rather than using only a general journal.
4. Burguet Company uses special journals. It recorded in a sales journal a sale made on account to P. Starch for £435. A few days later, P. Starch returns £70 worth of merchandise for credit. Where should Burguet Company record the sales return? Why?
5. A £500 purchase of merchandise on account from Hsu Company was properly recorded in the purchases journal. When posted, however, the amount recorded in the subsidiary ledger was £50. How might this error be discovered?
6. Why would special journals used in different businesses not be identical in format? What type of business would maintain a cash receipts journal but not include a column for accounts receivable?

7. The cash and the accounts receivable columns in the cash receipts journal were mistakenly over-added by €4,000 at the end of the month. (a) Will the customers' ledger agree with the Accounts Receivable control account? (b) Assuming no other errors, will the trial balance totals be equal?
8. One column total of a special journal is posted at month-end to only two general ledger accounts. One of these two accounts is Accounts Receivable. What is the name of this special journal? What is the other general ledger account to which that same month-end total is posted?
9. In what journal would the following transactions be recorded? (Assume that a two-column sales journal and a single-column purchases journal are used.)
   (a) Recording of depreciation expense for the year.
   (b) Credit given to a customer for merchandise purchased on credit and returned.
   (c) Sales of merchandise for cash.
   (d) Sales of merchandise on account.
   (e) Collection of cash on account from a customer.
   (f) Purchase of office supplies on account.
10. In what journal would the following transactions be recorded? (Assume that a two-column sales journal and a single-column purchases journal are used.)
   (a) Cash received from signing a note payable.
   (b) Investment of cash by shareholders.
   (c) Closing of the expense accounts at the end of the year.
   (d) Purchase of merchandise on account.
   (e) Credit received for merchandise purchased and returned to supplier.
   (f) Payment of cash on account due a supplier.
11. What transactions might be included in a multi-column purchases journal that would not be included in a single-column purchases journal?
12. Give an example of a transaction in the general journal that causes an entry to be posted twice (i.e., to two accounts), one in the general ledger, the other in the subsidiary ledger. Does this affect the debit/credit equality of the general ledger?
13. Give some examples of appropriate general journal transactions for an organization using special journals.

BRIEF EXERCISES

Identify subsidiary ledger balances.
(LO 1)

BEG-1 Presented below is information related to Cortes SLU for its first month of operations. Identify the balances that appear in the accounts receivable subsidiary ledger and the accounts receivable balance that appears in the general ledger at the end of January.

Credit Sales				Cash Collections			
Jan.	7	Austin Co.	€10,000	Jan.	17	Austin Co.	€7,600
	15	Diaz Co.	7,000		24	Diaz Co.	5,000
	23	Nichols Co.	9,000		29	Nichols Co.	9,000

Identify subsidiary ledger accounts.
(LO 1)

BEG-2 Identify in what ledger (general or subsidiary) each of the following accounts is shown.

(a) Rent Expense.
(b) Accounts Receivable—Nguyen.
(c) Notes Payable.
(d) Accounts Payable—Weeden.

Identify special journals.
(LO 2)

BEG-3 Identify the journal in which each of the following transactions is recorded.

(a) Cash sales.
(b) Payment of cash dividends.
(c) Cash purchase of land.
(d) Credit sales.
(e) Purchase of merchandise on account.
(f) Receipt of cash for services performed.

Identify entries to cash receipts journal.
(LO 2)

BEG-4 Indicate whether each of the following debits and credits is included in the cash receipts journal. (Use "Yes" or "No" to answer this question.)

(a) Debit to Sales Revenue.
(b) Credit to Inventory.
(c) Credit to Accounts Receivable.
(d) Debit to Accounts Payable.

Identify transactions for special journals.
(LO 2)

BEG-5 Lazar Co. uses special journals and a general journal. Identify the journal in which each of the following transactions is recorded.

(a) Purchased equipment on account.
(b) Purchased merchandise on account.
(c) Paid utility expense in cash.
(d) Sold merchandise on account.

Identify transactions for special journals.
(LO 2)

BEG-6 Identify the special journal(s) in which the following column headings appear.

(a) Sales Discounts Dr.
(b) Accounts Receivable Cr.
(c) Cash Dr.
(d) Sales Revenue Cr.
(e) Inventory Dr.

BEG-7 Serrato Computer Components uses a multi-column cash receipts journal. Indicate which column(s) is/are posted only in total, only daily, or both in total and daily.

Indicate postings to cash receipts journal.

(LO 3)

(a) Accounts Receivable.
(b) Sales Discounts.
(c) Cash.
(d) Other Accounts.

EXERCISES

EG-1 Kimani Ltd. uses both special journals and a general journal as described in this appendix. On June 30, after all monthly postings had been completed, the Accounts Receivable control account in the general ledger had a debit balance of £310,000; the Accounts Payable control account had a credit balance of £77,000.

Determine control account balances, and explain posting of special journals.

(LO 1, 3)

The July transactions recorded in the special journals are summarized below. No entries affecting accounts receivable and accounts payable were recorded in the general journal for July.

Sales journal	Total sales £161,400
Purchases journal	Total purchases £54,100
Cash receipts journal	Accounts receivable column total £131,000
Cash payments journal	Accounts payable column total £47,500

Instructions

(a) What is the balance of the Accounts Receivable control account after the monthly postings on July 31?
(b) What is the balance of the Accounts Payable control account after the monthly postings on July 31?
(c) To what account(s) is the column total of £161,400 in the sales journal posted?
(d) To what account(s) is the accounts receivable column total of £131,000 in the cash receipts journal posted?

EG-2 Presented below is the subsidiary accounts receivable account of Mailee Long.

Explain postings to subsidiary ledger.

(LO 1)

Date	Ref.	Debit	Credit	Balance
2017				
Sept. 2	S31	61,000		61,000
9	G4		14,000	47,000
27	CR8		47,000	—

Instructions

Write a memo to Erica Henes, chief financial officer, that explains each transaction.

EG-3 On September 1, the balance of the Accounts Receivable control account in the general ledger of Thone plc was £10,960. The customers' subsidiary ledger contained account balances as follows: Zeyen £1,440, Lahr £2,640, Bohn £2,060, and Cao £4,820. At the end of September, the various journals contained the following information.

Post various journals to control and subsidiary accounts.

(LO 1, 3)

Sales journal: Sales to Cao £840; to Zeyen £1,260; to Han £1,330; to Bohn £1,260.

Cash receipts journal: Cash received from Bohn £1,440; from Cao £2,300; from Han £380; from Lahr £1,800; from Zeyen £1,240.

General journal: An allowance is granted to Cao £185.

Instructions

(a) Set up control and subsidiary accounts and enter the beginning balances. Do not construct the journals.
(b) Post the various journals. Post the items as individual items or as totals, whichever would be the appropriate procedure. (No sales discounts given.)
(c) Prepare a list of customers and prove the agreement of the controlling account with the subsidiary ledger at September 30, 2017.

Determine control and subsidiary ledger balances for accounts receivable.
(LO 1)

EG-4 Bill Mellen Company has a balance in its Accounts Receivable control account of €10,200 on January 1, 2017. The subsidiary ledger contains three accounts: Burris Company, balance €4,000; Uhlig Company, balance €2,500; and Lopata Company. During January, the following receivable-related transactions occurred.

	Credit Sales	Collections	Returns
Burris Company	€9,000	€8,000	€−0−
Uhlig Company	7,000	2,500	3,000
Lopata Company	8,300	9,000	−0−

Instructions
(a) What is the January 1 balance in the Lopata Company subsidiary account?
(b) What is the January 31 balance in the control account?
(c) Compute the balances in the subsidiary accounts at the end of the month.
(d) Which January transaction would not be recorded in a special journal?

Determine control and subsidiary ledger balances for accounts payable.
(LO 1)

EG-5 Chia Vang Ltd. has a balance in its Accounts Payable control account of NT$247,500 on January 1, 2017. The subsidiary ledger contains three accounts: Tym Ltd., balance NT$90,000; Keyes Ltd., balance NT$56,250; and Byrne Ltd. During January, the following purchase-related transactions occurred.

	Purchases	Payments	Returns
Tym Ltd.	NT$196,500	NT$180,000	NT$ –0–
Keyes Ltd.	157,500	52,000	69,000
Byrne Ltd.	191,250	202,500	–0–

Instructions
(a) What is the January 1 balance in the Byrne Ltd. subsidiary account?
(b) What is the January 31 balance in the control account?
(c) Compute the balances in the subsidiary accounts at the end of the month.
(d) Which January transaction would not be recorded in a special journal?

Record transactions in sales and purchases journal.
(LO 1, 2)

EG-6 Pashak OAO uses special journals and a general journal. The following transactions occurred during September 2017.

Sept. 2 Sold merchandise on account to J. Witten, invoice no. 101, R$780, terms n/30. The cost of the merchandise sold was R$420.
10 Purchased merchandise on account from H. Gilles R$600, terms 2/10, n/30.
12 Purchased office equipment on account from Y. Kojima R$6,500.
21 Sold merchandise on account to K. Morgan, invoice no. 102 for R$800, terms 2/10, n/30. The cost of the merchandise sold was R$480.
25 Purchased merchandise on account from G. Harvey R$835, terms n/30.
27 Sold merchandise to D. Schaff for R$700 cash. The cost of the merchandise sold was R$400.

Instructions
(a) Prepare a sales journal (see Illustration G-6) and a single-column purchases journal (see Illustration G-12). (Use page 1 for each journal.)
(b) Record the transaction(s) for September that should be journalized in the sales journal and the purchases journal.

Record transactions in cash receipts and cash payments journal.
(LO 1, 2)

EG-7 Newell Ltd. uses special journals and a general journal. The following transactions occurred during May 2017.

May 1 M. Newell invested £50,000 cash in the business in exchange for ordinary shares.
2 Sold merchandise to A. Belton for £6,340 cash. The cost of the merchandise sold was £4,200.
3 Purchased merchandise for £7,200 from E. Reed using check no. 101.
14 Paid salary to M. Hunt £740 by issuing check no. 102.
16 Sold merchandise on account to S. Spies for £920, terms n/30. The cost of the merchandise sold was £630.
22 A check of £9,000 is received from N. Eggert in full for invoice 101; no discount given.

Instructions

(a) Prepare a multi-column cash receipts journal (see Illustration G-8) and a multi-column cash payments journal (see Illustration G-15). (Use page 1 for each journal.)
(b) Record the transaction(s) for May that should be journalized in the cash receipts journal and cash payments journal.

Explain journalizing in cash journals.

(LO 2)

EG-8 Cosey Company uses the columnar cash journals illustrated in this appendix. In April, the following selected cash transactions occurred.

1. Made a refund to a customer for the return of damaged goods.
2. Received collection from customer within the 3% discount period.
3. Purchased merchandise for cash.
4. Paid a creditor within the 3% discount period.
5. Received collection from customer after the 3% discount period had expired.
6. Paid freight on merchandise purchased.
7. Paid cash for office equipment.
8. Received cash refund from supplier for merchandise returned.
9. Paid cash dividend to shareholders.
10. Made cash sales.

Instructions

Indicate (a) the journal, and (b) the columns in the journal that should be used in recording each transaction.

Journalize transactions in general journal and post.

(LO 1, 3)

EG-9 Moncado plc has the following selected transactions during March.

Mar.	2	Purchased equipment costing £9,400 from Aleksic Company on account.
	5	Received credit of £410 from Dumont Company for merchandise damaged in shipment to Moncado.
	7	Issued credit of £365 to Gavin Company for merchandise the customer returned. The returned merchandise had a cost of £245.

Moncado uses a one-column purchases journal, a sales journal, the columnar cash journals used in this appendix, and a general journal.

Instructions

(a) Journalize the transactions in the general journal.
(b) In a brief memo to the president of Moncado plc, explain the postings to the control and subsidiary accounts from each type of journal.

Indicate journalizing in special journals.

(LO 2)

EG-10 Below are some typical transactions incurred by Khiani Company.

1. Payment of creditors on account.
2. Return of merchandise sold for credit.
3. Collection on account from customers.
4. Sale of land for cash.
5. Sale of merchandise on account.
6. Sale of merchandise for cash.
7. Received credit for merchandise purchased on credit.
8. Sales discount taken on goods sold.
9. Payment of employee wages.
10. Payment of cash dividend to shareholders.
11. Depreciation on building.
12. Purchase of office supplies for cash.
13. Purchase of merchandise on account.

Instructions

For each transaction, indicate whether it would normally be recorded in a cash receipts journal, cash payments journal, sales journal, single-column purchases journal, or general journal.

Explain posting to control account and subsidiary ledger.

(LO 1, 3)

EG-11 The general ledger of Saxena A/S contained the following Accounts Payable control account (in T-account form). Also shown is the related subsidiary ledger.

GENERAL LEDGER

Accounts Payable

Feb. 15	General journal	1,400	Feb. 1	Balance	26,025
28	?	?	5	General journal	195
			11	General journal	550
			28	Purchases	13,400
			Feb. 28	Balance	9,400

ACCOUNTS PAYABLE LEDGER

Lawlor

	Feb. 28 Bal. 4,600

Robillard

	Feb. 28 Bal. ?

Tilev

	Feb. 28 Bal. 2,300

Instructions

(a) Indicate the missing posting reference and amount in the control account, and the missing ending balance (in €) in the subsidiary ledger.

(b) Indicate the amounts in the control account that were dual-posted (i.e., posted to the control account and the subsidiary accounts).

Prepare purchases and general journals.

(LO 1, 2)

EG-12 Selected accounts from the ledgers of Masud Company at July 31 showed the following.

GENERAL LEDGER

Equipment No. 153

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		G1	3,900		3,900

Inventory No. 120

Date	Explanation	Ref.	Debit	Credit	Balance
July 15		G1	600		600
18		G1		380	220
25		G1		200	20
31		P1	8,500		8,520

Accounts Payable No. 201

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		G1		3,900	3,900
15		G1		600	4,500
18		G1	380		4,120
25		G1	200		3,920
31		P1		8,500	12,420

ACCOUNTS PAYABLE LEDGER

Alaska Equipment Co.

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		G1		3,900	3,900

Kansas Co.

Date	Explanation	Ref.	Debit	Credit	Balance
July 14		P1		1,300	1,300
25		G1	200		1,100

Dakota Co.

Date	Explanation	Ref.	Debit	Credit	Balance
July 3		P1		2,400	2,400
20		P1		700	3,100

Montana Co.

Date	Explanation	Ref.	Debit	Credit	Balance
July 12		P1		500	500
21		P1		600	1,100

Georgia Ltd.

Date	Explanation	Ref.	Debit	Credit	Balance
July 17		P1		1,400	1,400
18		G1	380		1,020
29		P1		1,600	2,620

Oklahoma Ltd.

Date	Explanation	Ref.	Debit	Credit	Balance
July 15		G1		600	600

Instructions

From the data prepare:

(a) The single-column purchases journal for July.
(b) The general journal entries for July.

EG-13 Schara Products uses both special journals and a general journal as described in this appendix. Schara also posts customers' accounts in the accounts receivable subsidiary ledger. The postings (in €) for the most recent month are included in the subsidiary T-accounts below.

Determine correct posting amount to control account.

(LO 3)

Christel

	Dr.	Cr.
Bal.	340	250
	280	

Lei

	Dr.	Cr.
Bal.	150	150
	240	

Epping

	Dr.	Cr.
Bal.	−0−	310
	310	

Rivera

	Dr.	Cr.
Bal.	120	120
	190	
	130	

Instructions

Determine the correct amount of the end-of-month posting from the sales journal to the Accounts Receivable control account.

EG-14 Selected account balances for Satina SpA at January 1, 2017, are presented below.

Compute balances in various accounts.

(LO 3)

Accounts Payable	€19,000
Accounts Receivable	22,000
Cash	17,000
Inventory	13,500

Satina's sales journal for January shows a total of €100,000 in the selling price column, and its one-column purchases journal for January shows a total of €72,000.

The column totals in Satina's cash receipts journal are Cash Dr. €64,000; Sales Discounts Dr. €1,100; Accounts Receivable Cr. €48,000; Sales Revenue Cr. €6,000; and Other Accounts Cr. €11,100.

The column totals in Satina's cash payments journal for January are Cash Cr. €55,000; Inventory Cr. €1,000; Accounts Payable Dr. €46,000; and Other Accounts Dr. €10,000. Satina's total cost of goods sold for January is €63,600.

Accounts Payable, Accounts Receivable, Cash, Inventory, and Sales Revenue are not involved in the "Other Accounts" column in either the cash receipts or cash payments journal, and are not involved in any general journal entries.

Instructions

Compute the January 31 balance for Satina in the following accounts.

(a) Accounts Payable.
(b) Accounts Receivable.
(c) Cash.
(d) Inventory.
(e) Sales Revenue.

PROBLEMS: SET A

PG-1A Nordeen AG's chart of accounts includes the following selected accounts.

Journalize transactions in cash receipts journal; post to control account and subsidiary ledger.

(LO 1, 2, 3)

101 Cash	401 Sales Revenue
112 Accounts Receivable	414 Sales Discounts
120 Inventory	505 Cost of Goods Sold
311 Share Capital—Ordinary	

On April 1, the accounts receivable ledger of Nordeen showed the following balances: Siem €1,550, Milkie €1,200, Jury Co. €2,900, and Afzal €1,800. The April transactions involving the receipt of cash were as follows.

Apr. 1 Shareholders invested €7,500 additional cash in the business, in exchange for ordinary shares.
4 Received check for payment of account from Afzal less 2% cash discount.
5 Received check for €1,050 payment of invoice no. 307 from Jury Co.
8 Made cash sales of merchandise totaling €7,845. The cost of the merchandise sold was €4,460.
10 Received check for €600 in payment of invoice no. 309 from Siem.
11 Received cash refund from a supplier for damaged merchandise €680.
23 Received check for €1,500 in payment of invoice no. 310 from Jury Co.
29 Received check for payment of account from Milkie.

Instructions

(a) Balancing totals €22,175

(c) Accounts Receivable €1,300

(a) Journalize the transactions above in a six-column cash receipts journal with columns for Cash Dr., Sales Discounts Dr., Accounts Receivable Cr., Sales Revenue Cr., Other Accounts Cr., and Cost of Goods Sold Dr./Inventory Cr. Foot and crossfoot the journal.
(b) Insert the beginning balances in the Accounts Receivable control and subsidiary accounts, and post the April transactions to these accounts.
(c) Prove the agreement of the control account and subsidiary account balances.

