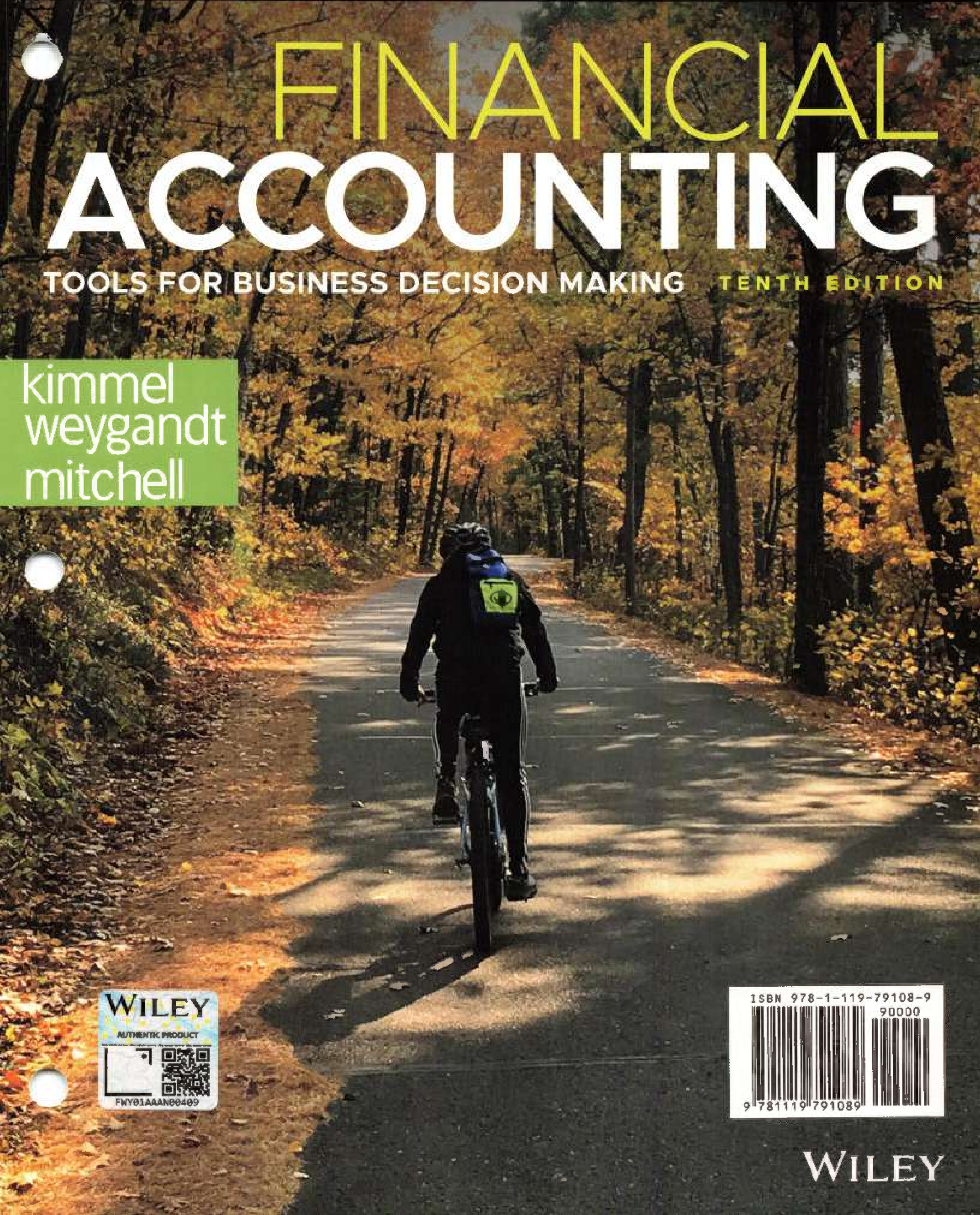
Wiley Loose-Leaf Print Edition

FINANCIAL ACCOUNTING

TOOLS FOR BUSINESS DECISION MAKING

TENTH EDITION

kimmel
weygandt
mitchell



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WILEY

ᴾaul Kimmel's

ᴀccounting Course Design ᴠith WileyPLUS

ul Kimmel, author of several Wiley courses, teaches at The University Wisconsin—Madison and uses WileyPLUS in a flipped classroom mat.

Ignite student potential with WileyPLUS

e how Paul uses four key elements to focus course on developing his students' success.

ided Learning

MPLE:
l sets up his learning path to light and structure pre-gnments, post-assignments discussions, adaptive gnments, exam practice, and zing.

uided learning path enables to control what your students when they see it, and in what er. This makes it very clear for dents to understand what 're supposed to complete. This specially vital for online classes. **ing a clear path to learning uces the risk of "losing" dents, keeping them engaged on track in your course.**

Information Retention

EXAMPLE:
Paul assigns Interactive Tutorial Assignments ahead of pre-lecture activities so students come to class ready to actively participate.

Interactive Tutorial Assignments provide students with self-paced lecture walk-throughs of each chapter. Broken into smaller chunks with Knowledge Check questions and Do It!s, students must watch the videos and respond to associated questions correctly or exhaust attempts before moving on, enhancing the retention of information. **Trying to solve a problem before being taught the solution is frustrating but improves retention.**

Personalized Practice

EXAMPLE:
Paul uses Adaptive Assignments as a capstone activity at the end of each week to improve retention.

Adaptive Assignments effectively close knowledge gaps through personalized adaptive experiences that provide just-in-time instruction, immediate feedback, and remediation to previous learning objectives. **To improve learning, employ dynamic (adaptive) testing rather than static testing. Without feedback, students often overestimate their competence and don't see a need to try to improve.**

Just-in-Time Homework Help

EXAMPLE:
Paul assigns post-assignment problems supported by Solution Walkthrough Videos.

Solution Walkthrough Videos provide students with 24/7 just-in-time homework support and enable you to assign more difficult homework questions. **Longer, multi-learning objective problems with video support help students consolidate their understanding.**

Paul Kimmel's

Accounting Course Design with WileyPLUS

Course Design Suggestions from *Make It Stick**

- ◯ Trying to solve a problem before being taught the solution improves retention.
- ◯ Testing (active retrieval) doesn't just measure learning, it strengthens memory.
- ◯ Spaced "testing" results in greater retention.
- ◯ Providing feedback strengthens learning more than testing alone.

**Make It Stick*; Brown, Roediger, and McDaniel, 2014.

Based on Paul Kimmel's course with two in-person lectures per week.

EXAMPLE WEEKLY SCHEDULE

[illegible]	Online	Complete first pre-assignment. Due Monday before class.
[illegible]	In Class	Students do at least two exercises in class on blank sheet (i.e., conditions faced in a test).
[illegible]	Online	Complete second pre-assignment. Due Wednesday before class.
[illegible]	In Class	Students do at least two exercises in class on blank sheet.
[illegible]	Online	Complete post-assignment. Due Friday night.
[illegible]	Online	Complete adaptive assignment. Due Saturday night.

Financial Accounting

Tools for Business Decision Making

Tenth Edition

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WILEY

DEDICATED TO

Our spouses, Enid, Merlynn, and Sean,
for their love, support, and encouragement.

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Founded in 1807, John Wiley & Sons, Inc. has been a valued source of knowledge and understanding for more than 200 years, helping people around the world meet their needs and fulfill their aspirations. Our company is built on a foundation of principles that include responsibility to the communities we serve and where we live and work. In 2008, we launched a Corporate Citizenship Initiative, a global effort to address the environmental, social, economic, and ethical challenges we face in our business. Among the issues we are addressing are carbon impact, paper specifications and procurement, ethical conduct within our business and among our vendors, and community and charitable support. For more information, please visit our website: www.wiley.com/go/citizenship.

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Brief Contents

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. A financial accounting course will help you understand the essential financial components of businesses. Whether you are looking at a large multinational company like **Apple** or **Starbucks** or a single-owner software consulting business or coffee shop, knowing the fundamentals of financial 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 **Apple** or **Starbucks** or a single-owner software consulting business or coffee shop, knowing the fundamentals of financial accounting will help you understand what is happening."