Journalize transactions in cash payments journal; post to control account and subsidiary ledgers.

(LO 1, 2, 3)

PG-2A Gatske A.Ş.'s chart of accounts includes the following selected accounts.

101 Cash	201 Accounts Payable
120 Inventory	332 Cash Dividends
130 Prepaid Insurance	505 Cost of Goods Sold
157 Equipment	

On October 1, the accounts payable ledger of Gatske showed the following balances: Deavers Company ₺2,700, Greer Co. ₺2,500, May Co. ₺2,100, and Snell Company ₺3,700. The October transactions involving the payment of cash were as follows.

Oct. 1 Purchased merchandise, check no. 63, ₺300.
3 Purchased equipment, check no. 64, ₺1,200.
5 Paid Deavers Company balance due of ₺2,700, less 2% discount, check no. 65, ₺2,646.
10 Purchased merchandise, check no. 66, ₺2,250.
15 Paid May Co. balance due of ₺2,100, check no. 67.
16 Paid cash dividend of ₺400, check no. 68.
19 Paid Greer Co. in full for invoice no. 610, ₺1,800 less 2% cash discount, check no. 69, ₺1,764.
29 Paid Snell Company in full for invoice no. 264, ₺2,500, check no. 70.

Instructions

(a) Balancing totals ₺13,250

(c) Accounts Payable ₺1,900

(a) Journalize the transactions above in a four-column cash payments journal with columns for Other Accounts Dr., Accounts Payable Dr., Inventory Cr., and Cash Cr. Foot and crossfoot the journal.
(b) Insert the beginning balances in the Accounts Payable control and subsidiary accounts, and post the October transactions to these accounts.
(c) Prove the agreement of the control account and the subsidiary account balances.

Journalize transactions in multi-column purchases journal; post to the general and subsidiary ledgers.

(LO 1, 2, 3)

PG-3A The chart of accounts of Domingo Ltd. includes the following selected accounts.

112 Accounts Receivable	401 Sales Revenue
120 Inventory	412 Sales Returns and Allowances
126 Supplies	505 Cost of Goods Sold
157 Equipment	610 Advertising Expense
201 Accounts Payable	

In July, the following selected transactions were completed. All purchases and sales were on account. The cost of all merchandise sold was 70% of the sales price.

July 1 Purchased merchandise from Chad Company £7,600.
2 Received freight bill from Pegasus Shipping on Chad purchase £400.
3 Made sales to Effron Company £1,300 and to Pitas Bros. £2,000.
5 Purchased merchandise from Kivlin Company £3,400.
8 Received credit on merchandise returned to Kivlin Company £300.
13 Purchased store supplies from Bowe Supply £910.
15 Purchased merchandise from Chad Company £3,600 and from Goran Company £3,300.
16 Made sales to Felber Company £3,450 and to Pitas Bros. £1,570.
18 Received bill for advertising from Wei Advertisements £640.
21 Made sales to Effron Company £310 and to Musky Company £2,680.
22 Granted allowance to Effron Company for merchandise damaged in shipment £65.
24 Purchased merchandise from Kivlin Company £3,000.
26 Purchased equipment from Bowe Supply £900.
28 Received freight bill from Pegasus Shipping on Kivlin purchase of July 24, £380.
30 Made sales to Felber Company £5,600.

Instructions

(a) Journalize the transactions above in a purchases journal, a sales journal, and a general journal. The purchases journal should have the following column headings: Date, Account Credited (Debited), Ref., Accounts Payable Cr., Inventory Dr., and Other Accounts Dr.
(b) Post to both the general and subsidiary ledger accounts. (Assume that all accounts have zero beginning balances.)
(c) Prove the agreement of the control and subsidiary accounts.

(a) Accounts Payable £23,830
Sales revenue column total £16,910

(c) Accounts Receivable £16,845
Accounts Payable £23,830

PG-4A Selected accounts from the chart of accounts of Valdez SA are shown below.

Journalize transactions in special journals.

(LO 1, 2, 3)

101 Cash	401 Sales Revenue
112 Accounts Receivable	412 Sales Returns and Allowances
120 Inventory	414 Sales Discounts
126 Supplies	505 Cost of Goods Sold
157 Equipment	726 Salaries and Wages Expense
201 Accounts Payable	

The cost of all merchandise sold was 60% of the sales price. During January, Valdez completed the following transactions.

Jan. 3 Purchased merchandise on account from Pirkov Co. R$10,000.
4 Purchased supplies for cash R$80.
4 Sold merchandise on account to Hull R$5,600, invoice no. 371, terms 1/10, n/30.
5 Returned R$300 worth of damaged goods purchased on account from Pirkov Co. on January 3.
6 Made cash sales for the week totaling R$3,750.
8 Purchased merchandise on account from Dubois Co. R$4,500.
9 Sold merchandise on account to Phelan Ltd. R$6,400, invoice no. 372, terms 1/10, n/30.
11 Purchased merchandise on account from Akers Co. R$3,700.
13 Paid in full Pirkov Co. on account less a 2% discount.
13 Made cash sales for the week totaling R$6,260.
15 Received payment from Phelan Ltd. for invoice no. 372.
15 Paid semi-monthly salaries of R$14,300 to employees.
17 Received payment from Hull for invoice no. 371.
17 Sold merchandise on account to Mayr Co. R$1,200, invoice no. 373, terms 1/10, n/30.
19 Purchased equipment on account from Barb Ltd. R$5,500.
20 Cash sales for the week totaled R$3,200.
20 Paid in full Dubois Co. on account less a 2% discount.
23 Purchased merchandise on account from Pirkov Co. R$7,800.
24 Purchased merchandise on account from Fifer Ltd. R$5,100.
27 Made cash sales for the week totaling R$4,230.
30 Received payment from Mayr Co. for invoice no. 373.
31 Paid semi-monthly salaries of R$14,300 to employees.
31 Sold merchandise on account to Hull R$9,330, invoice no. 374, terms 1/10, n/30.

Valdez uses the following journals.

1. Sales journal.
2. Single-column purchases journal.
3. Cash receipts journal with columns for Cash Dr., Sales Discounts Dr., Accounts Receivable Cr., Sales Revenue Cr., Other Accounts Cr., and Cost of Goods Sold Dr./Inventory Cr.
4. Cash payments journal with columns for Other Accounts Dr., Accounts Payable Dr., Inventory Cr., and Cash Cr.
5. General journal.

(a) Sales journal R$22,530
Purchases journal R$31,100
Cash receipts journal balancing total R$30,640
Cash payments journal balancing total R$42,880

Instructions

Using the selected accounts provided:

(a) Record the January transactions in the appropriate journal noted.
(b) Foot and crossfoot all special journals.
(c) Show how postings would be made by placing ledger account numbers and check-marks as needed in the journals. (Actual posting to ledger accounts is not required.)

Journalize in sales and cash receipts journals; post; prepare a trial balance; prove control to subsidiary; prepare adjusting entries; prepare an adjusted trial balance.

(LO 1, 2, 3)

PG-5A Presented below are the purchases and cash payments journals for Rosalez Co. for its first month of operations.

PURCHASES JOURNAL P1

Date	Account Credited	Ref.	Inventory Dr. Accounts Payable Cr.
July 4	T. Cigale		6,500
5	K. Emmons		8,100
11	M. Huang		5,920
13	D. Talbert		15,300
20	G. Young		7,900
			43,720

CASH PAYMENTS JOURNAL CP1

Date	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Inventory Cr.	Cash Cr.
July 4	Supplies		600			600
10	K. Emmons			8,100	81	8,019
11	Prepaid Rent		6,000			6,000
15	T. Cigale			6,500		6,500
19	Cash Dividends		2,500			2,500
21	D. Talbert			15,300	153	15,147
			9,100	29,900	234	38,766

In addition, the following transactions have not been journalized for July. The cost of all merchandise sold was 65% of the sales price.

July	1	A. Rosalez invested €80,000 in cash in exchange for ordinary shares.
	6	Sold merchandise on account to Dorfner Co. €6,900 terms 1/10, n/30.
	7	Made cash sales totaling €5,900.
	8	Sold merchandise on account to Bonilha €3,600, terms 1/10, n/30.
	10	Sold merchandise on account to L. Ortiz €4,900, terms 1/10, n/30.
	13	Received payment in full from Bonilha.
	16	Received payment in full from L. Ortiz.
	20	Received payment in full from Dorfner Co.
	21	Sold merchandise on account to M. Putzi €5,000, terms 1/10, n/30.
	29	Returned damaged goods to T. Cigale and received cash refund of €520.

Instructions

(a) Open the following accounts in the general ledger.

101 Cash	332 Cash Dividends
112 Accounts Receivable	401 Sales Revenue
120 Inventory	414 Sales Discounts
127 Supplies	505 Cost of Goods Sold
131 Prepaid Rent	631 Supplies Expense
201 Accounts Payable	729 Rent Expense
311 Share Capital—Ordinary	

(b) Journalize the transactions that have not been journalized in the sales journal, the cash receipts journal (see Illustration G-8), and the general journal.
(c) Post to the accounts receivable and accounts payable subsidiary ledgers. Follow the sequence of transactions as shown in the problem.
(d) Post the individual entries and totals to the general ledger.
(e) Prepare a trial balance at July 31, 2017.
(f) Determine whether the subsidiary ledgers agree with the control accounts in the general ledger.
(g) The following adjustments at the end of July are necessary.
    (1) A count of supplies indicates that €210 is still on hand.
    (2) Recognize rent expense for July, €500.
    Prepare the necessary entries in the general journal. Post the entries to the general ledger.
(h) Prepare an adjusted trial balance at July 31, 2017.

(b) Sales journal total €20,400
Cash receipts journal balancing totals €101,820
(e) Totals €120,120
(f) Accounts Receivable €5,000
Accounts Payable €13,820
(h) Totals €120,120

PG-6A The post-closing trial balance for Amland AG is as follows.

Journalize in special journals; post; prepare a trial balance.
(LO 1, 2, 3)

AMLAND AG
Post-Closing Trial Balance
December 31, 2016

	Debit	**Credit**
Cash	€ 41,500	
Accounts Receivable	15,000	
Notes Receivable	45,000	
Inventory	20,000	
Equipment	7,500	
Accumulated Depreciation—Equipment		€ 1,500
Accounts Payable		43,000
Share Capital—Ordinary		84,500
	€129,000	€129,000

The subsidiary ledgers contain the following information: (1) accounts receivable—M. Barajas €2,500, J. Clare €7,500, and E. Divine €5,000; (2) accounts payable—B. Forrest €10,000, L. Gold €18,000, and A. Qazi €15,000. The cost of all merchandise sold was 60% of the sales price.

The transactions for January 2017 are as follows.

Jan.	3	Sell merchandise to T. Payton €4,600, terms 2/10, n/30.
	5	Purchase merchandise from P. Yang €2,800, terms 2/10, n/30.
	7	Receive a check from E. Divine €3,500.
	11	Pay freight on merchandise purchased €300.
	12	Pay rent of €1,000 for January.
	13	Receive payment in full from T. Payton.
	14	Post all entries to the subsidiary ledgers. Issued credit of €300 to M. Barajas for returned merchandise.
	15	Send A. Qazi a check for €14,850 in full payment of account, discount €150.
	17	Purchase merchandise from E. Monty €1,600, terms 2/10, n/30.
	18	Pay sales salaries of €2,500 and office salaries €2,000.
	20	Give L. Gold a 60-day note for €18,000 in full payment of account payable.
	23	Total cash sales amount to €9,100.

Jan. 24 Post all entries to the subsidiary ledgers. Sell merchandise on account to J. Clare €7,400, terms 1/10, n/30.
27 Send P. Yang a check for €950.
29 Receive payment on a note of €37,000 from W. Lague.
30 Post all entries to the subsidiary ledgers. Return merchandise of €300 to E. Monty for credit.

Instructions

(a) Open general and subsidiary ledger accounts for the following.

101 Cash	311 Share Capital—Ordinary
112 Accounts Receivable	401 Sales Revenue
115 Notes Receivable	412 Sales Returns and Allowances
120 Inventory	414 Sales Discounts
157 Equipment	505 Cost of Goods Sold
158 Accumulated Depreciation—Equipment	726 Salaries and Wages Expense
200 Notes Payable	729 Rent Expense
201 Accounts Payable	

(b) Sales journal €12,000
Purchases journal €4,400
Cash receipts journal (balancing) €54,200
Cash payments journal (balancing) €21,750
(d) Totals €138,250
(e) Accounts Receivable €18,600
Accounts Payable €13,150

(b) Record the January transactions in a sales journal, a single-column purchases journal, a cash receipts journal (see Illustration G-8), a cash payments journal (see Illustration G-15), and a general journal.
(c) Post the appropriate amounts to the general ledger.
(d) Prepare a trial balance at January 31, 2017.
(e) Determine whether the subsidiary ledgers agree with controlling accounts in the general ledger.

PROBLEMS: SET B

Journalize transactions in cash receipts journal; post to control account and subsidiary ledger.
(LO 1, 2, 3)

PG-1B Caspari Company's chart of accounts includes the following selected accounts.

101 Cash	401 Sales Revenue
112 Accounts Receivable	414 Sales Discounts
120 Inventory	505 Cost of Goods Sold
311 Share Capital—Ordinary	

On June 1, the accounts receivable ledger of Caspari Company showed the following balances: Detwiler & Son £2,500, Flores Co. £1,900, Glaimo Bros. £1,600, and Loomis Co. £1,800. The June transactions involving the receipt of cash were as follows.

June 1 Shareholders invested £12,000 additional cash in the business, in exchange for ordinary shares.
3 Received check in full from Loomis Co. less 2% cash discount.
6 Received check in full from Flores Co. less 2% cash discount.
7 Made cash sales of merchandise totaling £7,220. The cost of the merchandise sold was £4,800.
9 Received check in full from Detwiler & Son less 2% cash discount.
11 Received cash refund from a supplier for damaged merchandise £370.
15 Made cash sales of merchandise totaling £4,900. The cost of the merchandise sold was £3,180.
20 Received check in full from Glaimo Bros. £1,600.

Instructions

(a) Balancing totals £32,290

(a) Journalize the transactions above in a six-column cash receipts journal with columns for Cash Dr., Sales Discounts Dr., Accounts Receivable Cr., Sales Revenue Cr., Other Accounts Cr., and Cost of Goods Sold Dr./Inventory Cr. Foot and crossfoot the journal.
(b) Insert the beginning balances in the Accounts Receivable control and subsidiary accounts, and post the June transactions to these accounts.

(c) Accounts Receivable £0

(c) Prove the agreement of the control account and subsidiary account balances.

PG-2B Grypp SE's chart of accounts includes the following selected accounts.

Journalize transactions in cash payments journal; post to the general and subsidiary ledgers.

(LO 1, 2, 3)

101 Cash	157 Equipment
120 Inventory	201 Accounts Payable
130 Prepaid Insurance	332 Cash Dividends

On November 1, the accounts payable ledger of Grypp showed the following balances: C. Holt & Co. €4,500, O. Kroll €2,350, K. Radaj €1,000, and Weber Bros. €1,500. The November transactions involving the payment of cash were as follows.

Nov. 1 Purchased merchandise, check no. 11, €1,190.
3 Purchased store equipment, check no. 12, €1,700.
5 Paid Weber Bros. balance due of €1,500, less 2% discount, check no. 13, €1,470.
11 Purchased merchandise, check no. 14, €2,000.
15 Paid K. Radaj balance due of €1,000, less 3% discount, check no. 15, €970.
16 Paid cash dividend of €500, check no. 16.
19 Paid O. Kroll in full for invoice no. 1245, €1,200 less 1% discount, check no. 17, €1,188.
25 Paid premium due on one-year insurance policy, check no. 18, €3,000.
30 Paid C. Holt & Co. in full for invoice no. 832, €3,500, check no. 19.

Instructions

(a) Journalize the transactions above in a four-column cash payments journal with columns for Other Accounts Dr., Accounts Payable Dr., Inventory Cr., and Cash Cr. Foot and crossfoot the journal.

(b) Insert the beginning balances in the Accounts Payable control and subsidiary accounts, and post the November transactions to these accounts.

(c) Prove the agreement of the control account and the subsidiary account balances.

(a) Balancing totals €15,590

(c) Accounts Payable €2,150

PG-3B The chart of accounts of Ervin A.Ş. includes the following selected accounts.

Journalize transactions in multi-column purchases journal; post to the general and subsidiary ledgers.

(LO 1, 2, 3)

112 Accounts Receivable	401 Sales Revenue
120 Inventory	412 Sales Returns and Allowances
126 Supplies	505 Cost of Goods Sold
157 Equipment	610 Advertising Expense
201 Accounts Payable	

In May, the following selected transactions were completed. All purchases and sales were on account except as indicated. The cost of all merchandise sold was 65% of the sales price.

May 2 Purchased merchandise from Yan Company ₺7,600.
3 Received freight bill from Porter Freight on Yan purchase ₺360.
5 Made sales to Eder Company ₺2,200, Dixon Bros. ₺2,700, and Lamb Company ₺1,800.
8 Purchased merchandise from Quirk Company ₺8,000 and Zamora Company ₺8,700.
10 Received credit on merchandise returned to Zamora Company ₺800.
15 Purchased supplies from Rizio Supply ₺900.
16 Purchased merchandise from Yan Company ₺4,500, and Quirk Company ₺7,200.
17 Returned supplies to Rizio Supply, receiving credit ₺100. (*Hint:* Credit Supplies.)
18 Received freight bills on May 16 purchases from Porter Freight ₺500.
20 Returned merchandise to Yan Company receiving credit ₺300.
23 Made sales to Dixon Bros. ₺1,900 and to Lamb Company ₺3,600.
25 Received bill for advertising from Anshus Advertising ₺950.
26 Granted allowance to Lamb Company for merchandise damaged in shipment ₺240.
28 Purchased equipment from Rizio Supply ₺500.

Instructions

(a) Journalize the transactions above in a purchases journal, a sales journal, and a general journal. The purchases journal should have the following column headings: Date, Account Credited (Debited), Ref., Accounts Payable Cr., Inventory Dr., and Other Accounts Dr.