Why This Text? Your instructor has chosen this text for you because of its trusted reputation. We have worked hard to provide instructional material that is engaging, 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 text provides—the more likely you are to learn the essential concepts, techniques, and methods of accounting.

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.

Paul D. Kimmel
Jerry J. Weygandt
Jill E. Mitchell

Author Commitmen

PAUL D. KIMMEL, PhD, CPA, received his bachelor's degree from the University of Minnesota and his doctorate in accounting from the University of Wisconsin. He was an Associate Professor at the University of Wisconsin—Milwaukee for more than 25 years and is now a Senior Lecturer at the University of Wisconsin—Madison. He has public accounting experience with Deloitte & Touche (Minneapolis). He was the recipient of the UWM School of Business Advisory Council Teaching Award and the Reggie Taite Excellence in Teaching Award, and a three-time winner of the Outstanding Teaching Assistant Award at the University of Wisconsin. He is also a recipient of the Elijah Watts Sells Award for Honorary Distinction for his results on the CPA exam. He is a member of the American Accounting Association and the Institute of Management Accountants and has published articles in *Accounting Review, Accounting Horizons, Advances in Management Accounting, Managerial Finance, Issues in Accounting Education,* and *Journal of Accounting Education,* as well as other journals. His research interests include accounting for financial instruments and innovation in accounting education.

JERRY J. WEYGANDT, PhD, CPA, is Arthur Andersen Alumni Emeritus Professor of Accounting at the University of Wisconsin—Madison. He holds a Ph.D. in accounting from the University of Illinois. Articles by Professor Weygandt have appeared in *The Accounting Review, Journal of Accounting Research, Accounting Horizons, Journal of Accountancy,* and other academic and professional journals. These articles have examined such financial reporting issues as accounting for price-level adjustments, pensions, convertible securities, stock option contracts, and interim reports. Professor Weygandt is author of other accounting and financial reporting texts and is a member of the American Accounting Association, the American Institute of Certified Public Accountants, and the Wisconsin Society of Certified Public Accountants. He has served on numerous committees of the American Accounting Association and as a member of the editorial board of the Accounting Review; he also has served as President and Secretary-Treasurer of the American Accounting Association. In addition, he has been actively involved with the American Institute of Certified Public Accountants and has been a member of the Accounting Standards Executive Committee (AcSEC) of that organization. He has served on the FASB task force that examined the reporting issues related to accounting for income taxes and served as a trustee of the Financial Accounting Foundation. Professor Weygandt has received the Chancellor's Award for Excellence in Teaching and the Beta Gamma Sigma Dean's Teaching Award. He is on the board of directors of M & I Bank of Southern Wisconsin. He is the recipient of the Wisconsin Institute of CPA's Outstanding Educator's Award and the Lifetime Achievement Award. In 2001 he received the American Accounting Association's Outstanding Educator Award.

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es presented by the State Council of Higher E
ucation for Virginia; the Virginia Commun
College System Chancellor's Award for Teac
ing Excellence; the AFWA's Women W
Count Award; the AAA Two-Year Colle
Educator of the Year Award; and the AAA
Michael and Mary Anne Cook/Deloitte Fou
dation Prize, the foremost recognition of
individual who consistently demonstrates t
attributes of a superior teacher in the discipl
of accounting.

New to This Edition: Data Analytics

The authors carefully considered how to thoughtfully and meaningfully integrate data analytics into the financial accounting course, and are pleased to provide the following data analytics resources.

Data Analytics and Decision-Making

The text provides numerous discussions on how decision-makers are increasingly relying on data analytics to make decisions using accounting information.

Accounting software systems collect vast amounts of data about a company's economic events as well as its suppliers and customers. Business decision-makers take advantage of this wealth of data by using data analytics to gain insights and therefore make more informed business decisions.

- Data analytics involves analyzing data, often employing both software and statistics, to draw inferences.
- As both data access and analytical software improve, the use of data analytics to support decisions is becoming increasingly common at virtually all types of companies.

Data Analytics in the Real World

Real-world examples that illustrate engaging situations in companies are provided throughout the text.

Data Analytics Insight Netflix

Bogdan Glisik/
Shutterstock.com

Using Data Science to Create Art

Technology provides decision-makers and problem-solvers with access to a large volume of information called "big data." And Netflix, the world's leading subscription streaming entertainment service, is tapping into this big data as part of its efforts to ramp up its original content production.

In a recent year, Netflix planned to spend $8 billion on content creation. Producing content involves a blend of creativity, technology, and business decisions, all of which result in costs. And by analyzing the large amounts of data from past productions, such as filming locations and production schedules, Netflix can more precisely estimate costs for future productions. Further, consider that the production of a TV show or film involves hundreds of tasks. Here again, Netflix uses data science, in this case to visualize where bottlenecks might occur or where opportunities might exist to increase the efficiency of the production process.

Source: Based on Ritwik Kumar et. al., "Data Science and the Art of Producing Entertainment at Netflix," *The Netflix Tech Blog* (March 26, 2018).

How can "big data" improve decision-making? (Answer is available at the end of the chapter.)

Data Analytics in Action

Data Analytics in Action problems provide students with the opportunity to see how to use data analytics to help solve realistic business problems. Excel templates for each *Data Analytics in Action* problem provide students a framework for solving the problem. *Data Analytics in Excel* videos provide students with step-by-step guidance to perform the Excel skills they need to solve these problems.

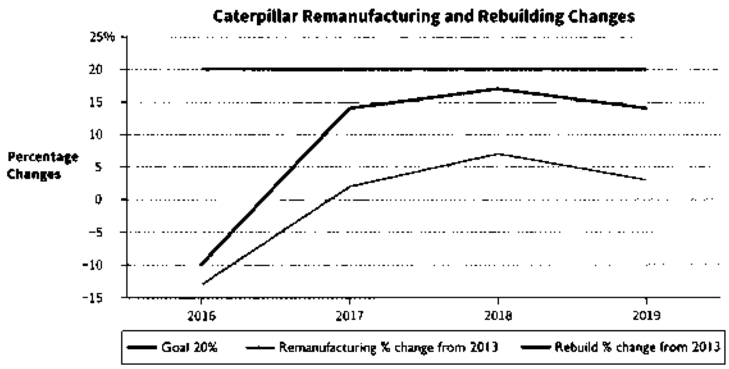
Using Data Visualization to Analyze Changes over Time

DA6.1 Data visualization can be used to analyze company changes over time.

Excel

Example: Recall the Feature Story "Where Is That Spare Bulldozer Blade?" presented in the chapter. Caterpillar continues to enhance its inventory management by improving its product sustainability in two ways. First, it is rebuilding used parts to like-new condition. Second, the company is remanufacturing usable inventory parts when customers trade-in or dispose of their used equipment. These actions not only reduce inventory costs but also enable Caterpillar to participate in the circular economy, where manufacturers take responsibility for their products at the end of the product lives. As noted in its 2019 sustainability report, Caterpillar has a goal of 20% growth in both rebuilding and remanufacturing.

Has Caterpillar reached this goal? A line chart can help you visualize the company's progress over time. What information can you obtain by examining the following chart?



Source: "ESG Data Center," *Caterpillar 2019 Sustainability Report.*

The chart indicates that while Caterpillar's goal has remained at 20%, the remanufacturing and rebuilding businesses are growing. The biggest increase in the growth of rebuilding occurred from 2016 to 2017. There was a decline from 2018 to 2019 in these initiatives as Caterpillar may have reached a peak that is leveling off due to new production that is more sustainable.

For this case, you will look more closely at specific Caterpillar data regarding its end-of-life returned materials and the percentage usable for recycling. You will create and analyze a combination column and line chart to determine how Caterpillar can increase its gross profit as it relates to these end-of-life materials.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Analytics to Compare Companies' Inventory Turnover

DA6.2 Inventory turnover shows the number of times during the period a firm sells the entire dollar amount of its inventory. It is advantageous to turn over inventory more quickly to reduce the risk of obsolescence and spoilage. As such, companies often have a goal of increasing inventory turnover. For this case, you will use inventory turnover data for Costco, Walmart, Target, and Amazon to create and analyze scatter plots, as well as to calculate days' sales in inventory, to determine which company is managing its inventory levels most effectively.

Excel

Go to Wiley Course Resources for complete case details and instructions.

Data Visualization Homework Assignments

PowerBI and Tableau visualizations accompanied by assignable questions are available with most chapters. PowerBI and Tableau visualizations allow students to interpret visualizations and think critically about data.

Data Analytics Module

An **accounting-specific data analytics module** with interactive lessons, case studies, and videos is part of the Wiley online course. The module has been prepared using industry-validated content to help students develop the professional competencies needed for the changing workforce.

New to This Edition: Chapter-by-Chapter Changes

Chapter 1: Introduction to Financial Statements

- NEW discussions of hybrid forms of organization and critical audit matters.
- NEW section on overview of data analytics, including Data Analytics Insight box on how Netflix relies on data science to streamline production costs on content creation.
- NEW DO IT!s on using financial information and components of annual reports.
- NEW chapter appendix on career opportunities in accounting.
- ADDED Questions, Do It's, Exercises, and Ethics Case to end-of-chapter (EOC) problem material.

Chapter 2: A Further Look at Financial Statements

- MOVED discussion of free cash flow/using a statement of cash flows to Chapter 12.
- NEW discussion of why receivables are considered more liquid than inventory.
- DELETED partial balance sheet illustrations showing classifications for more streamlined presentation.
- NEW Investor Insight box, on reliability of investor bulletin board postings.
- UPDATED definitions of materiality and the full disclosure principle per recent FASB actions.
- NEW illustrations on (1) world view of the standard-setting environment, (2) enhancing qualities of accounting information, and (3) summary of the conceptual framework.
- ADDED Exercises to EOC problem material.

Chapter 3: The Accounting Information System

- NEW discussion of recent technologies used, such as cloud-based storage and data automation tools.
- NEW DO IT! on accounts, debits, and credits.
- ADDED Practice Brief Exercise, DO IT!, Exercises, and Ethics Case to EOC problem material.

Chapter 4: Accrual Accounting Concepts

- NEW discussion of recent technologies used, such as the use of robotic process automation (RPA) in the closing process.
- NEW illustration of a post-closing trial balance.
- ADDED Exercises and Problem to EOC problem material.

Chapter 5: Merchandising Operations and the Multiple-Step Income Statement

- EXPANDED discussion of FOB shipping/destination for improved student understanding.
- ADDED discussion of new technology, such as use of artificial intelligence and algorithms, to Data Analytics and Credit Sales section.
- UPDATED People, Planet, and Profit Insight box to focus on REI, for greater continuity throughout chapter.
- MOVED discussion of the comprehensive income statement to Chapter 13.
- ADDED Exercises, Ethics Case, and Data Analytics in Action to EOC problem material.

Chapter 6: Reporting and Analyzing Inventory

- ADDED separate DO IT's after each cost flow method discussion.
- NEW illustration on the impact on cost flow assumptions when costs change.
- NEW discussion of how companies can use data analytics when determining NRV of products.
- NEW Data Analytics Insight box on value of dashboards.
- ADDED Exercises, Critical Thinking Case, and Data Analytics in Action to EOC problem material.

Chapter 7: Fraud, Internal Control, and Cash

- UPDATED discussion and illustrations of cash receipts controls, to reflect current practices and technology.
- NEW section on electronic banking.
- NEW illustration on how to determine outstanding checks in a bank reconciliation.
- ADDED Real-World Focus Case and Data Analytics in Action to EOC problem material.

Chapter 8: Reporting and Analyzing Receivables

- NEW Data Analytics Insight box on how companies are making increasingly more sophisticated credit decisions using data analytics.
- NEW illustration on the use of Tableau dashboards to provide tracking and analysis of a company's receivables.
- ADDED Exercises Data Analytics in Action to EOC problem material.

Chapter 9: Reporting and Analyzing Long-Lived Assets

- UPDATED People, Planet, and Profit Insight box to now focus on Nike's sustainability report.
- ADDED Exercises, Critical Thinking Case, and Data Analytics in Action to EOC problem material.

Chapter 10: Reporting and Analyzing Liabilities

- NEW Investor Insight box on how Ford issued bonds to raise cash for operations and new products.
- ADDED Tesla as comparative company in analyzing the liquidity and solvency of General Motors.
- ADDED Critical Thinking Case to EOC problem material.

Chapter 11: Reporting and Analyzing Stockholders' Equity

- UPDATED People, Planet, and Profit Insight box to highlight latest information on corporate social responsibility proposals.
- ADDED new discussion of liquidating dividends.
- NEW Investor Insight box on stock dividends.
- ADDED Exercises, Critical Thinking Case, and Data Analytics in Action to EOC problem material.

Chapter 12: Statement of Cash Flows

- ADDED Data Analytics in Action to EOC problem materi

Chapter 13: Financial Analysis: The Big Picture

- NEW presentation of discontinued operations on the i come statement (previously on the statement of compr hensive income) as well as discussion and format of th statement of comprehensive income.
- ADDED Critical Thinking Case to EOC problem materia

Appendix F: Time Value of Money (previously Appendix G)

- NEW discussion of using Excel function to solve time va ue of money problems.

Appendix G: Reporting and Analyzing Investments (previously Appendix H)

- NEW DO IT!s added to appendix discussion as well a end-of-chapter material.
- NEW Review and Practice section includes multipl choice questions followed by annotated solutions, prac tice brief exercises with solutions, practice exercises wit solutions, and a practice problem with solution.

New to This Edition in Your Wiley Course

Lecture Videos

Lecture Videos, narrated by an accounting instructor for every section in the text, talk through the PowerPoint slides, including embedded application videos where applicable, providing support for online courses, flipped classrooms, and student study and review.

Interactive Tutorial Assignments

Interactive Tutorial Assignments provide students a guided walkthrough and review of the chapter content and topics, including Chapter Overview Videos, Lecture Videos for each learning objective, and selected Real World Videos. Interactive Knowledge Check and Do It! questions in the assignments check student understanding and knowledge acquisition. In applicable questions, values change algorithmically, to support student practice and integrity. The Interactive Tutorial Assignments are available to students as practice, and may be separately customized and assigned by instructors.

Animations

Short, animated videos engage students and simplify major concepts in the text, making the concepts easier to understand. They offer an alternative approach to understanding the written material.

Brief Exercise Solution Walkthrough Videos

Additional Solution Walkthrough Videos developed for this edition, now also including selected Brief Exercises, continue to build scaffolding for student understanding and 24/7 problem-solving support.

Proven Pedagogical Features

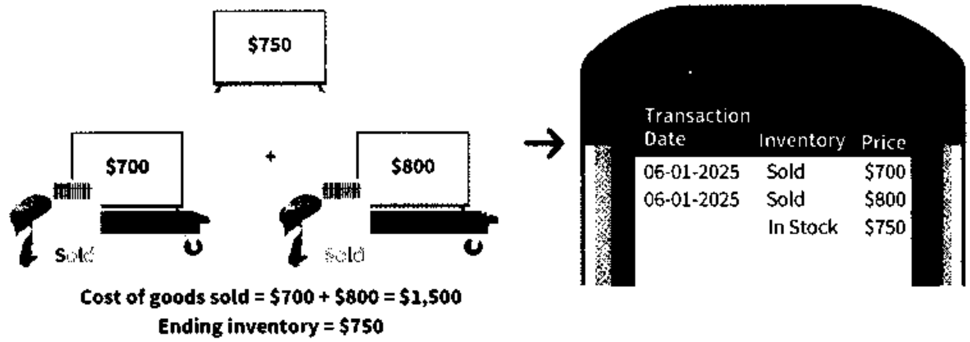
When you think of accounting, you probably don't think of athletics. So why do we have a photo of a cyclist on our cover? It's because this image represents active learning that's best accomplished through full engagement, commitment, and practice.