(b) Post to both the general and subsidiary ledger accounts. (Assume that all accounts have zero beginning balances.)

(c) Prove the agreement of the control and subsidiary accounts.

(a) Purchases journal—Accounts Payable, Cr. ₺39,210
Sales journal—Sales column total ₺12,200

(c) Accounts Receivable ₺11,960
Accounts Payable ₺38,010

Journalize transactions in special journals.

(LO 1, 2, 3)

PG-4B Selected accounts from the chart of accounts of Linvik NV are shown below.

101 Cash	201 Accounts Payable
112 Accounts Receivable	401 Sales Revenue
120 Inventory	414 Sales Discounts
126 Supplies	505 Cost of Goods Sold
140 Land	610 Advertising Expense
145 Buildings	

The cost of all merchandise sold was 70% of the sales price. During October, Linvik completed the following transactions.

Oct.	2	Purchased merchandise on account from Cutler Company €13,500.
	4	Sold merchandise on account to Ebert Co. €7,700, invoice no. 204, terms 2/10, n/30.
	5	Purchased supplies for cash €80.
	7	Made cash sales for the week totaling €8,800.
	9	Paid in full the amount owed Cutler Company less a 2% discount.
	10	Purchased merchandise on account from Frinzi Ltd. €3,500.
	12	Received payment from Ebert Co. for invoice no. 204.
	13	Returned €210 worth of damaged goods purchased on account from Frinzi Ltd. on October 10.
	14	Made cash sales for the week totaling €8,180.
	16	Sold a parcel of land for €27,000 cash, the land's original cost.
	17	Sold merchandise on account to B. Reblin & Co. €5,350, invoice no. 205, terms 2/10, n/30.
	18	Purchased merchandise for cash €2,450.
	21	Made cash sales for the week totaling €8,200.
	23	Paid in full the amount owed Frinzi Ltd. for the goods kept (no discount).
	25	Purchased supplies on account from Lewis Co. €310.
	25	Sold merchandise on account to Marco Ltd. €5,220, invoice no. 206, terms 2/10, n/30.
	25	Received payment from B. Reblin & Co. for invoice no. 205.
	26	Purchased for cash a small parcel of land and a building on the land to use as a storage facility. The total cost of €35,000 was allocated €21,000 to the land and €14,000 to the building.
	27	Purchased merchandise on account from Lisa Co. €8,500.
	28	Made cash sales for the week totaling €7,540.
	30	Purchased merchandise on account from Cutler Company €14,000.
	30	Paid advertising bill for the month from the *Gazette*, €400.
	30	Sold merchandise on account to B. Reblin & Co. €4,760, invoice no. 207, terms 2/10, n/30.

Linvik uses the following journals.

1. Sales journal.
2. Single-column purchases journal.
3. Cash receipts journal with columns for Cash Dr., Sales Discounts Dr., Accounts Receivable Cr., Sales Revenue Cr., Other Accounts Cr., and Cost of Goods Sold Dr./Inventory Cr.
4. Cash payments journal with columns for Other Accounts Dr., Accounts Payable Dr., Inventory Cr., and Cash Cr.
5. General journal.

(b) Sales journal €23,030
Purchases journal €39,500
Cash receipts journal, Cash, Dr. €72,509
Cash payments journal, Cash, Cr. €54,450

Instructions

Using the selected accounts provided:

(a) Record the October transactions in the appropriate journals.
(b) Foot and crossfoot all special journals.
(c) Show how postings would be made by placing ledger account numbers and check marks as needed in the journals. (Actual posting to ledger accounts is not required.)

Journalize in purchases and cash payments journals; post; prepare a trial balance; prove control to subsidiary; prepare adjusting entries; prepare an adjusted trial balance.

(LO 1, 2, 3)

PG-5B Presented on the next page are the sales and cash receipts journals for Wesley Co. for its first month of operations.

SALES JOURNAL S1

Date	Account Debited	Ref.	Accounts Receivable Dr. Sales Revenue Cr.	Cost of Goods Sold Dr. Inventory Cr.
Feb. 3	S. Armour		5,500	3,630
9	M. Barajas		6,500	4,290
12	V. Ciatti		8,400	5,544
26	A. Dobbs		7,000	4,620
			27,400	18,084

CASH RECEIPTS JOURNAL CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Revenue Cr.	Other Accounts Cr.	Cost of Goods Sold Dr. Inventory Cr.
Feb. 1	Share Capital—Ordinary		30,000				30,000	
2			5,400			5,400		3,564
13	S. Armour		5,445	55	5,500			
18	Inventory		150				150	
26	M. Barajas		6,500		6,500			
			47,495	55	12,000	5,400	30,150	3,564

In addition, the following transactions have not been journalized for February 2017.

Feb. 2 Purchased merchandise on account from T. Valentine €4,600, terms 3/10, n/30.
7 Purchased merchandise on account from B. Kucera for €28,000, terms 1/10, n/30.
9 Paid cash of €1,300 for purchase of supplies.
12 Paid €4,462 to T. Valentine in payment for €4,600 invoice, less 3% discount.
15 Purchased equipment for €7,700 cash.
16 Purchased merchandise on account from E. Nicks €2,700, terms 2/10, n/30.
17 Paid €27,720 to B. Kucera in payment of €28,000 invoice, less 1% discount.
20 Paid cash dividend of €1,100.
21 Purchased merchandise on account from D. Hachey for €7,800, terms 1/10, n/30.
28 Paid €2,700 to E. Nicks in payment of €2,700 invoice.

Instructions

(a) Open the following accounts in the general ledger.

101 Cash
112 Accounts Receivable
120 Inventory
126 Supplies
157 Equipment
158 Accumulated Depreciation—Equipment
201 Accounts Payable
311 Share Capital—Ordinary
332 Cash Dividends
401 Sales Revenue
414 Sales Discounts
505 Cost of Goods Sold
631 Supplies Expense
711 Depreciation Expense

(b) Journalize the transactions that have not been journalized in a one-column purchases journal and the cash payments journal (see Illustration G-15).
(c) Post to the accounts receivable and accounts payable subsidiary ledgers. Follow the sequence of transactions as shown in the problem.
(d) Post the individual entries and totals to the general ledger.
(e) Prepare a trial balance at February 28, 2017.
(f) Determine that the subsidiary ledgers agree with the control accounts in the general ledger.
(g) The following adjustments at the end of February are necessary.
(1) A count of supplies indicates that €390 is still on hand.
(2) Depreciation on equipment for February is €160.
Prepare the adjusting entries and then post the adjusting entries to the general ledger.
(h) Prepare an adjusted trial balance at February 28, 2017.

(b) Purchases journal total €43,100
Cash payments journal—Cash, Cr. €44,982
(e) Totals €70,600
(f) Accounts Receivable €15,400
Accounts Payable €7,800
(h) Totals €70,760

COMPREHENSIVE PROBLEM

CPG-1 Zweifel SE has the following opening account balances in its general and subsidiary ledgers on January 1 and uses the periodic inventory system. All accounts have normal debit and credit balances.

General Ledger

Account Number	Account Title	January 1 Opening Balance
101	Cash	€32,750
112	Accounts Receivable	13,000
115	Notes Receivable	42,000
120	Inventory	20,000
125	Supplies	1,000
130	Prepaid Insurance	2,000
157	Equipment	6,450
158	Accumulated Depreciation—Equip.	1,500
201	Accounts Payable	35,000
311	Share Capital—Ordinary	70,000
320	Retained Earnings	10,700

Accounts Receivable Subsidiary Ledger

Customer	January 1 Opening Balance
G. Dukes	€1,800
M. Hall	7,200
L. Longhini	4,000

Accounts Payable Subsidiary Ledger

Creditor	January 1 Opening Balance
O. Kitson	€ 9,000
D. Markoff	15,000
L. Quinn	11,000

In addition, the following transactions have not been journalized for January 2017.

Jan.	3	Sell merchandise on account to W. Rayms €3,600, invoice no. 510, and M. Fischer €1,800, invoice no. 511.
	5	Purchase merchandise on account from K. Zapfel €3,000 and J. Liotta €2,400.
	7	Receive checks for €4,000 from L. Longhini and €2,000 from M. Hall.
	8	Pay freight on merchandise purchased €180.
	9	Send checks to O. Kitson for €9,000 and L. Quinn for €11,000.
	9	Issue credit of €240 to M. Fischer for merchandise returned.
	10	Summary cash sales total €15,500.
	11	Sell merchandise on account to G. Dukes for €1,900, invoice no. 512, and to L. Longhini €900, invoice no. 513.
		Post all entries to the subsidiary ledgers.
	12	Pay rent of €1,000 for January.
	13	Receive payment in full from W. Rayms and M. Fischer.
	15	Pay cash dividend of €650.
	16	Purchase merchandise on account from L. Quinn for €15,000, from O. Kitson for €13,900, and from K. Zapfel for €1,500.
	17	Pay €400 cash for office supplies.
	18	Return €200 of merchandise to O. Kitson and receive credit.
	20	Summary cash sales total €17,750.
	21	Issue €15,000 note to D. Markoff in payment of balance due.
	21	Receive payment in full from L. Longhini.
		Post all entries to the subsidiary ledgers.
	22	Sell merchandise on account to W. Rayms for €3,700, invoice no. 514, and to G. Dukes for €800, invoice no. 515.
	23	Send checks to L. Quinn and O. Kitson in full payment.
	25	Sell merchandise on account to M. Hall for €3,500, invoice no. 516, and to M. Fischer for €6,100, invoice no. 517.

Jan. 27 Purchase merchandise on account from L. Quinn for €12,500, from J. Liotta €1,200, and from K. Zapfel for €2,800.

28 Pay €200 cash for office supplies.

31 Summary cash sales total €22,920.

31 Pay sales salaries of €4,300 and office salaries of €3,100.

Instructions

(a) Record the January transactions in the appropriate journal—sales, purchases, cash receipts, cash payments, and general.

(b) Post the journals to the general and subsidiary ledgers. Add and number new accounts in an orderly fashion as needed.

(c) Prepare a trial balance at January 31, 2017, using a worksheet. Complete the worksheet using the following additional information.

(1) Office supplies at January 31 total €580.

(2) Insurance coverage expires on October 31, 2017.

(3) Annual depreciation on the equipment is €1,500.

(4) Interest of €30 has accrued on the note payable.

(5) Inventory at January 31 is €12,600.

(c) Trial balance totals €199,270
Adj. T/B totals €199,425

(d) Prepare an income statement and a retained earnings statement for January and a statement of financial position at the end of January.

(d) Net income €8,775
Total assets €127,255

(e) Prepare and post the adjusting and closing entries.

(f) Prepare a post-closing trial balance, and determine whether the subsidiary ledgers agree with the control accounts in the general ledger.

(f) Post-closing T/B totals €128,880

APPENDIX

H Other Significant Liabilities

LEARNING OBJECTIVES

After studying this appendix, you should be able to:

1. Describe the accounting and disclosure requirements for provisions and contingent liabilities.
2. Contrast the accounting for operating and finance leases.
3. Identify additional fringe benefits associated with employee compensation.

APPENDIX PREVIEW

In addition to the current and non-current liabilities discussed in Chapter 10, several more types of liabilities may exist that could have a significant impact on a company's financial position and future cash flows. These other significant liabilities will be discussed in this appendix. They are (a) provisions and contingent liabilities, (b) lease liabilities, and (c) additional liabilities for employee fringe benefits (paid absences and postretirement benefits).

Provisions and Contingent Liabilities

Learning Objective 1

Describe the accounting and disclosure requirements for provisions and contingent liabilities.

When Siemens AG (DEU) reports an accounts payable, there is an invoice or formal agreement as to the existence of the liability and its amount. Similarly, when Siemens accrues interest for interest payable, the timing and the amount of the liability are known. But suppose Siemens is involved in a dispute (lawsuit) with taxing authorities over the amount of its income tax liability. In this case, both the existence and the amount of the liability may be uncertain. How does Siemens determine whether to report a liability and at what amount? The following IFRS guidelines are used by Siemens to determine how to report this tax dispute.

1. If it is probable (that is, more than a 50% chance) that Siemens will lose the lawsuit and if a reasonable estimate can be made of the amount, then Siemens should record a liability. This type of liability, which is uncertain in timing or amount, is called a **provision**.
2. If it is not probable that Siemens will lose the lawsuit (less than a 50% chance), then it should not record a liability. In this case, Siemens should disclose the details of the tax dispute in the notes to its financial statements. This type of event, which is a potential liability that may become an actual liability in the future, is called a **contingent liability**. It should be noted that if the chance of losing the lawsuit is less than 10% (referred to as a *remote possibility*), Siemens does not have to disclose the tax dispute in the notes to the financial statements.

Recording a Provision

Product warranties are an example of a provision that companies should record in the accounts. Warranty contracts result in future costs that companies may incur in replacing defective units or repairing malfunctioning units. Generally, a manufacturer, such as NEC (JPN), knows that it will incur some warranty costs. From prior experience with the product, the company usually can reasonably estimate the anticipated cost of servicing (honoring) the warranty.

The accounting for warranty costs is based on the expense recognition principle. **The estimated cost of honoring product warranty contracts should be recognized as an expense in the period in which the sale occurs.** To illustrate, assume that in 2017 Zhang Manufacturing Ltd. sells 10,000 washers and dryers at an average price of NT$6,000 each. The selling price includes a one-year warranty on parts. Zhang expects that 500 units (5%) will be defective and that warranty repair costs will average NT$800 per unit. In 2017, the company honors warranty contracts on 300 units, at a total cost of NT$240,000.

At December 31, it is necessary to accrue the estimated warranty costs on the 2017 sales. Zhang computes the estimated warranty liability as follows.

Illustration H-1
Computation of estimated product warranty liability

Number of units sold	10,000
Estimated rate of defective units	× 5%
Total estimated defective units	500
Average warranty repair cost	× NT$800
Estimated product warranty liability	**NT$400,000**

The company makes the following adjusting entry.

Dec. 31	Warranty Expense	400,000	
	Warranty Liability		400,000
	(To accrue estimated warranty costs)		

A	=	L	+	E
		+400,000		−400,000 Exp

Cash Flows
no effect

Zhang records those repair costs incurred in 2017 to honor warranty contracts on 2017 sales, as shown below.

Jan. 1–Dec. 31	Warranty Liability	240,000	
	Repair Parts		240,000
	(To record honoring of 300 warranty contracts on 2017 sales)		

A	=	L	+	E
−240,000		−240,000		

Cash Flows
no effect

The company reports warranty expense of NT$400,000 under selling expenses in the income statement. It classifies estimated warranty liability of NT$160,000 (NT$400,000 − NT$240,000) as a current liability on the statement of financial position.

In the following year, Zhang should debit to Warranty Liability all expenses incurred in honoring warranty contracts on 2017 sales. To illustrate, assume that the company replaces 20 defective units in January 2018, at an average cost of NT$800 in parts and labor. The summary entry for the month of January 2018 is:

Jan. 31	Warranty Liability	16,000	
	Repair Parts		16,000
	(To record honoring of 20 warranty contracts on 2017 sales)		

A	=	L	+	E
−16,000		−16,000		

Cash Flows
no effect

Disclosure of Contingent Liabilities

As noted earlier, sometimes an event makes it probable that a company will experience a cash outflow but it cannot reasonably estimate the amount. Or, sometimes the probability of the cash outflow is higher than remote but less than probable. Situations such as these, where the company faces a potential liability that may become an actual liability, are referred to as **contingent liabilities**.

Contingent liabilities should be disclosed in the notes to the financial statements. The disclosure should identify the nature of the item and, if known, the amount of the contingency and the expected outcome of the future event. An excerpt from the contingent liability note from the financial statements of Cathay Pacific (HKG) is presented in Illustration H-2.

Illustration H-2
Disclosure of contingent liability

Real World

CATHAY PACIFIC
Notes to the Financial Statements

The Company has been named as a defendant in a number of civil class action complaints in the United States, Canada and Australia alleging violations of applicable competition laws arising from the Company's conduct relating to its air cargo operations. In addition, civil class action claims have been filed in the United States alleging violations of applicable competition laws arising from the Company's conduct relating to certain of its passenger operations. The Company is represented by legal counsel in the actions filed in the United States, Canada and Australia and is defending those actions.

The investigations, proceedings and civil actions are ongoing and the outcomes are subject to uncertainties. The Company is not in a position at the present time to make a sufficiently reliable estimate of the amount of any potential liability. Accordingly, no provision has been made in the accounts. The information usually required by HKAS 37 "Provisions, Contingent Liabilities and Contingent Assets" is not disclosed on the grounds that it can be expected to prejudice seriously the outcomes.

The required disclosure for contingencies is a good example of the use of the full disclosure principle. The **full disclosure principle** requires that companies disclose all circumstances and events that would make a difference to financial statement users. Some important financial information, such as contingencies, is not easily reported in the financial statements. Reporting information on contingencies in the notes to the financial statements will help investors be aware of events that can affect the financial health of a company.

Lease Liabilities

Learning Objective 2
Contrast the accounting for operating and finance leases.

A **lease** is a contractual arrangement between a lessor (owner of a property) and a lessee (renter of the property). It grants the right to use specific property for a period of time in return for cash payments. Leasing is big business worldwide. The global leasing market has recently been between \$600 to \$700 billion for capital equipment. This represents approximately one-third of equipment financed in a year. The two most common types of leases are operating leases and finance leases.

Operating Leases

The renting of an apartment and the rental of a car at an airport are examples of **operating leases. In an operating lease, the intent is temporary use of the property by the lessee, while the lessor continues to own the property.**

In an operating lease, the lessee records the lease (or rental) payments as an expense. The lessor records the payments as revenue. For example, assume that a sales representative for Western Inc. leases a car from Hertz Car Rental (USA) at the Paris airport and that Hertz charges a total of €275. Western, the lessee, records the rental as follows.

A	=	L	+	E
				−275 Exp
−275				

Cash Flows
−275

Rent Expense	275	
Cash		275
(To record payment of lease rental charge)		

The lessee may incur other costs during the lease period. For example, in the case above, Western will generally incur costs for gas. Western would report these costs as an expense.

Finance Leases

In most lease contracts, the lessee makes a periodic payment and records that payment in the income statement as rent expense. In some cases, however, the lease contract transfers to the lessee substantially all the benefits and risks of ownership. Such a lease is in effect a purchase of the property. This type of lease is a **finance lease**. The lessee company capitalizes the present value of the cash payments for the lease and records that amount as an asset. Illustration H-3 indicates the major difference between operating and finance leases.

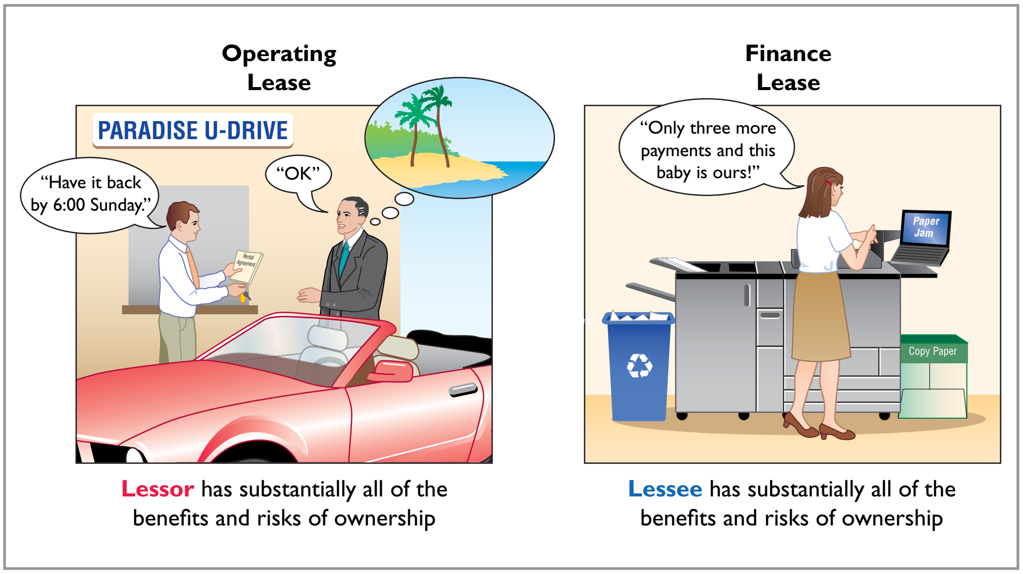


Illustration H-3
Types of leases

• HELPFUL HINT
A finance lease situation is one that, although legally a rental transaction, is *in substance* an installment purchase by the lessee. Accounting standards require that substance over form be used in such a situation.

IFRS does not prescribe criteria for determining classification. It does, however, provide examples of situations that would typically result in finance lease treatment. For example, if **any one** of the following conditions exists, the lessee should record a lease **as an asset**—that is, as a finance lease:

1. **The lease transfers ownership of the property to the lessee.** *Rationale:* If during the lease term the lessee receives ownership of the asset, the lessee should report the leased asset as an asset on its books.
2. **The lease contains a bargain purchase option.** *Rationale:* If during the term of the lease the lessee can purchase the asset at a price substantially below its fair value, the lessee will exercise this option. Thus, the lessee should report the lease as a leased asset on its books.
3. **The lease term is a major portion of the economic life of the leased property.** *Rationale:* If the lessee uses the asset for much of the asset's useful life, the lessee should report the asset as a leased asset on its books.
4. **The present value of the lease payments represents substantially all of the fair value of the leased property.** *Rationale:* If the present value of the lease payments is equal to or almost equal to the fair value of the asset, the lessee has essentially purchased the asset. As a result, the lessee should report the leased asset as an asset on its books.

To illustrate, assume that Gonzalez SA decides to lease new equipment. The lease period is four years; the economic life of the leased equipment is estimated to be five years. The present value of the lease payments is €190,000, which is equal to the fair value of the equipment. There is no transfer of ownership during the lease term, nor is there any bargain purchase option.

In this example, Gonzalez has essentially purchased the equipment. Conditions 3 and 4 have been met. First, the lease term is 80% of the economic life of the asset. Second, the present value of cash payments is equal to the equipment's fair value. Gonzalez records the transaction as follows.

A	=	L	+	E
+190,000				
		+190,000		

Cash Flows
no effect

Leased Asset—Equipment	190,000	
Lease Liability		190,000
(To record leased asset and lease liability)		

The lessee reports a leased asset on the statement of financial position under plant assets. It reports the lease liability on the statement of financial position as a liability. **The portion of the lease liability expected to be paid in the next year is a current liability. The remainder is classified as a non-current liability.**

Most lessees do not like to report leases on their statements of financial position. Why? Because the lease liability increases the company's total liabilities. This, in turn, may make it more difficult for the company to obtain needed funds from lenders. As a result, companies attempt to keep leased assets and lease liabilities off the statement of financial position by structuring leases so as not to meet any of the four conditions mentioned previously (see page H-4). The practice of keeping liabilities off the statement of financial position is referred to as **off-balance-sheet financing**. (Recall that the statement of financial position is sometimes referred to as the balance sheet.)

Ethics Note

Accounting standard-setters are attempting to rewrite rules on lease accounting because of concerns that abuse of the current standards is reducing the usefulness of financial statements.

Additional Liabilities for Employee Fringe Benefits

Learning Objective 3

Identify additional fringe benefits associated with employee compensation.

In addition to the three payroll tax fringe benefits discussed in Appendix I (FICA taxes and state and federal unemployment taxes), employers incur other substantial fringe benefit costs. We discuss two of the most important fringe benefits—paid absences and postretirement benefits—in this section.

Paid Absences

Employees often are given rights to receive compensation for absences when certain conditions of employment are met. The compensation may be for paid vacations, sick pay benefits, and paid holidays. When the payment for such absences is **probable** and the amount can be **reasonably estimated**, a liability should be accrued for paid future absences. When the amount cannot be reasonably estimated, companies should instead disclose the potential liability. Ordinarily, vacation pay is the only paid absence that is accrued because this liability often extends into future periods. The other types of paid absences are only disclosed.

To illustrate, assume that Academy Company employees are entitled to one day's vacation for each month worked. If 30 employees earn an average of $110 per day in a given month, the accrual for vacation benefits in one month is $3,300. The liability is recognized at the end of the month by the following adjusting entry.

A	=	L	+	E
				−3,300 Exp
		+3,300		

Cash Flows
no effect

Jan. 31	Vacation Benefits Expense	3,300	
	Vacation Benefits Payable		3,300
	(To accrue vacation benefits expense)		

This accrual is required by the expense recognition principle. Academy would report Vacation Benefits Expense as an operating expense in the income statement, and Vacation Benefits Payable as a current liability in the statement of financial position.

Later, when Academy pays vacation benefits, it debits Vacation Benefits Payable and credits Cash. For example, if the above benefits for 10 employees are paid in July, the entry is:

July 31	Vacation Benefits Payable	1,100	
	Cash		1,100
	(To record payment of vacation benefits)		

A	=	L	+	E
		−1,100		
−1,100				

Cash Flows
−1,100

The magnitude of unpaid absences has gained employers' attention. Consider the case of an assistant superintendent of schools who worked for 20 years and rarely took a vacation or sick day. A month or so before she retired, the school district discovered that she was due nearly $30,000 in accrued benefits. Yet, the school district had never accrued the liability.

Postretirement Benefits

Postretirement benefits are benefits provided by employers to retired employees for (1) health care and life insurance and (2) pensions. Companies account for both types of postretirement benefits on the accrual basis.

POSTRETIREMENT HEALTH-CARE AND LIFE INSURANCE BENEFITS

Providing medical and related health-care benefits for retirees was at one time an inexpensive and highly effective way of generating employee goodwill. This practice has now turned into one of the corporate world's most worrisome financial problems. Runaway medical costs, early retirement, and increased longevity are sending the liability for retiree health plans through the roof.

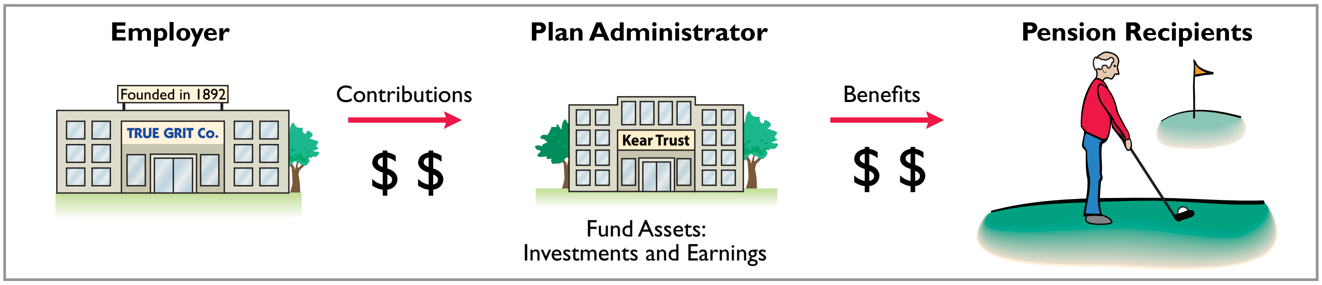
Companies estimate and expense postretirement costs during the working years of the employee because the company benefits from the employee's services during this period. However, the company rarely sets up funds to meet the cost of the future benefits. It follows a pay-as-you-go basis for these costs. The major reason is that the company does not receive a tax deduction until it actually pays the medical bill.

PENSION PLANS

A **pension plan** is an agreement whereby an employer provides benefits (payments) to employees after they retire. The need for good accounting for pension plans becomes apparent when we consider the size of existing pension funds.

Three parties are generally involved in a pension plan. The **employer** (company) sponsors the pension plan. The **plan administrator** receives the contributions from the employer, invests the pension assets, and makes the benefit payments to the **pension recipients** (retired employees). Illustration H-4 indicates the flow of cash among the three parties involved in a pension plan.

Illustration H-4
Parties in a pension plan



Companies record pension costs as an expense while the employees are working because that is when the company receives benefits from the employees' services. Generally, the pension expense is reported as an operating expense in the company's income statement. Frequently, the amount contributed by the company to the pension plan is different from the amount of the pension expense. A **liability** is recognized when the pension expense to date is **more than** the company's contributions to date. An **asset** is recognized when the pension expense to date is **less than** the company's contributions to date. Further consideration of the accounting for pension plans is left for more advanced courses.

The two most common types of pension arrangements for providing benefits to employees after they retire are defined contribution plans and defined benefit plans.

DEFINED CONTRIBUTION PLAN In a **defined contribution plan**, the plan defines the employer's contribution but not the benefit that the employee will receive at retirement. That is, the employer agrees to contribute a certain sum each period based on a formula.

The accounting for a defined contribution plan is straightforward. The employer simply makes a contribution each year based on the formula established in the plan. As a result, the employer's obligation is easily determined. It follows that the company reports **the amount of the contribution required each period as pension expense**. **The employer reports a liability only if it has not made the contribution in full.**

To illustrate, assume that Alba Office AG has a defined contribution plan in which it contributes €200,000 each year to the pension fund for its employees. The entry to record this transaction is:

A	=	L	+	E
				−200,000
−200,000				

Cash Flows
−200,000

Pension Expense	200,000	
Cash		200,000
(To record pension expense and contribution to pension fund)		

To the extent that Alba did not contribute the €200,000 defined contribution, it would record a liability. Pension payments to retired employees are made from the pension fund by the plan administrator.

DEFINED BENEFIT PLAN In a **defined benefit plan**, the **benefits** that the employee will receive at the time of retirement are defined by the terms of the plan. Benefits are typically calculated using a formula that considers an employee's compensation level when he or she nears retirement and the employee's years of service. Because the benefits in this plan are defined in terms of uncertain future variables, an appropriate funding pattern is established to ensure that enough funds are available at retirement to meet the benefits promised. This funding level depends on a number of factors such as employee turnover, length of service, mortality, compensation levels, and investment earnings. **The proper accounting for defined benefit plans is complex and is considered in more advanced accounting courses.**

POSTRETIREMENT BENEFITS AS NON-CURRENT LIABILITIES

While part of the liability associated with (1) postretirement health-care and life insurance benefits and (2) pension plans is generally a current liability, the greater portion of these liabilities extends many years into the future. Therefore, many companies are required to report significant amounts as non-current liabilities for postretirement benefits.

REVIEW

LEARNING OBJECTIVES REVIEW

1 **Describe the accounting and disclosure requirements for provisions and contingent liabilities.** If it is probable (if it is likely to occur) that the obligation will require a cash outflow and the amount can be reasonably estimated, the liability should be recorded in the accounts as a provision. If a cash outflow is only reasonably possible (it could occur), then it should be disclosed only in the notes to the financial statements as a contingent liability. If the possibility that the contingency will happen is remote (unlikely to occur), it need not be recorded or disclosed.

2 **Contrast the accounting for operating and finance leases.** For an operating lease, lease (or rental) payments are recorded as an expense by the lessee (renter). For a finance lease, the lessee records the asset and related obligation at the present value of the future lease payments.

3 **Identify additional fringe benefits associated with employee compensation.** Additional fringe benefits associated with wages are paid absences (paid vacations, sick pay benefits, and paid holidays), postretirement health care and life insurance, and pensions. The two most common types of pension arrangements are a defined contribution plan and a defined benefit plan.

GLOSSARY REVIEW

Contingent liability A potential liability that may become an actual liability in the future. (p. H-1).

Defined benefit plan A pension plan in which the benefits that the employee will receive at retirement are defined by the terms of the plan. (p. H-7).

Defined contribution plan A pension plan in which the employer's contribution to the plan is defined by the terms of the plan. (p. H-7).

Finance lease A contractual arrangement that transfers substantially all the benefits and risks of ownership to the lessee so that the lease is in effect a purchase of the property. (p. H-4).

Lease A contractual arrangement between a lessor (owner of a property) and a lessee (renter of the property). (p. H-3).

Operating lease A contractual arrangement giving the lessee temporary use of the property, with continued ownership of the property by the lessor. (p. H-3).

Pension plan An agreement whereby an employer provides benefits to employees after they retire. (p. H-6).

Postretirement benefits Payments by employers to retired employees for health care, life insurance, and pensions. (p. H-6).

Provision A liability of uncertain timing or amount. (p. H-1).

WileyPLUS Many more resources are available for practice in WileyPLUS.

QUESTIONS

1. What is a provision? Give an example of a provision that is usually recorded in the accounts.
2. Under what circumstances is a contingent liability disclosed in the notes to the financial statements? Under what circumstances is a contingent liability not disclosed in the notes to the financial statements?
3. (a) What is a lease agreement? (b) What are the two most common types of leases? (c) Distinguish between the two types of leases.
4. Kuchin Company rents a warehouse on a month-to-month basis for the storage of its excess inventory. The company periodically must rent space when its production greatly exceeds actual sales. What is the nature of this type of lease agreement, and what accounting treatment should be accorded it?
5. Palmer SA entered into an agreement to lease 12 computers from Wendt Electronics. The present value of the lease payments is €186,300. Assuming that this is a finance lease, what entry would Palmer make on the date of the lease agreement?
6. Identify three additional types of fringe benefits associated with employees' compensation.
7. Often during job interviews, the candidate asks the potential employer about the firm's paid absences policy. What are paid absences? How are they accounted for?
8. What are the two types of postretirement benefits? During what years does the IASB advocate expensing the employer's costs of these postretirement benefits?
9. Identify the three parties in a pension plan. What role does each party have in the plan?
10. Jesse Dorner and Corey Robb are reviewing pension plans. They ask your help in distinguishing between a defined contribution plan and a defined benefit plan. Explain the principal difference to Jesse and Corey.

BRIEF EXERCISES

Prepare adjusting entry for warranty costs.
(LO 1)

BEH-1 On December 1, Jiang Ltd. introduces a new product that includes a 1-year warranty on parts. In December, 1,000 units are sold. Management believes that 4% of the units will be defective and that the average warranty costs will be HK$680 per unit. Prepare the adjusting entry at December 31 to accrue the estimated warranty cost.

Prepare entries for operating and finance leases.
(LO 2)

BEH-2 Prepare the journal entries that the lessee should make to record the following transactions.

(a) The lessee makes a lease payment of €68,000 to the lessor in an operating lease transaction.
(b) Perzan Company leases a new building from Wedell Construction. The present value of the lease payments is €900,000. The lease qualifies as a finance lease.

Record estimated vacation benefits.
(LO 3)

BEH-3 At Estrada SA, employees are entitled to 1 day's vacation for each month worked. In January, 35 employees worked the full month. Record the vacation pay liability for January assuming the average daily pay for each employee is €150.

EXERCISES

Record estimated liability and expense for warranties.
(LO 1)

EH-1 Huerta Company sells automatic can openers under a 75-day warranty for defective merchandise. Based on past experience, Huerta Company estimates that 3% of the units sold will become defective during the warranty period. Management estimates that the average cost of replacing or repairing a defective unit is £15. The units sold and units defective that occurred during the last 2 months of 2017 are as follows.

Month	Units Sold	Units Defective Prior to December 31
November	28,000	620
December	33,000	500

Instructions

(a) Determine the estimated warranty liability at December 31 for the units sold in November and December.
(b) Prepare the journal entries to record the estimated liability for warranties and the costs (assume actual costs of £16,800) incurred in honoring 1,120 warranty claims.
(c) Give the entry to record the honoring of 500 warranty contracts in January at an average cost of £15.

Prepare the current liabilities section of the statement of financial position.
(LO 1)

EH-2 Kesete Online AG has the following liability accounts after posting adjusting entries: Accounts Payable €63,000, Unearned Ticket Revenue €21,000, Warranty Liability €18,000, Interest Payable €8,000, Mortgage Payable €120,000, Notes Payable €80,000, and Sales Taxes Payable €10,000. Assume the company's operating cycle is less than 1 year, ticket revenue will be earned within 1 year, warranty costs are expected to be incurred within 1 year, and the notes mature in 3 years.

Instructions

(a) Prepare the current liabilities section of the statement of financial position, assuming €40,000 of the mortgage is payable next year.
(b) Comment on Kesete Online's liquidity, assuming total current assets are €300,000.

Prepare journal entries for operating lease and finance lease.
(LO 2)

EH-3 Presented below are two independent situations.