In this new edition, all content has been carefully reviewed and revised to ensure maximum student understanding. At the same time, the time-tested features that have proven to be of most help to students have been retained, such as the following.

Infographic Learning

Over half of the text is visual, providing students alternative ways of learning about accounting.

ILLUSTRATION 6.4 **Specific identification method**



Real-World Decision-Making

Real-world examples, which illustrate engaging situations in companies, are provided throughout the text. Answers to the critical thinking questions posed to readers within the real-world examples are now available at the end of each chapter.

People, Planet, and Profit Insight


njgphoto/Getty Images

Got Junk?

Do you have an old computer or two in your garage? How about an old TV that needs replacing? Many people do. Approximately 163,000 computers and televisions become obsolete **each day**. Yet, in a recent year, only 11% of computers were recycled.

It is estimated that 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.

What accounting issue might this cause for companies? (Answer is available at the end of the chapter.)

DO IT! Exercises

DO IT! Exercises in the body of the text prompt students to stop and review key concepts. They outline the Action Plan necessary to complete the exercise as well as show a detailed solution.

ACTION PLAN

- **Understand the periodic inventory system.**
- **Allocate costs between goods sold and goods on hand (ending inventory) for the FIFO method.**
- **Compute cost of goods sold for the FIFO method.**

DO IT! 2a Cost Flow Methods—FIFO Method

The accounting records of Shumway Ag Implements 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 the FIFO 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

Cost of goods sold FIFO: \$36,000 – (3,000 × \$4) = \$24,000

Related exercise material: BE6.3, BE6.4, BE6.5, BE6.6, DO IT! 6.2, E6.5, E.6.6, E6.7, and E6.8.

Decision Tools

Accounting concepts that are useful for management decision-making are highlighted throughout the text. A summary of Decision Tools is included in each chapter as well as a practice exercise and solution called Using the Decision Tools.

USING THE DECISION TOOLS | Eastman Chemical

Eastman Chemical is a global specialty materials company that produces a broad range of products found in items people use every day. Eastman employs approximately 14,500 people around the world and serves customers in more than 100 countries. The company is headquartered in Kingsport, Tennessee. Here is the inventory note taken from recent financial statements.

Eastman Chemical Company
Notes to the Financial Statements

Inventories: The components of inventories are summarized as follows:

(in millions)	
Inventories—gross:	
Raw materials	\$ 576
Work in process	220
Finished goods	1,114
Total inventories—at FIFO or average cost	1,910
Less: LIFO reserve	248
Inventories—net (as reported on balance sheet)	\$1,662

Eastman determines the cost of most raw materials, work in process, and finished goods inventories in the United States and Switzerland by the LIFO method. The cost of all other inventories is determined by the average-cost method, which approximates the FIFO method.

Additional facts (amounts in millions):

Current liabilities	\$1,789
Current assets (as reported)	3,321
Cost of goods sold	7,039
Beginning inventory	1,583

Instructions

Answer the following questions.

a. Why does the company report its inventory in three components?

b. Why might the company use three methods (LIFO, FIFO and average-cost) to account for its inventory?

c. Perform each of the following.

1. Calculate the inventory turnover and days in inventory using the LIFO inventory.
2. Calculate the current ratio using LIFO and the current ratio using FIFO. Discuss the difference.

Solution

a. Eastern Chemical is a manufacturer, so it purchases raw materials and makes them into finished products. At the end of each period, it has some goods that have been started but are not yet complete (work in process).

By reporting all three components of inventory, a company reveals important information about its inventory position. For example, if amounts of raw materials have increased significantly compared to the previous year, we might assume the company is planning to step up production. On the other hand, if levels of finished goods have increased relative to last year and raw materials have declined, we might conclude that sales are slowing down—that the company has too much inventory on hand and is cutting back production.

b. Companies are free to choose different cost flow assumptions for different types of inventory. A company might choose to use FIFO for a product that is expected to decrease in price over time. One common reason for choosing a method other than LIFO is that many foreign countries do not allow LIFO; thus, the company cannot use LIFO for its foreign operations.

c. 1. $\text{Inventory turnover} = \dfrac{\text{Cost of goods sold}}{\text{Average inventory}} = \dfrac{\$7{,}039}{(\$1{,}583 + \$1{,}662) \div 2} = 4.3 \text{ times}$

$\text{Days in inventory} = \dfrac{365}{\text{Inventory turnover}} = \dfrac{365}{4.3} = 84.9 \text{ days}$

2. Current ratio

	LIFO	FIFO
$\dfrac{\text{Current assets}}{\text{Current liabilities}}$	$= \dfrac{\$3{,}321}{\$1{,}789} = 1.86{:}1$	$\dfrac{\$3{,}321 + \$248}{\$1{,}789} = 1.99{:}1$

This represents a 7% increase in the current ratio [(1.99 – 1.86) ÷ 1.86].

Review and Practice

Each chapter concludes with a Review and Practice section which includes a review of learning objectives, Decision Tools review, key terms glossary, practice multiple-choice questions with annotated solutions, practice brief exercises with solutions, practice exercises with solutions, and a practice problem with a solution.

Review and Practice

Practice Brief Exercises

Determine ending inventory amount.

1. (LO 1) Fylus Company took a physical inventory on December 31 and determined that goods costing $180,000 were on hand. Not included in the physical count were $18,000 of goods purchased from Rake Corporation, FOB destination, and $27,000 of goods sold to Shovel Company for $40,000, FOB destination. Both the Rake purchase and the Shovel sale were in transit year-end. What amount should Fylus report as its December 31 inventory?

Solution

1. Physical inventory	$180,000
Add: Goods sold to Shovel	27,000
Fylus ending inventory	$207,000

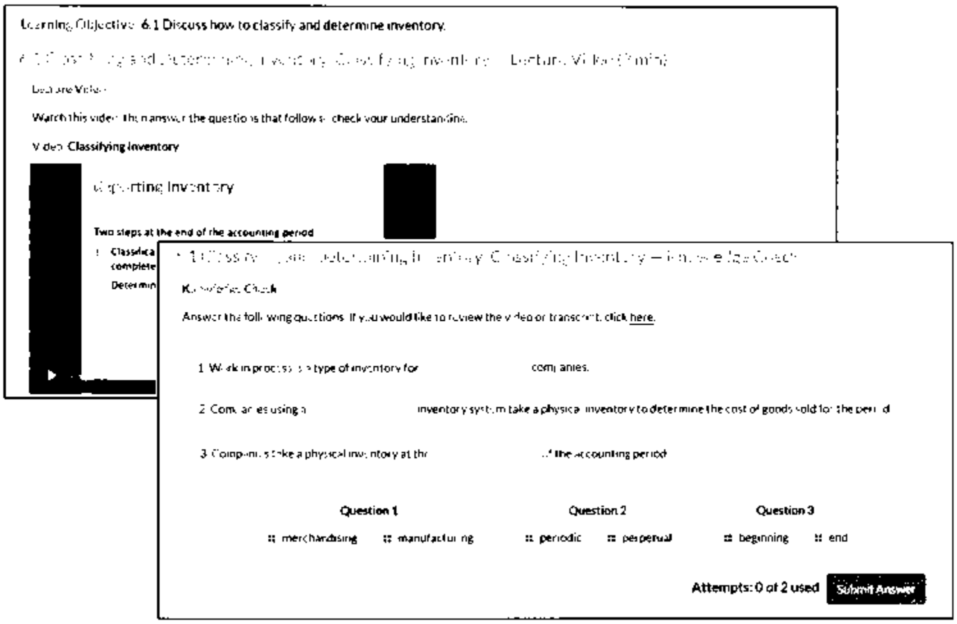
The $18,000 of goods purchased from Rake are excluded from ending inventory because the terms are FOB destination which means Fylus takes title at the time the goods are received. Goods sold to Shovel FOB destination means that the goods are still Fylus's until delivered.

Engaging Digital Tools

Digital study tools in Wiley's online course include the following.