1. Speedy Car Rental leased a car to Metnik SA for 1 year. Terms of the operating lease agreement call for monthly payments of R$720.
2. On January 1, 2017, Burke SA entered into an agreement to lease 20 computers from Cloud Electronics. The terms of the lease agreement require three annual rental payments of R$40,000 (including 8% interest) beginning December 31, 2017. The present value of the three rental payments is R$103,084. Burke considers this a finance lease.

Instructions

(a) Prepare the appropriate journal entry to be made by Metnik for the first lease payment.
(b) Prepare the journal entry to record the lease agreement on the books of Burke on January 1, 2017.

EH-4 Legaspi SpA has two fringe benefit plans for its employees:

Prepare adjusting entries for fringe benefits.

(LO 3)

1. It grants employees 2 days' vacation for each month worked. Ten employees worked the entire month of March at an average daily wage of €96 per employee.
2. It has a defined contribution pension plan in which the company contributes 8% of gross earnings. Gross earnings in March were €30,000. The payment to the pension fund has not been made.

Instructions

Prepare the adjusting entries at March 31.

PROBLEMS: SET A

PH-1A On January 1, 2017, the ledger of Russell Software contains the following liability accounts.

Prepare current liability entries, adjusting entries, and current liabilities section.

(LO 1)

Accounts Payable	€42,500
Sales Taxes Payable	5,800
Unearned Service Revenue	15,000

During January, the following selected transactions occurred.

Jan.	1	Borrowed €15,000 in cash from Landmark Bank on a 4-month, 8%, €15,000 note.
	5	Sold merchandise for cash totaling €9,752, which includes 6% sales taxes.
	12	Performed services for customers who had made advance payments of €9,000. (Credit Service Revenue.)
	14	Paid revenue department for sales taxes collected in December 2016 (€5,800).
	20	Sold 700 units of a new product on credit at €52 per unit, plus 6% sales tax. This new product is subject to a 1-year warranty.
	25	Sold merchandise for cash totaling €13,144, which includes 6% sales taxes.

Instructions

(a) Journalize the January transactions.
(b) Journalize the adjusting entries at January 31 for (1) the outstanding notes payable, and (2) estimated warranty liability, assuming warranty costs are expected to equal 4% of sales of the new product.
(c) Prepare the current liabilities section of the statement of financial position at January 31, 2017. Assume no change in accounts payable.

(c) Total current liabilities €68,536

PH-2A Presented below are three different lease transactions in which Amsrud Enterprises engaged in 2017. Assume that all lease transactions start on January 1, 2017. In no case does Amsrud receive title to the properties leased during or at the end of the lease term.

Analyze three different lease situations and prepare journal entries.

(LO 2)

	Lessor		
	Schell Ltd.	**Haber Co.**	**Lennon Ltd.**
Type of property	Bulldozer	Truck	Furniture
Bargain purchase option	None	None	None
Lease term	4 years	6 years	3 years
Estimated economic life	8 years	7 years	5 years
Yearly rental	€13,000	€15,000	€4,800
Fair value of leased asset	€80,000	€72,000	€27,500
Present value of the lease rental payments	€48,000	€62,000	€12,000

Instructions

(a) Identify the leases above as operating or finance leases. Explain.
(b) How should the lease transaction with Haber Co. be recorded on January 1, 2017?
(c) How should the lease transactions for Lennon Ltd. be recorded in 2017?

PROBLEMS: SET B

Prepare current liability entries, adjusting entries, and current liabilities section.
(LO 1)

PH-1B On January 1, 2017, the ledger of Khan plc contains the following liability accounts.

Accounts Payable	£52,000
Sales Taxes Payable	7,700
Unearned Service Revenue	16,000

During January, the following selected transactions occurred.

Jan. 5 Sold merchandise for cash totaling £17,496, which includes 8% sales taxes.
12 Performed services for customers who had made advance payments of £10,000. (Credit Service Revenue.)
14 Paid revenue department for sales taxes collected in December 2016 (£7,700).
20 Sold 600 units of a new product on credit at £54 per unit, plus 8% sales tax. This new product is subject to a 1-year warranty.
21 Borrowed £18,000 from Commerce Bank on a 3-month, 6%, £18,000 note.
25 Sold merchandise for cash totaling £12,420, which includes 8% sales taxes.

Instructions

(a) Journalize the January transactions.
(b) Journalize the adjusting entries at January 31 for (1) the outstanding notes payable, and (2) estimated warranty liability, assuming warranty costs are expected to equal 5% of sales of the new product. (*Hint:* Use one-third of a month for the Commerce Bank note.)
(c) Prepare the current liabilities section of the statement of financial position at January 31, 2017. Assume no change in accounts payable.

(c) Total current liabilities £82,458

Analyze three different lease situations and prepare journal entries.
(LO 2)

PH-2B The following are three different lease transactions that occurred for McKay A/S in 2017. Assume that all lease contracts start on January 1, 2017. In no case does McKay receive title to the properties leased during or at the end of the lease term.

	Lessor		
	Block Delivery	**Dunbar Co.**	**Jens Auto**
Type of property	Computer	Delivery equipment	Automobile
Yearly rental	€8,000	€4,200	€3,700
Lease term	6 years	4 years	2 years
Estimated economic life	7 years	7 years	5 years
Fair value of leased asset	€42,000	€19,000	€11,000
Present value of the lease rental payments	€38,000	€13,000	€6,400
Bargain purchase option	None	None	None

Instructions

(a) Which of the leases above are operating leases and which are finance leases? Explain.
(b) How should the lease transaction with Dunbar Co. be recorded in 2017?
(c) How should the lease transaction for Block Delivery be recorded on January 1, 2017?

APPENDIX

I Payroll Accounting

LEARNING OBJECTIVES

After studying this appendix, you should be able to:

1 Compute and record the payroll for a pay period.

2 Describe and record employer payroll taxes.

3 Discuss the objectives of internal control for payroll.

APPENDIX PREVIEW

While the mechanics of payroll accounting are the same around the world, the particular accounts used are country-specific. Each country has different laws, different health and social programs, and different taxes related to payroll. The examples in this appendix illustrate payroll accounting applied in the United States.

Accounting for Payroll

Learning Objective 1

Compute and record the payroll for a pay period.

Payroll and related fringe benefits often make up a large percentage of current liabilities. Employee compensation is often the most significant expense that a company incurs. For example, Costco (USA) recently reported total employees of 103,000 and labor and fringe benefits costs that approximated 70% of the company's total cost of operations.

Payroll accounting involves more than paying employees' wages. Companies are required by law to maintain payroll records for each employee, to file and pay payroll taxes, and to comply with numerous state and federal tax laws related to employee compensation. Accounting for payroll has become much more complex due to these regulations.

The term "payroll" pertains to both salaries and wages. Managerial, administrative, and sales personnel are generally paid **salaries**. Salaries are often expressed in terms of a specified amount per month or per year rather than an hourly rate. Store clerks, factory employees, and manual laborers are normally paid **wages**. Wages are based on a rate per hour or on a piecework basis (such as per unit of product). Frequently, people use the terms "salaries" and "wages" interchangeably.

The term "payroll" does not apply to payments made for services of professionals such as certified public accountants, attorneys, and architects. Such professionals are independent contractors rather than salaried employees. Payments to them are called **fees**. This distinction is important because government regulations relating to the payment and reporting of payroll taxes apply only to employees.

Determining the Payroll

Determining the payroll involves computing three amounts: (1) gross earnings, (2) payroll deductions, and (3) net pay.

GROSS EARNINGS

Gross earnings is the total compensation earned by an employee. It consists of wages or salaries, plus any bonuses and commissions.

Companies determine total **wages** for an employee by multiplying the hours worked by the hourly rate of pay. In addition to the hourly pay rate, most companies are required by law to pay hourly workers a minimum of 1½ times the regular hourly rate for overtime work in excess of eight hours per day or 40 hours per week. In addition, many employers pay overtime rates for work done at night, on weekends, and on holidays.

For example, assume that Michael Watson, an employee of Academy Company, worked 44 hours for the weekly pay period ending January 14. His regular wage is $12 per hour. For any hours in excess of 40, the company pays at one-and-a-half times the regular rate. Academy computes Watson's gross earnings (total wages) as follows.

Illustration I-1
Computation of total wages

Type of Pay	Hours	×	Rate	=	Gross Earnings
Regular	40	×	$12	=	$ 480
Overtime	4	×	18	=	72
Total wages					**$552**

This computation assumes that Watson receives 1½ times his regular hourly rate ($12 × 1.5) for his overtime hours. Union contracts often require that overtime rates be as much as twice the regular rates.

An employee's **salary** is generally based on a monthly or yearly rate. The company then prorates these rates to its payroll periods (e.g., biweekly or monthly). Most executive and administrative positions are salaried. Federal law does not require overtime pay for employees in such positions.

Many companies have **bonus** agreements for employees. One survey found that over 94% of the largest U.S. manufacturing companies offer annual bonuses to key executives. Bonus arrangements may be based on such factors as increased sales or net income. Companies may pay bonuses in cash and/or by granting employees the opportunity to acquire company shares at favorable prices (called stock option plans in the United States).

Ethics Note

Bonuses often reward outstanding individual performance, but successful corporations also need considerable teamwork. A challenge is to motivate individuals while preventing an unethical employee from taking another's idea for his or her own advantage.

PAYROLL DEDUCTIONS

As anyone who has received a paycheck knows, gross earnings are usually very different from the amount actually received. The difference is due to **payroll deductions**.

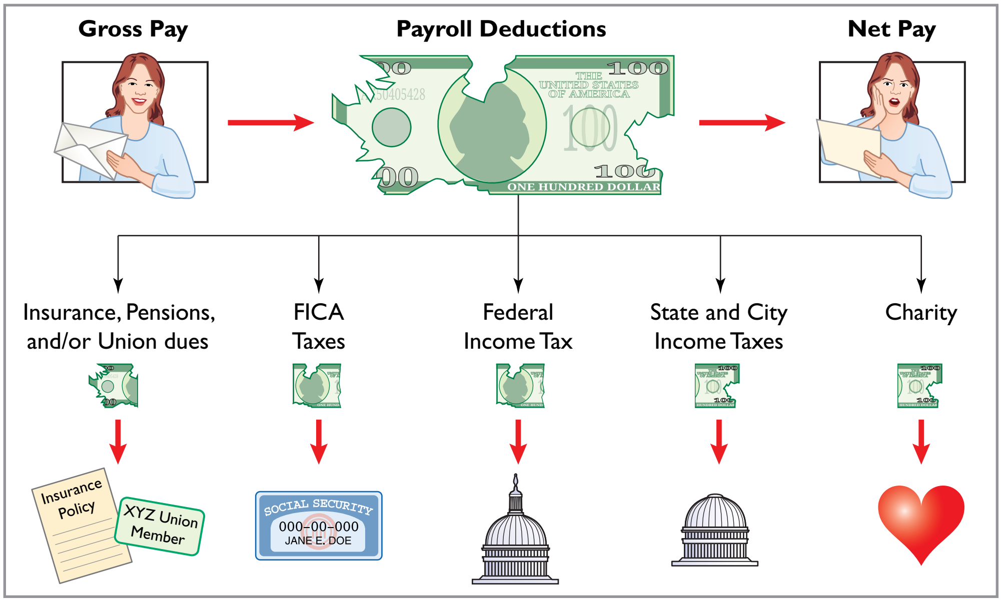
Payroll deductions may be mandatory or voluntary. Mandatory deductions are required by law and consist of FICA taxes and income taxes. Voluntary deductions are at the option of the employee. Illustration I-2 (page I-3) summarizes common types of payroll deductions. Such deductions do not result in payroll tax expense to the employer. The employer is merely a collection agent and subsequently transfers the deducted amounts to the government and designated recipients.

FICA TAXES In 1937, Congress enacted the Federal Insurance Contribution Act (FICA). **FICA taxes are designed to provide workers with supplemental retirement, employment disability, and medical benefits.** In 1965, Congress extended benefits to include Medicare for individuals over 65 years of age. The benefits are financed by a tax levied on employees' earnings.

FICA taxes consist of a Social Security tax and a Medicare tax. They are paid by both employee and employer. The FICA tax rate is 7.65% (6.2% Social Security tax up to $117,000[1] plus 1.45% Medicare tax) of salary and wages for each

[1]The $117,000 limit is based on 2014 guidelines set by the Social Security Administration.

Illustration I-2
Payroll deductions



employee. In addition, the Medicare tax of 1.45% continues for an employee's salary and wages in excess of $117,000. These tax rate and tax base requirements are shown in Illustration I-3.

Illustration I-3
FICA tax rate and tax base

Social Security taxes	
Employee and employer	6.2% on salary and wages up to $117,000
Medicare taxes	
Employee and employer	1.45% on all salary and wages without limitation

To illustrate the computation of FICA taxes, assume that Mario Ruez has total wages for the year of $100,000. In this case, Mario pays FICA taxes of $7,650 ($100,000 × 7.65%). If Mario has total wages of $124,000, Mario pays FICA taxes of $9,052, as shown in Illustration I-4.

Illustration I-4
FICA tax computation

Social Security tax	($117,000 × 6.2%)	$7,254
Medicare tax	($124,000 × 1.45%)	1,798
Total FICA taxes		$9,052

Mario's employer is also required to pay $9,052 of FICA taxes.

INCOME TAXES Under the U.S. pay-as-you-go system of federal income taxes, employers are required to withhold income taxes from employees each pay period. Four variables determine the amount to be withheld: (1) the employee's gross earnings, (2) marital status, (3) the number of allowances claimed by the employee, and (4) the length of the pay period. The number of allowances claimed typically includes the employee, his or her spouse, and other dependents.

Withholding tables furnished by the Internal Revenue Service indicate the amount of income tax to be withheld. Withholding amounts are based on gross wages and the number of allowances claimed. Separate tables are provided for weekly, biweekly, semimonthly, and monthly pay periods. Illustration I-5 shows the withholding tax table for Michael Watson (assuming he earns $552 per week, is married, and claims two allowances). For a weekly salary of $552 with two allowances, the income tax to be withheld is $24 (highlighted in red).

Illustration I-5
Withholding tax table

MARRIED Persons — **WEEKLY** Payroll Period
(For Wages Paid through December 2017)

If the wages are —		And the number of withholding allowances claimed is —										
At least	But less than	0	1	2	3	4	5	6	7	8	9	10
		The amount of income tax to be withheld is —										
500	**510**	34	27	19	11	4	0	0	0	0	0	0
510	**520**	35	28	20	12	5	0	0	0	0	0	0
520	**530**	37	29	21	13	6	0	0	0	0	0	0
530	**540**	38	30	22	14	7	0	0	0	0	0	0
540	**550**	40	31	23	15	8	0	0	0	0	0	0
550	**560**	41	32	**24**	16	9	1	0	0	0	0	0
560	**570**	43	33	25	17	10	2	0	0	0	0	0
570	**580**	44	34	26	18	11	3	0	0	0	0	0
580	**590**	46	35	27	19	12	4	0	0	0	0	0
590	**600**	47	36	28	20	13	5	0	0	0	0	0
600	**610**	49	38	29	21	14	6	0	0	0	0	0
610	**620**	50	39	30	22	15	7	0	0	0	0	0
620	**630**	52	41	31	23	16	8	1	0	0	0	0
630	**640**	53	42	32	24	17	9	2	0	0	0	0
640	**650**	55	44	33	25	18	10	3	0	0	0	0
650	**660**	56	45	34	26	19	11	4	0	0	0	0
660	**670**	58	47	35	27	20	12	5	0	0	0	0
670	**680**	59	48	37	28	21	13	6	0	0	0	0
680	**690**	61	50	38	29	22	14	7	0	0	0	0
690	**700**	62	51	40	30	23	15	8	0	0	0	0

In addition, most states (and some cities) require **employers** to withhold income taxes from employees' earnings. As a rule, the amounts withheld are a percentage (specified in the state revenue code) of the amount withheld for the federal income tax. Or, they may be a specified percentage of the employee's earnings. For the sake of simplicity, we have assumed that Watson's wages are subject to state income taxes of 2%, or $11.04 (2% × $552) per week.

There is no limit on the amount of gross earnings subject to income tax withholdings. In fact, under our progressive system of taxation, the higher the earnings, the higher the percentage of income withheld for taxes.

OTHER DEDUCTIONS Employees may voluntarily authorize withholdings for charitable, retirement, and other purposes. All voluntary deductions from gross earnings should be authorized in writing by the employee. The authorization(s) may be made individually or as part of a group plan. Deductions for charitable organizations, such as the United Fund, or for financial arrangements, such as U.S. savings bonds and repayment of loans from company credit unions, are made individually. Deductions for union dues, health and life insurance, and pension plans are often made on a group basis. We will assume that Watson has weekly voluntary deductions of $10 for the United Fund and $5 for union dues.

NET PAY

Academy Company determines **net pay** by subtracting payroll deductions from gross earnings. Illustration I-6 (page I-5) shows the computation of Watson's net pay for the pay period.

• Alternative Terminology
Net pay is also called *take-home pay*.

Illustration I-6
Computation of net pay

Gross earnings		$ 552.00
Payroll deductions:		
FICA taxes	$42.23	
Federal income taxes	24.00	
State income taxes	11.04	
United Fund	10.00	
Union dues	5.00	92.27
Net pay		**$459.73**

Assuming that Michael Watson's wages for each week during the year are $552, total wages for the year are $28,704 (52 × $552). Thus, all of Watson's wages are subject to FICA tax during the year. In comparison, let's assume that Watson's department head earns $3,000 per week, or $156,000 for the year. In this case, the department head's FICA taxes are $9,516 ([$117,000 × 6.20%] + [$156,000 × 1.45%]).

Recording the Payroll

Recording the payroll involves maintaining payroll department records, recognizing payroll expenses and liabilities, and recording payment of the payroll.

MAINTAINING PAYROLL DEPARTMENT RECORDS

To comply with state and federal laws, an employer must keep a cumulative record of each employee's gross earnings, deductions, and net pay during the year. The record that provides this information is the **employee earnings record**. Illustration I-7 shows Michael Watson's employee earnings record.