Lecture Videos

Lecture Videos, narrated by an accounting instructor for every section in the text, talk through the PowerPoint slides, including embedded application videos where applicable, providing support for online courses, flipped classrooms, and student study and review.



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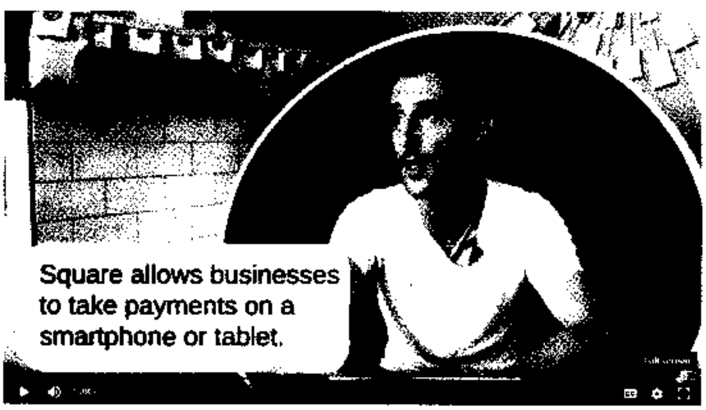
Interactive Tutorial Assignments provide students with guided instruction of the chapter content and topics, including Chapter Overview Videos, Lecture Videos for each learning objective, and selected Real World Videos. Knowledge Check questions in the assignments check student understanding and knowledge acquisition. The Interactive Tutorial Assignments are available to students as practice, and may be separately customized and assigned by instructors.

Animations

Short, animated videos engage students and simplify major concepts in the text, making the concepts easier to understand. They offer an alternative approach to understanding the written material.

Real-World Company Videos

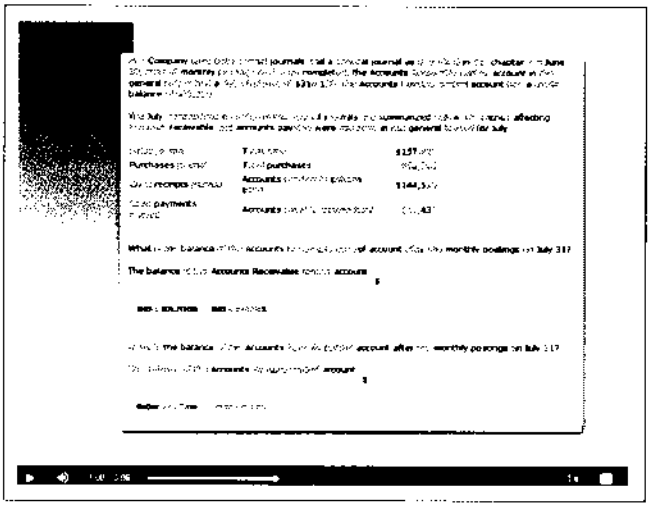
Real-world company videos feature both small businesses and larger companies to help students apply content and see how business owners apply concepts from the text in the real world. Many of the videos have associated questions available to be assigned.



Source: YouTube.

Solution Walkthrough Videos

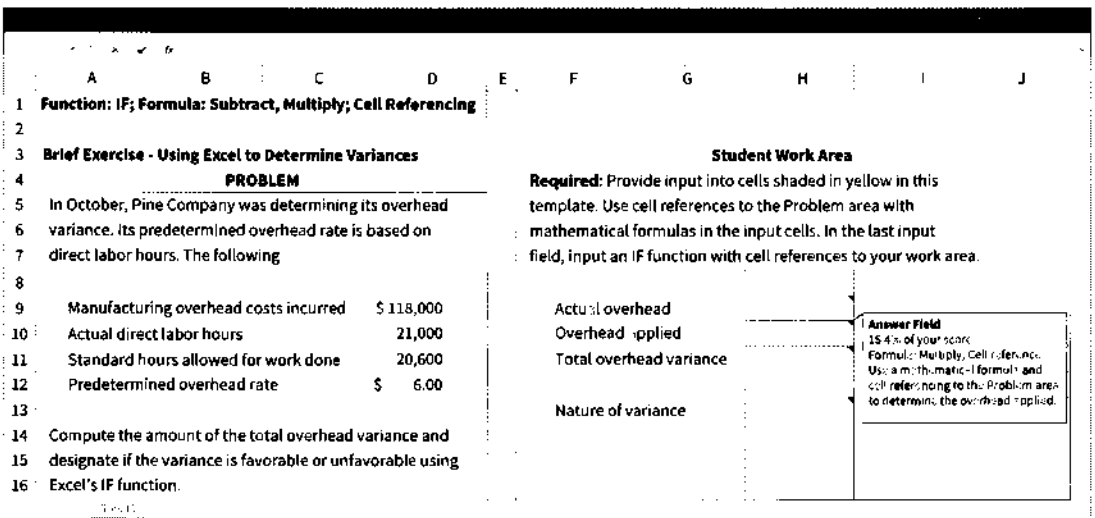
Solution Walkthrough Videos are available as question assistance and to help students develop problem-solving techniques. These videos walk students through solutions step-by-step and are based on the most regularly assigned exercises and problems in the text.



Source: YouTube.

Gradable Excel Questions

Gradable Excel questions for each chapter provide students an opportunity to practice Excel skills in the context of solving accounting problems.



Data Visualization Homework Assignments

PowerBI and Tableau visualizations accompanied by questions are available with most chapters. PowerBI and Tableau visualizations allow students to interpret visualizations and think critically about data.

Other Learning Opportunities

Other learning opportunities in Wiley's online course include the following.

- **Accounting-Specific Data Analytics Module** offers interactive lessons, case studies, and videos. The module has been prepared using industry-validated content to help students develop the professional competencies needed for the changing workforce.
- **Cookie Creations** is a continuing case that spans across chapters and offers students the opportunity to see how a small business might use financial accounting to operate effectively.
- **Wiley Accounting Updates** (wileyaccountingupdates.com) provide faculty and students with weekly curated news articles and suggested discussion questions.
- **Flashcards and Crossword Puzzles** help students study and master basic vocabulary and concepts.
- **Student Practice** quickly and effectively assesses student understanding of the material they have just covered.
- **Adaptive Assignments** encourage students to persist so that they can succeed in this course and beyond. By continuously adapting to each student's needs and providing achievable goals with just-in-time instruction, Adaptive Assignments close knowledge gaps to accelerate learning.

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CHAPTER 1

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Introduction to Financial Statements

Chapter Preview

If you own a business, how do you determine whether it is making or losing money? How should you finance expansion—should you borrow, should you issue stock, should you use your own funds? How do you convince banks to lend you money or investors to buy your stock? Success in business requires making countless decisions, and decisions require financial information.

The purpose of this chapter is to show you what role accounting plays in providing financial information.

The **Chapter Preview** describes the purpose of the chapter and highlights major topics.

The **Feature Story** helps you picture how the chapter topic relates to the real world of accounting and business.

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?" Well, consider this quote from Harold Geneen, the former chairman of IT&T: "To be good at your business, you have to know the numbers—cold." In business, accounting financial statements are the means for communicating the numbers. If you don't know how to read financial statements, you can't really know your business.

Knowing the numbers is sometimes even a matter of corporate survival. Consider the story of **Columbia Sportswear Company**, headquartered in Portland, Oregon. Gert Boyle's family fled Nazi Germany when she was 13 years old and then purchased a small hat company in Oregon, Columbia Hat Company. In 1971, Gert's husband, who was then running the company, died suddenly. Gert took over the small, struggling company with help from her son Tim, who was then a senior at the University of Oregon. Somehow, they kept the company afloat. Today, Columbia has more than 4,000 employees and annual sales in excess of $1 billion. Its brands include Columbia, Mountain Hardwear, Sorel, and Montrail.

Employers such as Columbia Sportswear generally assume that managers in all areas of the company are "financially literate." To help prepare you for that, in this text you will learn how to read and prepare financial statements, and how to use key tools to evaluate financial results using basic data analytics.