Illustration I-7
Employee earnings record

Academy Company.xls

Home Insert Page Layout Formulas Data Review View

P18 *fx*

ACADEMY COMPANY
Employee Earnings Record
For the Year 2017

Name	Michael Watson	**Address**	2345 Mifflin Ave.
Social Security Number	329-36-9547		Hampton, Michigan 48292
Date of Birth	December 24, 1994	**Telephone**	555-238-9051
Date Employed	September 1, 2015	**Date Employment Ended**	
Sex	Male	**Exemptions**	2
Single		**Married**	x

		Gross Earnings				Deductions						Payment	
2017 Period Ending	**Total Hours**	**Regular**	**Over-time**	**Total**	**Cumulative**	**FICA**	**Fed. Inc. Tax**	**State Inc. Tax**	**United Fund**	**Union Dues**	**Total**	**Net Amount**	**Check No.**
1/7	42	480.00	36.00	516.00	516.00	39.47	20.00	10.32	10.00	5.00	84.79	431.21	974
1/14	**44**	**480.00**	**72.00**	**552.00**	**1,068.00**	**42.23**	**24.00**	**11.04**	**10.00**	**5.00**	**92.27**	**459.73**	**1028**
1/21	43	480.00	54.00	534.00	1,602.00	40.85	22.00	10.68	10.00	5.00	88.53	445.47	1077
1/28	42	480.00	36.00	516.00	2,118.00	39.47	20.00	10.32	10.00	5.00	84.79	431.21	1133
Jan. Total		1,920.00	198.00	2,118.00		162.02	86.00	42.36	40.00	20.00	350.38	1,767.62	

Companies keep a separate earnings record for each employee, and update these records after each pay period. The employer uses the cumulative payroll data on the earnings record to (1) determine when an employee has earned the maximum earnings subject to FICA taxes, (2) file state and federal payroll tax returns (as explained later), and (3) provide each employee with a statement of gross earnings and tax withholdings for the year. (Illustration I-11 on page I-10 shows this statement.)

In addition to employee earnings records, many companies find it useful to prepare a **payroll register**. This record accumulates the gross earnings, deductions, and net pay by employee for each pay period. It provides the documentation for preparing a paycheck for each employee. Illustration I-8 presents Academy Company's payroll register. It shows the data for Michael Watson in the wages section. In this example, Academy Company's total weekly payroll is $17,210, as shown in the Salaries and Wages Expense column.

Illustration I-8
Payroll register

Academy Company.xls

Home Insert Page Layout Formulas Data Review View

P18 fx

ACADEMY COMPANY
Payroll Register
For the Week Ending January 14, 2017

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
5				Earnings			Deductions					Paid		Account Debited
6–8	Employee	Total Hours	Regular	Over-time	Gross	FICA	Federal Income Tax	State Income Tax	United Fund	Union Dues	Total	Net Pay	Check No.	Salaries and Wages Expense
9														
10	Arnold, Patricia	40	580.00		580.00	44.37	61.00	11.60	15.00		131.97	448.03	998	580.00
11	Canton, Matthew	40	590.00		590.00	45.14	63.00	11.80	20.00		139.94	450.06	999	590.00
21	Mueller, William	40	530.00		530.00	40.55	54.00	10.60	11.00		116.15	413.85	1000	530.00
22	Bennett, Robin	42	480.00	36.00	516.00	39.47	35.00	10.32	18.00	5.00	107.79	408.21	1025	516.00
23	Watson, Michael	44	480.00	72.00	552.00	42.23	24.00	11.04	10.00	5.00	92.27	459.73	1028	552.00
29	Milroy, Lee	43	480.00	54.00	534.00	40.85	46.00	10.68	10.00	5.00	112.53	421.47	1029	534.00
30														
31	Total		16,200.00	1,010.00	17,210.00	1,316.57	3,490.00	344.20	421.50	115.00	5,687.27	11,522.73		17,210.00
32														

Note that this record is a listing of each employee's payroll data for the pay period. In some companies, a payroll register is a journal or book of original entry; postings are made from the payroll register directly to ledger accounts. In other companies, the payroll register is a memorandum record that provides the data for a general journal entry and subsequent posting to the ledger accounts. At Academy Company, the latter procedure is followed.

RECOGNIZING PAYROLL EXPENSES AND LIABILITIES

From the payroll register in Illustration I-8, Academy Company makes a journal entry to record the payroll. For the week ending January 14, the entry is:

Jan. 14	Salaries and Wages Expense	17,210.00	
	FICA Taxes Payable		1,316.57
	Federal Income Taxes Payable		3,490.00
	State Income Taxes Payable		344.20
	United Fund Contributions Payable		421.50
	Union Dues Payable		115.00
	Salaries and Wages Payable		11,522.73
	(To record payroll for the week ending January 14)		

A = L + E
−17,210.00 Exp
+1,316.57
+3,490.00
+344.20
+421.50
+115.00
+11,522.73

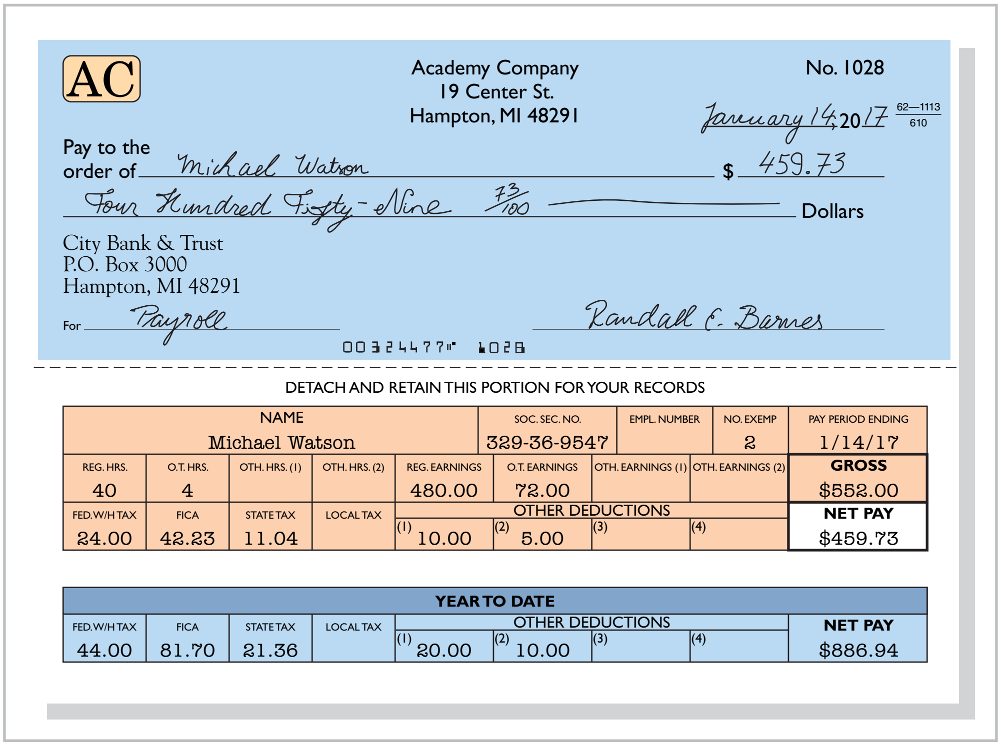
Cash Flows
no effect

The company credits specific liability accounts for the mandatory and voluntary deductions made during the pay period. In the example, Academy debits Salaries and Wages Expense for the gross earnings of its employees. The amount credited to Salaries and Wages Payable is the sum of the individual checks the employees will receive.

RECORDING PAYMENT OF THE PAYROLL

A company makes payments by check (or electronic funds transfer) either from its regular bank account or a payroll bank account. Each paycheck is usually accompanied by a detachable **statement of earnings** document. This shows the employee's gross earnings, payroll deductions, and net pay, both for the period and for the year-to-date. Academy Company uses its regular bank account for payroll checks. Illustration I-9 shows the paycheck and statement of earnings for Michael Watson.

Illustration I-9
Paycheck and statement of earnings



AC
Academy Company
19 Center St.
Hampton, MI 48291

No. 1028

January 14, 2017 62—1113/610

Pay to the order of Michael Watson $ 459.73

Four Hundred Fifty-Nine 73/100 Dollars

City Bank & Trust
P.O. Box 3000
Hampton, MI 48291

For Payroll Randall E. Barnes

00324477" 1028

DETACH AND RETAIN THIS PORTION FOR YOUR RECORDS

NAME	SOC. SEC. NO.	EMPL. NUMBER	NO. EXEMP	PAY PERIOD ENDING
Michael Watson	329-36-9547		2	1/14/17

REG. HRS.	O.T. HRS.	OTH. HRS. (1)	OTH. HRS. (2)	REG. EARNINGS	O.T. EARNINGS	OTH. EARNINGS (1)	OTH. EARNINGS (2)	GROSS
40	4			480.00	72.00			$552.00

FED. W/H TAX	FICA	STATE TAX	LOCAL TAX	OTHER DEDUCTIONS (1)	(2)	(3)	(4)	NET PAY
24.00	42.23	11.04		10.00	5.00			$459.73

YEAR TO DATE

FED. W/H TAX	FICA	STATE TAX	LOCAL TAX	OTHER DEDUCTIONS (1)	(2)	(3)	(4)	NET PAY
44.00	81.70	21.36		20.00	10.00			$886.94

• HELPFUL HINT
None of the income tax liabilities result in payroll tax expense for the employer because the employer is acting only as a collection agent for the government.

Following payment of the payroll, the company enters the check numbers in the payroll register. Academy Company records payment of the payroll as follows.

Jan. 14	Salaries and Wages Payable	11,522.73	
	Cash		11,522.73
	(To record payment of payroll)		

A = L + E
−11,522.73 (L)
−11,522.73 (A)
Cash Flows
−11,522.73

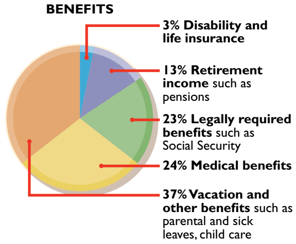
When a company uses currency in payment, it prepares one check for the payroll's total amount of net pay. The company cashes this check and inserts the coins and currency in individual pay envelopes for disbursement to individual employees.

Employer Payroll Taxes

Payroll tax expense for businesses results from three taxes that governmental agencies levy **on employers**. These taxes are (1) FICA, (2) federal unemployment tax, and (3) state unemployment tax. These taxes, plus such items as paid vacations and pensions, are collectively referred to as **fringe benefits**. As indicated earlier, the cost of fringe benefits in many companies is substantial. The pie chart in the margin shows the pieces of the benefits "pie."

Learning Objective 2

Describe and record employer payroll taxes.



FICA Taxes

Each employee must pay FICA taxes. In addition, employers must match each employee's FICA contribution. The matching contribution results in **payroll tax expense** to the employer. The employer's tax is subject to the same rate and maximum earnings as the employee's. The company uses the same account, FICA Taxes Payable, to record both the employee's and the employer's FICA contributions. For the January 14 payroll, Academy Company's FICA tax contribution is \$1,316.57 (\$17,210.00 × 7.65%).

Federal Unemployment Taxes

The Federal Unemployment Tax Act (FUTA) is another feature of the federal Social Security program. **Federal unemployment taxes** provide benefits for a limited period of time to employees who lose their jobs through no fault of their own. The FUTA tax rate is 6.2% of taxable wages. The taxable wage base is the first \$7,000 of wages paid to each employee in a calendar year. Employers who pay the state unemployment tax on a timely basis will receive an offset credit of up to 5.4%. Therefore, the net federal tax rate is generally 0.8% (6.2% − 5.4%). This rate would equate to a maximum of \$56 of federal tax per employee per year (.008 × \$7,000). State tax rates are based on state law.

• HELPFUL HINT
Both the employer and employee pay FICA taxes. Federal unemployment taxes and (in most states) the state unemployment taxes are borne entirely by the employer.

The **employer** bears the entire federal unemployment tax. There is no deduction or withholding from employees. Companies use the account Federal Unemployment Taxes Payable to recognize this liability. The federal unemployment tax for Academy Company for the January 14 payroll is \$137.68 (\$17,210.00 × 0.8%).

State Unemployment Taxes

All states have unemployment compensation programs under state unemployment tax acts (SUTA). Like federal unemployment taxes, **state unemployment taxes** provide benefits to employees who lose their jobs. These taxes are levied on employers.[2] The basic rate is usually 5.4% on the first \$7,000 of wages paid to an employee during the year. The state adjusts the basic rate according to the employer's experience rating. Companies with a history of stable employment may pay less than 5.4%. Companies with a history of unstable employment may pay more than the basic rate. Regardless of the rate paid, the company's credit on the federal unemployment tax is still 5.4%.

Companies use the account State Unemployment Taxes Payable for this liability. The state unemployment tax for Academy Company for the January 14 payroll is \$929.34 (\$17,210.00 × 5.4%). Illustration I-10 (page I-9) summarizes the types of employer payroll taxes.

[2]In a few states, the employee is also required to make a contribution. *In this textbook, including the homework, we will assume that the tax is only on the employer.*

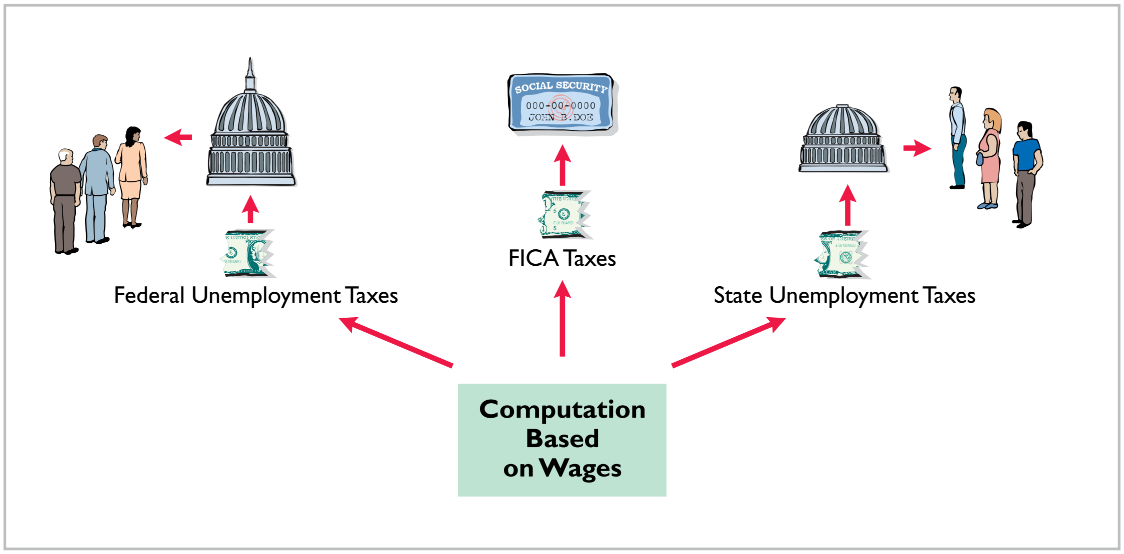


Illustration I-10
Employer payroll taxes

Recording Employer Payroll Taxes

Companies usually record employer payroll taxes at the same time they record the payroll. The entire amount of gross pay ($17,210.00) shown in the payroll register in Illustration I-8 (page I-6) is subject to each of the three taxes mentioned above. Accordingly, Academy records the payroll tax expense associated with the January 14 payroll with the entry shown below.

A	=	L	+	E
				−2,383.59 Exp
		+1,316.57		
		+137.68		
		+929.34		

Cash Flows
no effect

Jan. 14	Payroll Tax Expense	2,383.59	
	FICA Taxes Payable		1,316.57
	Federal Unemployment Taxes Payable		137.68
	State Unemployment Taxes Payable		929.34
	(To record employer's payroll taxes on January 14 payroll)		

Note that Academy uses separate liability accounts instead of a single credit to Payroll Taxes Payable. Why? Because these liabilities are payable to different taxing authorities at different dates. Companies classify the liability accounts in the statement of financial position as current liabilities since they will be paid within the next year. They classify Payroll Tax Expense on the income statement as an operating expense.

Filing and Remitting Payroll Taxes

Preparation of payroll tax returns is the responsibility of the payroll department. The treasurer's department makes the tax payment. Much of the information for the returns is obtained from employee earnings records.

For purposes of reporting and remitting to the IRS, the company combines the FICA taxes and federal income taxes that it withheld. **Companies must report the taxes quarterly**, no later than one month following the close of each quarter. The remitting requirements depend on the amount of taxes withheld and the length of the pay period. Companies remit funds through deposits in either a Federal Reserve bank or an authorized commercial bank.

Companies generally file and remit federal unemployment taxes **annually** on or before January 31 of the subsequent year. Earlier payments are required when the tax exceeds a specified amount. Companies usually must file and pay state unemployment taxes by the **end of the month following each quarter**. When payroll taxes are paid, companies debit payroll liability accounts, and credit Cash.

• HELPFUL HINT
Employers generally transmit their W-2s to the government electronically. The taxing agencies store the information in their computer systems for subsequent comparison against earnings and taxes withheld reported on employees' income tax returns.

Employers also must provide each employee with a **Wage and Tax Statement (Form W-2)** by January 31 following the end of a calendar year. This statement shows gross earnings, FICA taxes withheld, and income taxes withheld for the year. The required W-2 form for Michael Watson, using assumed annual data, is shown in Illustration I-11. The employer must send a copy of each employee's Wage and Tax Statement (Form W-2) to the Social Security Administration. This agency subsequently furnishes the Internal Revenue Service with the income data required.

Illustration I-11
W-2 form

22222	Void ☐	a Employee's social security number: 329-35-9547	For Official Use Only ▶ OMB No. 1545-0008
b Employer identification number (EIN): 36-2167852		1 Wages, tips, other compensation: 26,300.00	2 Federal income tax withheld: 2,248.00
c Employer's name, address, and ZIP code: Academy Company, 19 Center St., Hampton, MI 48291		3 Social security wages: 26,300.00	4 Social security tax withheld: 1,630.60
		5 Medicare wages and tips: 26,300.00	6 Medicare tax withheld: 381.35
		7 Social security tips	8 Allocated tips
d Control number		9 Advance EIC payment	10 Dependent care benefits
e Employee's first name and initial: Michael	Last name: Watson; Suff.	11 Nonqualified plans	12a See instructions for box 12 (Code)
2345 Mifflin Ave., Hampton, MI 48292		13 Statutory employee ☐ Retirement plan ☐ Third-party sick pay ☐	12b (Code)
		14 Other	12c (Code)
f Employee's address and ZIP code			12d (Code)

15 State	Employer's state ID number	16 State wages, tips, etc.	17 State income tax	18 Local wages, tips, etc.	19 Local income tax	20 Locality name
MI	423-1466-3	26,300.00	526.00			

Form **W-2 Wage and Tax Statement** 2017

Department of the Treasury—Internal Revenue Service

For Privacy Act and Paperwork Reduction Act Notice, see back of Copy D.