Chapter Outline

The **Chapter Outline** presents the chapter's topics and subtopics, as well as practice opportunities.

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Identify the forms of business organization and the uses of accounting information.	• Forms of business organization • Users and uses of financial information • Data analytics • Ethics in financial reporting	**DO IT! 1a** Business Organization Forms **1b** Using Financial Information
LO 2 Explain the three principal types of business activity.	• Financing activities • Investing activities • Operating activities	**DO IT! 2** Business Activities
LO 3 Describe the four financial statements and how they are prepared.	• Income statement • Retained earnings statement • Balance sheet • Statement of cash flows • Interrelationships of statements • Elements of an annual report	**DO IT! 3a** Financial Statements: Parts 1–4 **3b** Components of Annual Reports

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.

Visit Wiley Course Resources for additional tutorials and practice opportunities.

1.1 Business Organization and Accounting Information Uses

LEARNING OBJECTIVE 1

Identify the forms of business organization and the uses of accounting information.

Suppose you graduate with a business degree and decide you want to start your own business. But what kind of business? You enjoy working with people, especially teaching them new skills. You spend most of your free time outdoors, kayaking, backpacking, skiing, rock climbing, and mountain biking. You think you might successfully combine your teaching skills and outdoor interest by starting an outdoor guide service.

Forms of Business Organization

What organizational form should you choose for your business? You have three choices—sole proprietorship, partnership, or corporation.

Sole Proprietorship

You might choose the sole proprietorship form for your outdoor guide service.

- A business owned by one person is a **sole proprietorship**.
- It is **simple to set up** and **gives you control** over the business.

Small owner-operated businesses such as barber shops, law offices, and auto repair shops are often sole proprietorships, as are farms and small retail stores.

Partnership

Another possibility is for you to join forces with other individuals to form a partnership.

- A business owned by two or more persons associated as partners is a **partnership**.
- Partnerships often are formed because one individual does not have **enough economic resources** or other **unique skills or resources** to initiate or expand the business.

You and your partners should formalize your duties and contributions in a written partnership agreement. Retail and service-type businesses, including professional practices (lawyers, doctors, architects, and certified public accountants), often organize as partnerships.

Corporation

As a third alternative, you might organize as a corporation.

- A business organized as a separate legal entity owned by stockholders is a **corporation**.
- Investors in a corporation receive shares of stock to indicate their ownership claim.

Buying stock in a corporation is often more attractive than investing in a partnership because shares of stock are **easy to sell** (transfer ownership). Selling a proprietorship or partnership interest is much more involved. Also, individuals can become **stockholders** by investing relatively small amounts of money (see **Alternative Terminology**).

Therefore, it is **easier for corporations to raise funds** compared to sole proprietorships or partnerships. Successful corporations often have thousands of stockholders, and their stock is traded on organized stock exchanges like the **New York Stock Exchange**. Many businesses start as sole proprietorships or partnerships and eventually incorporate.

Other factors to consider in deciding which organizational form to choose are **taxes and legal liability**. Sole proprietorships or partnerships, generally receive more favorable tax treatment than corporations. However, proprietors and partners are personally liable for all debts and legal obligations of the business; corporate stockholders are not. In other words, corporate stockholders generally pay higher taxes but have no personal legal liability. We will discuss these issues in more depth in a later chapter.

Hybrid Forms of Organization

Finally, while sole proprietorships, partnerships, and corporations represent the main types of business organizations, hybrid forms are now allowed in all states.

- Hybrid business forms combine the tax advantages of partnerships with the limited liability of corporations.
- Probably the most common among these hybrid types are limited liability companies (LLCs) and subchapter S corporations (these forms are discussed extensively in business law classes).

The combined number of proprietorships and partnerships in the United States far exceeds the number of corporations. However, the revenue produced by corporations is many times greater. Most of the largest businesses in the United States—for example, **Apple**, **Google**, **Verizon**, **Visa**, and **Microsoft**—are corporations. Because the majority of U.S. business is done by corporations, the emphasis in this text is on the corporate form of organization.

Sole Proprietorship

- Simple to establish
- Owner-controlled
- Tax advantages

Partnership

- Simple to establish
- Shared control
- Broader skills and resources
- Tax advantages

Corporation

- Easier to transfer ownership
- Easier to raise funds
- No personal liability

ALTERNATIVE TERMINOLOGY

Stockholders are sometimes called *shareholders*.

Alternative Terminology notes present synonymous terms that you may come across in practice.

DO IT! exercises prompt you to stop and review the key points you have just studied. The **Action Plan** offers you tips about how to approach the problem.

ACTION PLAN

- **Know which organizational form best matches the business type, size, and preferences of the owner(s).**

DO IT! 1a Business Organization Forms

In choosing the organizational form for your outdoor guide service, you should consider the pros and cons of each. Identify each of the following organizational characteristics with the organizational form or forms with which it is associated (sole proprietorship, partnership, or corporation).

1. Easier to raise funds.
2. Simple to establish.
3. No personal legal liability.
4. Tax advantages.
5. Easier to transfer ownership.

Solution

1. Easier to raise funds: Corporation.
2. Simple to establish: Sole proprietorship and partnership.
3. No personal legal liability: Corporation.
4. Tax advantages: Sole proprietorship and partnership.
5. Easier to transfer ownership: Corporation.

Related exercise material: BE1.1, DO IT! 1.1a, and E1.2.

Users and Uses of Financial Information

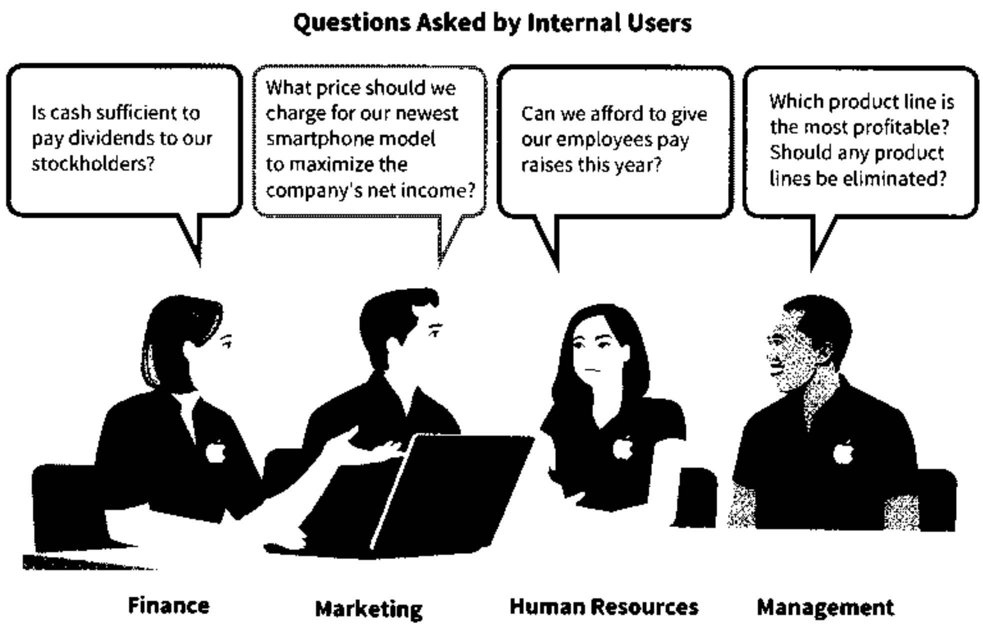
The purpose of financial information is to provide inputs for decision-making.

- **Accounting** is the information system that identifies, records, and communicates the economic events of an organization to interested users.
- **Users** of accounting information can be divided broadly into two groups: internal users and external users.

Internal Users

Internal users of accounting information are managers who plan, organize, and run a business. These include **marketing managers, production supervisors, finance directors, and company officers.** In running a business, managers must answer many important questions, as shown in **Illustration 1.1.**

ILLUSTRATION 1.1 Questions that internal users ask



To answer these and other questions, you need detailed information on a timely basis. For internal users, accounting provides internal reports, such as financial comparisons of operating alternatives, projections of income from new sales campaigns, and forecasts of cash needs for the next year. In addition, companies present summarized financial information in the form of financial statements.

Accounting Across the Organization boxes show applications of accounting information in various business functions.

Accounting Across the Organization Clif Bar & Company


carterdayne/Getty Images

Owning a Piece of the Bar

The original Clif Bar® energy bar was created in 1990 after six months of experimentation by Gary Erickson and his mother in her kitchen. Today, the company has approximately 1,000 employees and was named one of Landor's Breakaway Brands®. One of Clif Bar & Company's proudest moments was the creation of an employee stock ownership plan (ESOP). This plan gives its employees 20% ownership of the company. The ESOP also resulted in Clif Bar enacting an open-book management program, including the commitment to educate all employee-owners about its finances. Armed with basic accounting knowledge, employees are more aware of the financial impact of their actions, which leads to better decisions.

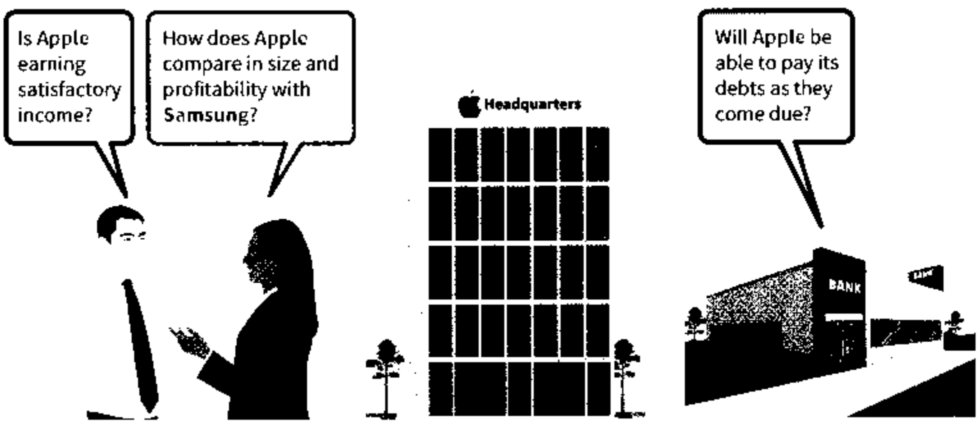
What are the benefits to the company and to the employees of making the financial statements available to all employees? (Answer is available at the end of the chapter.)

External Users

There are several types of **external users** of accounting information. **Investors** (owners) use accounting information to make decisions to buy, hold, or sell stock. **Creditors,** such as suppliers and bankers, use accounting information to evaluate the risks of selling on credit or lending money. Some questions that investors and creditors may ask about a company are shown in **Illustration 1.2.**

ILLUSTRATION 1.2 **Questions that external users ask**

Questions Asked by External Users



The information needs and questions of other external users vary considerably.

- **Taxing authorities**, such as the Internal Revenue Service, want to know whether the company complies with the tax laws.
- **Customers** are interested in whether a company like Tesla will be able to honor product warranties and otherwise support its product lines.
- **Labor unions**, such as the Major League Baseball Players Association, want to know whether the owners have the ability to pay increased wages and benefits.
- **Regulatory agencies,** such as the Securities and Exchange Commission or the Federal Trade Commission, want to know whether the company is operating within prescribed rules.

For example, **Enron**, **Dynegy**, **Duke Energy**, and other big energy-trading companies reported record profits at the same time as California was paying extremely high prices for energy and suffering from blackouts. This disparity caused regulators to investigate the energy traders to make sure that the profits were earned by legitimate and fair practices.

Data Analytics

Accounting software systems collect vast amounts of data about a company's economic events as well as its suppliers and customers. Business decision-makers take advantage of this wealth of data by using data analytics to gain insights and therefore make more informed business decisions.

Helpful Hints further clarify concepts being discussed.

- **Data analytics** involves analyzing data, often employing both software and statistics, to draw inferences.
- As both data access and analytical software improve, the use of data analytics to support decisions is becoming increasingly common at virtually all types of companies (see **Helpful Hint**).

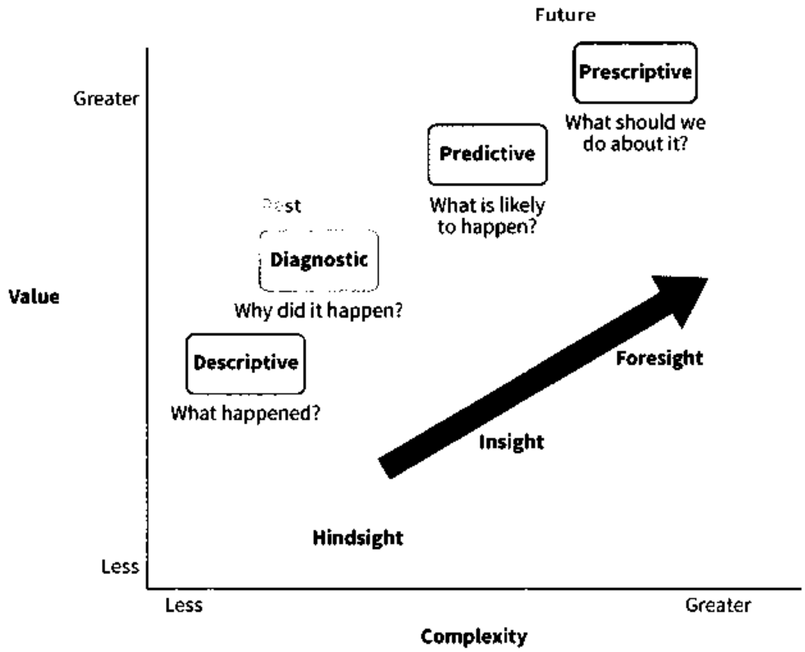
HELPFUL HINT

Throughout this text, we will highlight examples where accounting information is used to support business decisions using data analytics.

Illustration 1.3 shows the four most common types of data analytics that help answer questions ranging from what happened and why did it happen, to what is likely to happen and what should we do about it? Analytics range from simple analysis that can be performed using spreadsheets with tools like pivot tables and graphs, to complex statistical software and even artificial intelligence. More complex analysis provides greater value to the business.

ILLUSTRATION 1.3
Four types of data analytics

Four Types of Data Analytics



Insight boxes provide examples of business situations from various perspectives—ethics, investor, international, corporate social responsibility, and data analytics.

Data Analytics Insight Netflix


Bogdan Glisik/
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Using Data Science to Create Art

Technology provides decision-makers and problem-solvers with access to a large volume of information called "big data." And **Netflix**, the world's leading subscription streaming entertainment service, is tapping into this big data as part of its efforts to ramp up its original content production.

In a recent year, Netflix planned to spend $8 billion on content creation. Producing content involves a blend of creativity, technology, and business decisions, all of which result in costs. And by analyzing the large amounts of data from past productions, such as filming locations and production schedules, Netflix can more precisely estimate costs for future productions. Further, consider that the production of a TV show or film involves hundreds of tasks. Here again, Netflix uses data science, in this case to visualize where bottlenecks might occur or where opportunities might exist to increase the efficiency of the production process.

Source: Based on Ritwik Kumar et. al., "Data Science and the Art of Producing Entertainment at Netflix," *The Netflix Tech Blog* (March 26, 2018).

How can "big data" improve decision-making? (Answer is available at the end of the chapter.)

Ethics in Financial Reporting

People won't gamble in a casino if they think it is "rigged." Similarly, people won't "play" the stock market if they think stock prices are rigged. At one time, major financial scandals at **Enron**, **WorldCom**, **HealthSouth**, and **AIG** led to a mistrust of financial reporting in general.

A *Wall Street Journal* article noted that "repeated disclosures about questionable accounting practices have bruised investors' faith in the reliability of earnings reports, which in turn has sent stock 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. A well-functioning economy depends on accurate and reliable financial reporting.

U.S. regulators and lawmakers were very concerned that the economy would suffer if investors lost confidence in corporate accounting because of unethical financial reporting.