Copy A For Social Security Administration — Send this entire page with Form W-3 to the Social Security Administration; photocopies are **not** acceptable.

Cat. No. 10134D

Internal Control for Payroll

Learning Objective 3
Discuss the objectives of internal control for payroll.

Chapter 7 introduced internal control. As applied to payrolls, the objectives of internal control are (1) to safeguard company assets against unauthorized payments of payrolls, and (2) to ensure the accuracy and reliability of the accounting records pertaining to payrolls.

Irregularities often result if internal control is lax. Frauds involving payroll include overstating hours, using unauthorized pay rates, adding fictitious employees to the payroll, continuing terminated employees on the payroll, and distributing duplicate payroll checks. Moreover, inaccurate records will result in incorrect paychecks, financial statements, and payroll tax returns.

Payroll activities involve four functions: hiring employees, timekeeping, preparing the payroll, and paying the payroll. For effective internal control, companies should assign these four functions to different departments or individuals. Illustration I-12 (page I-11) highlights these functions and illustrates their internal control features.

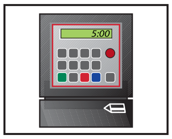
Payroll Function

Hiring Employees

Internal control feature: Human Resources department documents and authorizes employment.

Fraud prevented: Fictitious employees are not added to payroll.

Timekeeping



Internal control feature: Supervisors monitor hours worked through time cards and time reports.

Fraud prevented: Employee not paid for hours not worked.

Payroll Function

Preparing the Payroll

Internal control feature: Two (or more) employees verify payroll amounts; supervisor approves.

Fraud prevented: Payroll calculations are accurate and relevant.

Paying the Payroll

Internal control feature: Treasurer signs and distributes prenumbered checks.

Fraud prevented: Checks are not lost, misappropriated, or unavailable for proof of payment; endorsed check provides proof of payment.

Illustration I-12
Internal control for payroll

REVIEW

LEARNING OBJECTIVES REVIEW

1 Compute and record the payroll for a pay period. The computation of the payroll involves gross earnings, payroll deductions, and net pay. In recording the payroll, Salaries and Wages Expense is debited for gross earnings, individual tax and other liability accounts are credited for payroll deductions, and Salaries and Wages Payable is credited for net pay. When the payroll is paid, Salaries and Wages Payable is debited, and Cash is credited.

2 Describe and record employer payroll taxes. Employer payroll taxes consist of FICA, federal unemployment taxes, and state unemployment taxes. The taxes are usually accrued at the time the payroll is recorded by debiting Payroll Tax Expense and crediting separate liability accounts for each type of tax.

3 Discuss the objectives of internal control for payroll. The objectives of internal control for payroll are (1) to safeguard company assets against unauthorized payments of payrolls, and (2) to ensure the accuracy and reliability of the accounting records pertaining to payrolls.

GLOSSARY REVIEW

Bonus Compensation to management personnel and other employees, based on factors such as increased sales or the amount of net income. (p. I-2).

Employee earnings record A cumulative record of each employee's gross earnings, deductions, and net pay during the year. (p. I-5).

Federal unemployment taxes Taxes imposed on the employer that provide benefits for a limited time period to employees who lose their jobs through no fault of their own. (p. I-8).

Fees Payments made for the services of professionals. (p. I-1).

FICA taxes Taxes designed to provide workers with supplemental retirement, employment disability, and medical benefits. (p. I-2).

Gross earnings Total compensation earned by an employee. (p. I-1).

Net pay Gross earnings less payroll deductions. (p. I-4).

Payroll deductions Deductions from gross earnings to determine the amount of a paycheck. (p. I-2).

Payroll register A payroll record that accumulates the gross earnings, deductions, and net pay by employee for each pay period. (p. I-6).

Salaries Specified amount per month or per year paid to managerial, administrative, and sales personnel. (p. I-1).

Statement of earnings A document attached to a paycheck that indicates the employee's gross earnings, payroll deductions, and net pay. (p. I-7).

State unemployment taxes Taxes imposed on the employer that provide benefits to employees who lose their jobs. (p. I-8).

Wage and Tax Statement (Form W-2) A form showing gross earnings, FICA taxes withheld, and income taxes withheld which is prepared annually by an employer for each employee. (p. I-10).

Wages Amounts paid to employees based on a rate per hour or on a piece-work basis. (p. I-1).

QUESTIONS

1. What is the difference between gross pay and net pay? Which amount should a company record as wages or salaries expense?
2. Which payroll tax is levied on both employers and employees?
3. Are the federal and state income taxes withheld from employee paychecks a payroll tax expense for the employer? Explain your answer.
4. What do the following acronyms stand for: FICA, FUTA, and SUTA?
5. What information is shown on a W-2 statement?
6. Distinguish between the two types of payroll deductions and give examples of each.
7. What are the primary uses of the employee earnings record?
8. (a) Identify the three types of employer payroll taxes. (b) How are tax liability accounts and Payroll Tax Expense classified in the financial statements?
9. You are a newly hired accountant with Spindle Company. On your first day, the controller asks you to identify the main internal control objectives related to payroll accounting. How would you respond?
10. What are the four functions associated with payroll activities?

BRIEF EXERCISES

Compute gross earnings and net pay. (LO 1)

BEI-1 Wade Yeo's regular hourly wage rate is $16, and he receives an hourly rate of $24 for work in excess of 40 hours. During a January pay period, Wade works 47 hours. Wade's federal income tax withholding is $95, he has no voluntary deductions, and the FICA tax rate is 7.65%. Compute Wade Yeo's gross earnings and net pay for the pay period.

Record a payroll and the payment of wages. (LO 1)

BEI-2 Data for Wade Yeo are presented in BEI-1. Prepare the journal entries to record (a) Wade's pay for the period and (b) the payment of Wade's wages. Use January 15 for the end of the pay period and the payment date.

Record employer payroll taxes. (LO 2)

BEI-3 In January, gross earnings in Padgett Company totaled $79,000. All earnings are subject to 7.65% FICA taxes, 5.4% state unemployment taxes, and 0.8% federal unemployment taxes. Prepare the entry to record January payroll tax expense.

Identify payroll functions. (LO 3)

BEI-4 Rahman Company has the following payroll procedures.

(a) Supervisor approves overtime work.
(b) The human resources department prepares hiring authorization forms for new hires.
(c) A second payroll department employee verifies payroll calculations.
(d) The treasurer's department pays employees.

Identify the payroll function to which each procedure pertains.

EXERCISES

Compute net pay and record pay for one employee.

(LO 1)

EI-1 Gabrielle Osmon's regular hourly wage rate is $14, and she receives a wage of 1½ times the regular hourly rate for work in excess of 40 hours. During a March weekly pay period, Gabrielle worked 46 hours. Her gross earnings prior to the current week were $6,000. Gabrielle is married and claims three withholding allowances. Her only voluntary deduction is for group hospitalization insurance at $30 per week.

Instructions

(a) Compute the following amounts for Gabrielle's wages for the current week.
   (1) Gross earnings.
   (2) FICA taxes. (Assume a 7.65% rate on maximum of $117,000.)
   (3) Federal income taxes withheld. (Use the withholding table in Illustration I-5, page I-4.)
   (4) State income taxes withheld. (Assume a 2.0% rate.)
   (5) Net pay.
(b) Record Gabrielle's pay.

Compute maximum FICA deductions.

(LO 1)

EI-2 Employee earnings records for Slaymaker Company reveal the following gross earnings for four employees through the pay period of December 15.

J. Seligman	$93,500	L. Marshall	$115,100
R. Eby	$113,600	T. Olson	$120,000

For the pay period ending December 31, each employee's gross earnings is $4,500. The FICA tax rate is 7.65% on gross earnings of $117,000.

Instructions

Compute the FICA withholdings that should be made for each employee for the December 31 pay period. (Show computations.)

Prepare payroll register and record payroll and payroll tax expense.

(LO 1, 2)

EI-3 Welstead Company has the following data for the weekly payroll ending January 31.

	Hours							Federal	
Employee	**M**	**T**	**W**	**T**	**F**	**S**	**Hourly Rate**	**Income Tax Withholding**	**Health Insurance**
W. Jeong	8	8	9	8	8	3	$11	$34	$18
C. Garrison	8	8	8	8	8	2	13	43	15
J. Buss	8	10	8	8	9	0	14	58	20

Employees are paid 1½ times the regular hourly rate for all hours worked in excess of 40 hours per week. FICA taxes are 7.65% on the first $117,000 of gross earnings and 1.45% in excess of $117,000. Welstead Company is subject to 5.4% state unemployment taxes on the first $9,800 and 0.8% federal unemployment taxes on the first $7,000 of gross earnings.

Instructions

(a) Prepare the payroll register for the weekly payroll.
(b) Prepare the journal entries to record the payroll and Welstead's payroll tax expense.

Compute missing payroll amounts and record payroll.

(LO 1)

EI-4 Selected data from a February payroll register for Halverson Company are presented below. Some amounts are intentionally omitted.

Gross earnings:		State income taxes	$ (3)
Regular	$8,900	Union dues	100
Overtime	(1)	Total deductions	(4)
Total	(2)	Net pay	$7,340
Deductions:		Departmental payroll:	
FICA taxes	$ 765	Warehouse wages	$ (5)
Federal income taxes	1,395	Store wages	4,000

FICA taxes are 7.65%. State income taxes are 4% of gross earnings.

Instructions

(a) Fill in the missing amounts.
(b) Journalize the February payroll and the payment of the payroll.

EI-5 According to a payroll register summary of Brand Company, the amount of employees' gross pay in December was $850,000, of which $61,000 was not subject to Social Security taxes of 6.2% and $780,000 was not subject to state and federal unemployment taxes.

Determine employer's payroll taxes; record payroll tax expense.

(LO 2)

Instructions

(a) Determine the employer's payroll tax expense for the month, using the following rates: Social Security tax rate 6.2%, Medicare tax rate 1.45%, state unemployment 5.4%, and federal unemployment 0.8%.
(b) Prepare the journal entry to record December payroll tax expense.

PROBLEMS: SET A

PI-1A Ethridge Drug Store has four employees who are paid on an hourly basis plus time-and-a-half for all hours worked in excess of 40 a week. Payroll data for the week ended February 15, 2017, are presented below.

Prepare payroll register and payroll entries.

(LO 1, 2)

Employees	Hours Worked	Hourly Rate	Federal Income Tax Withholdings	United Fund
A. Joseph	38	$14.00	$?	$–0–
J. Wilgus	42	$13.00	?	5.00
P. Kirk	44	$12.00	57.00	7.50
L. Zhang	48	$12.00	52.00	5.00

Joseph and Wilgus are married. They claim 2 and 4 withholding allowances, respectively. The following tax rates are applicable: FICA 7.65% on all wages, state income taxes 3%, state unemployment taxes 5.4%, and federal unemployment 0.8%.

Instructions

(a) Prepare a payroll register for the weekly payroll. (Use the wage-bracket withholding table in Illustration I-5 on page I-4 for federal income tax withholdings.)
(b) Journalize the payroll on February 15, 2017, and the accrual of employer payroll taxes.
(c) Journalize the payment of the payroll on February 16, 2017.
(d) Journalize the deposit in a Federal Reserve bank on February 28, 2017, of the FICA and federal income taxes payable to the government.

(a) Net pay $1,868.06

(b) Payroll Tax Expense $313.99

PI-2A The following payroll liability accounts are included in the ledger of Stockbridge Company on January 1, 2017.

Journalize payroll transactions and adjusting entries.

(LO 1, 2)

FICA Taxes Payable	$ 662.20
Federal Income Taxes Payable	1,254.60
State Income Taxes Payable	102.15
Federal Unemployment Taxes Payable	312.00
State Unemployment Taxes Payable	1,954.40
Union Dues Payable	250.00
U.S. Savings Bonds Payable	350.00

In January, the following transactions occurred.

Jan. 10 Sent check for $250.00 to union treasurer for union dues.
12 Deposited check for $1,916.80 in Federal Reserve bank for FICA taxes and federal income taxes withheld.
15 Purchased U.S. Savings Bonds for employees by writing check for $350.00.
17 Paid state income taxes withheld from employees.
20 Paid federal and state unemployment taxes.
31 Completed monthly payroll register, which shows salaries and wages $46,200, FICA taxes withheld $3,534.30, federal income taxes payable $1,770, state income taxes payable $360, union dues payable $400, United Fund contributions payable $1,800, and net pay $38,335.70.
31 Prepared payroll checks for the net pay and distributed checks to employees.

At January 31, the company also makes the following accrual for employer payroll taxes: FICA taxes 7.65%, state unemployment taxes 5.4%, and federal unemployment taxes 0.8%.

Instructions

(b) Payroll Tax Expense $6,398.70

(a) Journalize the January transactions.
(b) Journalize the adjustments pertaining to employee compensation at January 31.

Prepare entries for payroll and payroll taxes; prepare W-2 data.

(LO 1, 2)

PI-3A For the year ended December 31, 2017, D. Pienkos Company reports the following summary payroll data.

Gross earnings:	
Administrative salaries	$150,000
Electricians' wages	340,000
Total	$490,000
Deductions:	
FICA taxes	$ 35,005
Federal income taxes withheld	108,000
State income taxes withheld (2.6%)	12,740
United Fund contributions payable	25,000
Hospital insurance premiums	26,800
Total	$207,545

D. Pienkos Company's payroll taxes are Social Security tax 6.2%, Medicare tax 1.45%, state unemployment 2.5% (due to a stable employment record), and 0.8% federal unemployment. Gross earnings subject to Social Security taxes of 6.2% total $450,000 and gross earnings subject to unemployment taxes total $110,000.

Instructions

(a) Sal./Wages Payable $282,455
(b) Payroll Tax Expense $38,635

(a) Prepare a summary journal entry at December 31 for the full year's payroll.
(b) Journalize the adjusting entry at December 31 to record the employer's payroll taxes.
(c) The W-2 Wage and Tax Statement requires the following dollar data.

Wages, Tips, Other Compensation	Federal Income Tax Withheld	State Income Tax Withheld	FICA Wages	FICA Tax Withheld

Complete the required data for the following employees.

Employee	Gross Earnings	Federal Income Tax Withheld
S. Brand	$56,000	$18,500
R. Morin	27,000	11,000

Identify internal control weaknesses and make recommendations for improvement.

(LO 3)

PI-4A The payroll procedures used by three different companies are described below.

1. In Watson Company, each employee is required to mark on a clock card the hours worked. At the end of each pay period, the employee must have this clock card approved by the department manager. The approved card is then given to the payroll department by the employee. Subsequently, the treasurer's department pays the employee by check.
2. In Blasin Computer Company, clock cards and time clocks are used. At the end of each pay period, the department manager initials the cards, indicates the rates of pay, and sends them to payroll. A payroll register is prepared from the cards by the payroll department. Cash equal to the total net pay in each department is given to the department manager, who pays the employees in cash.
3. In Forseth Company, employees are required to record hours worked by "punching" clock cards in a time clock. At the end of each pay period, the clock cards are collected by the department manager. The manager prepares a payroll register in duplicate and forwards the original to payroll. In payroll, the summaries are checked for mathematical accuracy, and a payroll supervisor pays each employee by check.

Instructions

(a) Indicate the weakness(es) in internal control in each company.
(b) For each weakness, describe the control procedure(s) that will provide effective internal control. Use the following format for your answer:

(a) Weaknesses	(b) Recommended Procedures

PROBLEMS: SET B

Prepare payroll register and payroll entries.

(LO 1, 2)

PI-1B Ralph's Hardware has four employees who are paid on an hourly basis plus time-and-a half for all hours worked in excess of 40 a week. Payroll data for the week ended March 15, 2017, are presented below.

Employee	Hours Worked	Hourly Rate	Federal Income Tax Withholdings	United Fund
K. Litwack	40	$15	$?	$5
E. Burgess	46	13	?	5
R. Perez	44	13	60	8
H. Hosseini	48	13	67	5

Litwack and Burgess are married. They claim 1 and 3 withholding allowances, respectively. The following tax rates are applicable: FICA 7.65% on all wages, state income taxes 4.5%, state unemployment taxes 5.4%, and federal unemployment 0.8%.

Instructions

(a) Prepare a payroll register for the weekly payroll. (Use the wage-bracket withholding table in Illustration I-5 on page I-4 for federal income tax withholdings.)

(b) Journalize the payroll on March 15, 2017, and the accrual of employer payroll taxes.

(c) Journalize the payment of the payroll on March 16, 2017.

(d) Journalize the deposit in a Federal Reserve bank on March 31, 2017, of the FICA and federal income taxes payable to the government.

(a) Net pay $1,993.91

(b) Payroll Tax Expense $347.77

Journalize payroll transactions and adjusting entries.

(LO 1, 2)

PI-2B The following payroll liability accounts are included in the ledger of Marcus Company on January 1, 2017.

FICA Taxes Payable	$ 760.00
Federal Income Taxes Payable	1,204.60
State Income Taxes Payable	108.95
Federal Unemployment Taxes Payable	288.95
State Unemployment Taxes Payable	1,954.40
Union Dues Payable	740.00
U.S. Savings Bonds Payable	360.00

In January, the following transactions occurred.

Jan. 10 Sent check for $740.00 to union treasurer for union dues.

12 Deposited check for $1,964.60 in Federal Reserve bank for FICA taxes and federal income taxes withheld.

15 Purchased U.S. Savings Bonds for employees by writing check for $360.00.

17 Paid state income taxes withheld from employees.

20 Paid federal and state unemployment taxes.

31 Completed monthly payroll register, which shows salaries and wages $50,600, FICA taxes withheld $3,871, federal income taxes payable $1,958, state income taxes payable $414, union dues payable $400, United Fund contributions payable $1,888, and net pay $42,069.

31 Prepared payroll checks for the net pay and distributed checks to employees.

At January 31, the company also makes the following accrued adjustment for employer payroll taxes: FICA taxes 7.65%, federal unemployment taxes 0.8%, and state unemployment taxes 5.4%.

Instructions

(a) Journalize the January transactions.

(b) Journalize the adjustments pertaining to employee compensation at January 31.

(b) Payroll Tax Expense $7,008.20

Prepare entries for payroll and payroll taxes; prepare W-2 data.

(LO 1, 2)

PI-3B For the year ended December 31, 2017, Grayson Electrical Repair Company reports the following summary payroll data.

Gross earnings:	
Administrative salaries	$180,000
Electricians' wages	390,000
Total	$570,000
Deductions:	
FICA taxes	$ 37,405
Federal income taxes withheld	168,000
State income taxes withheld (3.2%)	18,240
United Fund contributions payable	27,500
Hospital insurance premiums	32,200
Total	$283,345

Grayson Company's payroll taxes are Social Security tax 6.2%, Medicare tax 1.45%, state unemployment 2.5% (due to a stable employment record), and 0.8% federal unemployment. Gross earnings subject to Social Security taxes of 6.2% total $470,000, and gross earnings subject to unemployment taxes total $125,000.

(a) Sal./Wages Payable $286,655
(b) Payroll Tax Expense $41,530

Instructions

(a) Prepare a summary journal entry at December 31 for the full year's payroll.
(b) Journalize the adjusting entry at December 31 to record the employer's payroll taxes.
(c) The W-2 Wage and Tax Statement requires the following dollar data.

Wages, Tips, Other Compensation	Federal Income Tax Withheld	State Income Tax Withheld	FICA Wages	FICA Tax Withheld

Complete the required data for the following employees.

Employee	Gross Earnings	Federal Income Tax Withheld
Jin Chien	$59,000	$19,500
Nina Harris	28,000	7,200

Identify internal control weaknesses and make recommendations for improvement.

(LO 3)

PI-4B Selected payroll procedures of Schuster Company are described below.

1. Department managers interview applicants and on the basis of the interview either hire or reject the applicants. When an applicant is hired, the applicant fills out a W-4 form (Employee's Withholding Allowance Certificate). One copy of the form is sent to the human resources department, and one copy is sent to the payroll department as notice that the individual has been hired. On the copy of the W-4 sent to payroll, the managers manually indicate the hourly pay rate for the new hire.
2. The payroll checks are manually signed by the chief accountant and given to the department managers for distribution to employees in their department. The managers are responsible for seeing that any absent employees receive their checks.
3. There are two clerks in the payroll department. The payroll is divided alphabetically; one clerk has employees A to L and the other has employees M to Z. Each clerk computes the gross earnings, deductions, and net pay for employees in the section and posts the data to the employee earnings records.

Instructions

(a) Indicate the weaknesses in internal control.
(b) For each weakness, describe the control procedures that will provide effective internal control. Use the following format for your answer:

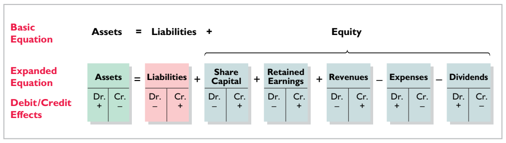
(a) Weaknesses	(b) Recommended Procedures

Company Index

Subject Index

RAPID REVIEW
Chapter Content

BASIC ACCOUNTING EQUATION (Chapter 2)



ADJUSTING ENTRIES (Chapter 3)

	Type	Adjusting Entry	
Deferrals	1. Prepaid expenses 2. Unearned revenues	Dr. Expenses Dr. Liabilities	Cr. Assets Cr. Revenues
Accruals	1. Accrued revenues 2. Accrued expenses	Dr. Assets Dr. Expenses	Cr. Revenues Cr. Liabilities

Note: Each adjusting entry will affect one or more income statement accounts and one or more statement of financial position accounts.

Interest Computation

Interest = Face value of note × Annual interest rate × Time in terms of one year

CLOSING ENTRIES (Chapter 4)

Purpose: (1) Update the Retained Earnings account in the ledger by transferring net income (loss) and dividends to retained earnings. (2) Prepare the temporary accounts (revenue, expense, dividends) for the next period's postings by reducing their balances to zero.

Process

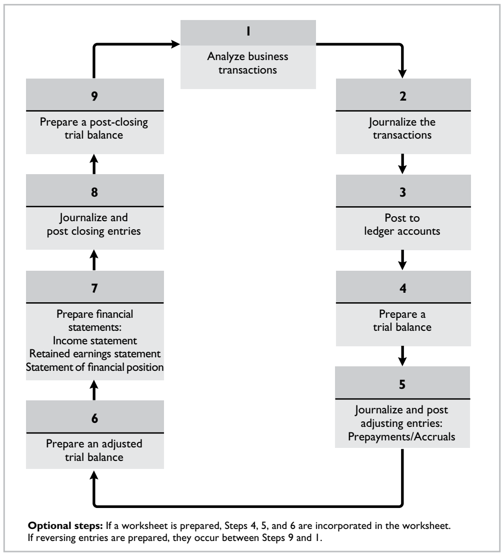
1. Debit each revenue account for its balance (assuming normal balances) and credit Income Summary for total revenues.
2. Debit Income Summary for total expenses and credit each expense account for its balance (assuming normal balances).

   STOP AND CHECK: Does the balance in your Income Summary account equal the net income (loss) reported in the income statement?

3. Debit (credit) Income Summary and credit (debit) Retained Earnings for the amount of net income (loss).
4. Debit Retained Earnings for the balance in the Dividends account and credit Dividends for the same amount.

   STOP AND CHECK: Does the balance in your Retained Earnings account equal the ending balance reported in the statement of financial position and the retained earnings statement? Are all of your temporary account balances zero?

ACCOUNTING CYCLE (Chapter 4)



INVENTORY (Chapters 5 and 6)

Ownership

Freight Terms	Ownership of goods on public carrier resides with:	Who pays freight costs:
FOB shipping point	Buyer	Buyer
FOB destination	Seller	Seller

Perpetual vs. Periodic Journal Entries

Event	Perpetual	Periodic
Purchase of goods	Inventory Cash (A/P)	Purchases Cash (A/P)
Freight (shipping point)	Inventory Cash	Freight-In Cash
Return of goods	Cash (or A/P) Inventory	Cash (or A/P) Purchase Returns and Allowances
Sale of goods	Cash (or A/R) Sales Revenue Cost of Goods Sold Inventory	Cash (or A/R) Sales Revenue No entry
End of period	No entry	Closing or adjusting entry required

Cost Flow Methods

- Specific identification
- First-in, first-out (FIFO)
- Weighted-average

FRAUD, INTERNAL CONTROL, AND CASH (Chapter 7)

The Fraud Triangle

Opportunity

Financial pressure

Rationalization

Principles of Internal Control Activities

- Establishment of responsibility
- Segregation of duties
- Documentation procedures
- Physical controls
- Independent internal verification
- Human resource controls

Bank Reconciliation

Bank
Balance per bank statement Add: Deposits in transit Deduct: Outstanding checks Adjusted cash balance

Books
Balance per books Add: Unrecorded credit memoranda from bank statement Deduct: Unrecorded debit memoranda from bank statement Adjusted cash balance

Note: 1. Errors should be offset (added or deducted) on the side that made the error.
2. Adjusting journal entries should only be made on the books.

STOP AND CHECK: Does the adjusted cash balance in the Cash account equal the reconciled balance?

RECEIVABLES (Chapter 8)

Methods to Account for Uncollectible Accounts

Direct write-off method	Record bad debt expense when the company determines a particular account to be uncollectible.
Allowance methods: **Percentage-of-sales**	At the end of each period, estimate the amount of credit sales uncollectible. Debit Bad Debt Expense and credit Allowance for Doubtful Accounts for this amount. As specific accounts become uncollectible, debit Allowance for Doubtful Accounts and credit Accounts Receivable.
Percentage-of-receivables	At the end of each period, estimate the amount of uncollectible receivables. Debit Bad Debt Expense and credit Allowance for Doubtful Accounts in an amount that results in a balance in the allowance account equal to the estimate of uncollectibles. As specific accounts become uncollectible, debit Allowance for Doubtful Accounts and credit Accounts Receivable.

RAPID REVIEW
Chapter Content

PLANT ASSETS (Chapter 9)

Presentation

Tangible Assets	Intangible Assets
Property, plant, and equipment	Intangible assets (patents, copyrights, trademarks, franchises, goodwill)
Natural resources	

Computation of Annual Depreciation Expense

Straight-line	$\dfrac{\text{Cost} - \text{Residual value}}{\text{Useful life (in years)}}$
Units-of-activity	$\dfrac{\text{Depreciable cost}}{\text{Useful life (in units)}} \times$ Units of activity during year
Declining-balance	Book value at beginning of year × Declining-balance rate* *Declining-balance rate = 1 ÷ Useful life (in years)

Note: If depreciation is calculated for partial periods, the straight-line and declining-balance methods must be adjusted for the relevant proportion of the year. Multiply the annual depreciation expense by the number of months expired in the year divided by 12 months.

BONDS (Chapter 10)

Premium	Market interest rate < Contractual interest rate
Face value	Market interest rate = Contractual interest rate
Discount	Market interest rate > Contractual interest rate

Computation of Annual Bond Interest Expense

Interest expense = Interest paid (payable) + Amortization of discount
(OR − Amortization of premium)

Straight-line amortization	$\dfrac{\text{Bond discount (premium)}}{\text{Number of interest periods}}$	
Effective-interest amortization (preferred method)	Bond interest expense	Bond interest paid
	Carrying value of bonds at beginning of period × Effective-interest rate	Face amount of bonds × Contractual interest rate

EQUITY (Chapter 11)

No-Par Value vs. Par Value Share Journal Entries

No-Par Value	Par Value
Cash Share Capital—Ordinary	Cash Share Capital—Ordinary (par value) Share Premium—Ordinary

Comparison of Dividend Effects

	Cash	Share Capital—Ordinary	Retained Earnings
Cash dividend	↓	No effect	↓
Share dividend	No effect	↑	↓
Share split	No effect	No effect	No effect

Debits and Credits to Retained Earnings

Retained Earnings	
Debits (Decreases)	Credits (Increases)
1. Net loss 2. Prior period adjustments for overstatement of net income 3. Cash dividends and share dividends 4. Some disposals of treasury shares	1. Net income 2. Prior period adjustments for understatement of net income

INVESTMENTS (Chapter 12)

Comparison of Long-Term Bond Investment and Liability Journal Entries

Event	Investor	Investee
Purchase / issue of bonds	Debt Investments Cash	Cash Bonds Payable
Interest receipt / payment	Cash Interest Revenue	Interest Expense Cash

Comparison of Cost and Equity Methods of Accounting for Long-Term Share Investments

Event	Cost	Equity
Acquisition	Share Investments Cash	Share Investments Cash
Investee reports earnings	No entry	Share Investments Investment Revenue
Investee pays dividends	Cash Dividend Revenue	Cash Share Investments

Trading and Non-Trading Securities

Trading	Report at fair value with changes reported in net income.
Non-trading	Report at fair value with changes reported in the equity section.

STATEMENT OF CASH FLOWS (Chapter 13)

Cash flows from operating activities (**indirect method**)

Net income			
Add:	Losses on disposals of assets	$ X	
	Amortization and depreciation	X	
	Decreases in non-cash current assets	X	
	Increases in current liabilities	X	
Deduct:	Gains on disposals of assets	(X)	
	Increases in non-cash current assets	(X)	
	Decreases in current liabilities	(X)	
Net cash provided (used) by operating activities			$ X

Cash flows from operating activities (**direct method**)

Cash receipts		
(Examples: from sales of goods and services to customers, from receipts of interest and dividends on loans and investments)	$ X	
Cash payments		
(Examples: to suppliers, for operating expenses, for interest, for taxes)	(X)	
Net cash provided (used) by operating activities		$ X

PRESENTATION OF NON-TYPICAL ITEMS (Chapter 14)

Prior period adjustments (Chapter 11)	Retained earnings statement (adjustment of beginning retained earnings)
Discontinued operations	Income statement (presented separately after "Income from continuing operations")
Changes in accounting principle	In most instances, use the new method in current period and restate previous years' results using new method. For changes in depreciation and amortization methods, use the new method in the current period but do not restate previous periods.

RAPID REVIEW
Financial Statements

Order of Preparation

Statement Type	Date
1. Income statement	For the period ended
2. Retained earnings statement	For the period ended
3. Statement of financial position	As of the end of the period
4. Statement of cash flows	For the period ended

Income Statement (perpetual inventory system)

NAME OF COMPANY
Income Statement
For the Period Ended

Sales		
Sales revenue	€ X	
Less: Sales returns and allowances	X	
Sales discounts	X	
Net sales		€ X
Cost of goods sold		X
Gross profit		X
Operating expenses		
(Examples: store salaries, advertising, delivery, rent, depreciation, utilities, insurance)		X
Income from operations		X
Other income and expense		X
Interest expense		X
Income before income taxes		X
Income tax expense		X
Net income		€ X

Income Statement (periodic inventory system)

NAME OF COMPANY
Income Statement
For the Period Ended

Sales			
Sales revenue		€ X	
Less: Sales returns and allowances		X	
Sales discounts		X	
Net sales			€ X
Cost of goods sold			
Beginning inventory		X	
Purchases	€ X		
Less: Purchase returns and allowances	X		
Net purchases	X		
Add: Freight-in	X		
Cost of goods purchased		X	
Cost of goods available for sale		X	
Less: Ending inventory		X	
Cost of goods sold			X
Gross profit			X
Operating expenses			
(Examples: store salaries, advertising, delivery, rent, depreciation, utilities, insurance)			X
Income from operations			X
Other income and expense			
Interest expense			X
Income before income taxes			X
Income tax expense			X
Net income			€ X

NAME OF COMPANY
Comprehensive Income Statement
For the Period Ended

Net income	€ XX
Other comprehensive income	XX
Comprehensive income	€ XX

Retained Earnings Statement

NAME OF COMPANY
Retained Earnings Statement
For the Period Ended

Retained earnings, beginning of period	€ X
Add: Net income (or deduct net loss)	X
	X
Deduct: Dividends	X
Retained earnings, end of period	€ X

STOP AND CHECK: Net income (loss) presented on the retained earnings statement must equal the net income (loss) presented on the income statement.

Statement of Financial Position

NAME OF COMPANY
Statement of Financial Position
As of the End of the Period

Assets

Intangible assets			€ X
Property, plant, and equipment			
Land		€ X	
Buildings and equipment	€ X		
Less: Accumulated depreciation	X	X	X
Long-term investments			
(Examples: investments in bonds, investments in shares)			X
Current assets			
(Examples: prepaid expenses, merchandise inventory, accounts receivable, short-term investments, cash)			X
Total assets			€ X

Equity and Liabilities

Equity		
Share capital—ordinary	€ X	
Retained earnings	X	€ X
Liabilities		
Non-current liabilities		
(Examples: notes payable, bonds payable)	X	
Current liabilities		
(Examples: notes payable, accounts payable, accruals, unearned revenues, current portion of notes payable)	X	X
Total equity and liabilities		€ X

STOP AND CHECK: Total assets on the statement of financial position must equal total equity and liabilities; ending retained earnings on the statement of financial position must equal ending retained earnings on the retained earnings statement.

Statement of Cash Flows

NAME OF COMPANY
Statement of Cash Flows
For the Period Ended

Cash flows from operating activities	
(*Note:* May be prepared using the direct or indirect method)	
Net cash provided (used) by operating activities	€ X
Cash flows from investing activities	
(Examples: purchase / sale of non-current assets)	
Net cash provided (used) by investing activities	X
Cash flows from financing activities	
(Examples: issue / repayment of non-current liabilities, issue of shares, payment of dividends)	
Net cash provided (used) by financing activities	X
Net increase (decrease) in cash	X
Cash, beginning of the period	X
Cash, end of the period	€ X

STOP AND CHECK: Cash, end of the period, on the statement of cash flows must equal cash presented on the statement of financial position.

RAPID REVIEW

Using the Information in the Financial Statements

	Ratio	Formula	Purpose or Use
	Liquidity Ratios		
1.	Current ratio	$\dfrac{\text{Current assets}}{\text{Current liabilities}}$	Measures short-term debt-paying ability.
2.	Acid-test (quick) ratio	$\dfrac{\text{Cash + Short-term investments + Accounts receivable (net)}}{\text{Current liabilities}}$	Measures immediate short-term liquidity.
3.	Accounts receivable turnover	$\dfrac{\text{Net credit sales}}{\text{Average net accounts receivable}}$	Measures liquidity of accounts receivable.
4.	Inventory turnover	$\dfrac{\text{Cost of goods sold}}{\text{Average inventory}}$	Measures liquidity of inventory.
	Profitability Ratios		
5.	Profit margin	$\dfrac{\text{Net income}}{\text{Net sales}}$	Measures net income generated by each currency unit of sales.
6.	Asset turnover	$\dfrac{\text{Net sales}}{\text{Average total assets}}$	Measures how efficiently assets are used to generate sales.
7.	Return on assets	$\dfrac{\text{Net income}}{\text{Average total assets}}$	Measures overall profitability of assets.
8.	Return on ordinary shareholders' equity	$\dfrac{\text{Net income} - \text{Preference dividends}}{\text{Average ordinary shareholders' equity}}$	Measures profitability of shareholders' investment.
9.	Earnings per share (EPS)	$\dfrac{\text{Net income} - \text{Preference dividends}}{\text{Weighted-average ordinary shares outstanding}}$	Measures net income earned on each ordinary share.
10.	Price-earnings (P-E) ratio	$\dfrac{\text{Market price per share}}{\text{Earnings per share}}$	Measures the ratio of the market price per share to earnings per share.
11.	Payout ratio	$\dfrac{\text{Cash dividends}}{\text{Net income}}$	Measures percentage of earnings distributed in the form of cash dividends.
	Solvency Ratios		
12.	Debt to assets ratio	$\dfrac{\text{Total liabilities}}{\text{Total assets}}$	Measures percentage of total assets provided by creditors.
13.	Times interest earned	$\dfrac{\text{Net income + Interest expense + Income tax expense}}{\text{Interest expense}}$	Measures ability to meet interest payments as they come due.
14.	Free cash flow	Net cash provided by operating activities − Capital expenditures − Cash dividends	Measures the amount of cash generated during the current year that is available for the payment of additional dividends or for expansion.

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