- Congress passed the Sarbanes-Oxley Act (SOX) to reduce unethical corporate behavior and decrease the likelihood of future corporate scandals (see Ethics Note).
- As a result of SOX, top management must now certify the fairness of financial information.
- In addition, penalties for fraudulent financial activity are much more severe.
- Also, SOX increased both the independence of the outside auditors who review the accuracy of corporate financial statements and the oversight role of boards of directors.

Effective financial reporting depends on sound ethical behavior. When analyzing ethics cases and your own ethical experiences, you should apply the three steps outlined in **Illustration 1.4**.

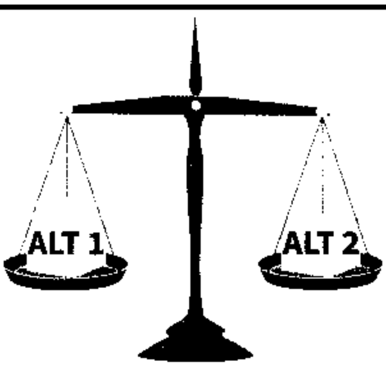
ETHICS NOTE

Circus-founder P.T. Barnum is alleged to have said, "Trust everyone, but cut the deck." What Sarbanes-Oxley does is to provide measures that (like cutting the deck of playing cards) help ensure that fraud will not occur.

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

ILLUSTRATION 1.4 Steps in analyzing ethics cases

Solving an Ethical Dilemma



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 you to evaluate each alternative and select the best one.

Ethics Insight Dewey & LeBoeuf LLP

Alliance Images/
Shutterstock.com

I Felt the Pressure—Would You?

"I felt the pressure." That's what some of the employees of the now-defunct law firm of **Dewey & LeBoeuf LLP** 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 about unethical practices 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.

Sources: Ashby Jones, "Guilty Pleas of Dewey Staff Detail the Alleged Fraud," *Wall Street Journal* (March 28, 2014); and Sara Randazzo, "Dewey CFO Escapes Jail Time in Fraud Case Sentencing," *Wall Street Journal* (October 10, 2017).

Why did these employees lie, and what do you believe should be their penalty for these lies? (Answer is available at the end of the chapter.)

ACTION PLAN

- **Review forms of business organization, users of financial information, approach to ethical dilemmas, and definition of data analytics.**

DO IT! 1b Using Financial Information

There are a variety of users and uses of financial information. Match each of the following terms with its definition, classification type, or associated phrase.

a. ____ Data analytics.
b. ____ Internal users of financial information.
c. ____ Element of Sarbanes-Oxley Act.
d. ____ External users of financial information.
e. ____ Steps in solving an ethical dilemma.

1. Marketing managers, finance directors.
2. Management must certify the fairness of financial information.
3. Often employs both software and statistics to draw inferences.
4. Identify the alternatives and weigh the impact of each alternative on various stakeholders.
5. Investors, labor unions.

Solution

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

Related exercise material: BE1.2, DO IT! 1.1b, and E1.3.

1.2 The Three Types of Business Activity

LEARNING OBJECTIVE 2

Explain the three principal types of business activity.

Businesses engage in three types of activity—financing, investing, and operating. For example, consider Gert Boyle's parents, the founders of **Columbia Sportswear.**

1. The Boyles obtained cash through **financing** (from personal savings and outside sources like banks) to start and grow their business.

2. The family then **invested** the cash in equipment to run the business, such as sewing equipment and delivery vehicles.
3. Once this equipment was in place, they began the **operating** activities of making and selling clothing.

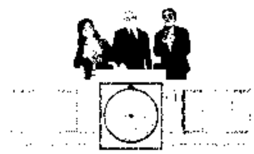
The **accounting information system** keeps track of the results of each of the various business activities—financing, investing, and operating. Let's look at each type of business activity in more detail.

Financing Activities

It takes money to make money. **Financing activities involve raising money from outside sources.** The two primary sources of outside funds for corporations are borrowing money (debt financing) and issuing (selling) shares of stock in exchange for cash (equity financing).

Columbia Sportswear may borrow money in a variety of ways. For example, it can take out a loan at a bank or borrow directly from investors by issuing debt securities called bonds. Persons or entities to whom Columbia owes money are its **creditors**.

The Stock Exchange



Equity Financing

Debt Financing

- Amounts owed to creditors—in the form of debt and other obligations—are called **liabilities**.
- Specific names are given to different types of liabilities, depending on their source. Columbia may have a **note payable** to a bank for the money borrowed to purchase delivery trucks.
- Debt securities sold to investors that must be repaid at a particular date some years in the future are **bonds payable**.

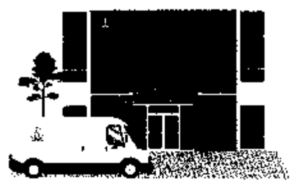
Corporations also obtain funds by selling shares of stock to investors. **Common stock** is the term used to describe the total amount paid in by stockholders for the shares they purchase.

The claims of creditors differ from those of stockholders. If you loan money to a company, you are one of its creditors. In lending money, you specify a payment schedule (e.g., payment at the end of three months). As a creditor, you have a legal right to be paid at the agreed time. In the event of nonpayment, you may legally force the company to sell property to pay its debts. In the case of financial difficulty, creditor claims must be paid before stockholders' claims.

Stockholders, on the other hand, have no claim to corporate cash until the claims of creditors are satisfied. Suppose you buy a company's stock instead of loaning it money. You have no legal right to expect any payments from your stock ownership until all of the company's creditors are paid amounts currently due. However, many corporations make payments to stockholders on a regular basis as long as there is sufficient cash to cover required payments to creditors. These cash payments to stockholders are called **dividends**.

Investing Activities

Once the company has raised cash through financing activities, it uses that cash in investing activities. **Investing activities involve the purchase of the resources a company needs in order to operate.** Resources owned by a business are called **assets**. A growing company purchases many assets, such as computers, delivery trucks, furniture, and buildings.



Investing

- Different types of assets are given different names; Columbia Sportswear's sewing equipment is a type of asset referred to as **property, plant, and equipment** (see Alternative Terminology).
- **Cash** is one of the more important assets owned by Columbia or any other business.
- If a company has excess cash that it does not need for a while, it might choose to invest in securities (stocks or bonds) of other corporations, a type of asset referred to as **investments**.

ALTERNATIVE TERMINOLOGY

Property, plant, and equipment is sometimes called *fixed assets*.

Operating Activities

Once a business has the assets it needs to get started, it begins operating activities. **Operating activities are the day-to-day actions taken by a company to produce and sell a product, or provide a service.** Columbia Sportswear is in the business of selling outdoor clothing and footwear. It sells TurboDown jackets, Millennium snowboard pants, Sorel® snow boots, Bugaboots™, rainwear, and anything else you might need to protect you from the elements. We call amounts earned from the sale of these products **revenues**.

Operating

- **Revenue** is the increase in assets or decrease in liabilities resulting from the sale of goods or the performance of services in the normal course of business; Columbia records revenue when it sells a footwear product.
- Revenues arise from different sources and are identified by various names depending on the nature of the business; Columbia's primary source of revenue is the sale of sportswear (but it also generates interest revenue on debt securities held as investments).
- Sources of revenue common to many businesses are **sales revenue**, **service revenue**, and **interest revenue**.

The company purchases its longer-lived assets through investing activities as described earlier. Other assets with shorter lives, however, result from operating activities.

- **Supplies** are assets used in day-to-day operations (rather than sold to customers).
- Goods available for future sales to customers are assets called **inventory**.
- The right to receive money in the future is called an **account receivable**. If Columbia sells goods to a customer and does not receive cash immediately, then the company has a right to expect payment from that customer in the near future.

Before Columbia can sell a single Sorel® boot, it must purchase wool, rubber, leather, metal lace loops, laces, and other materials. It then must process, wrap, and ship the finished product. It also incurs costs like salaries, rents, and utilities. All of these costs, referred to as **expenses**, are necessary to produce and sell the product.

- In accounting language, **expenses** are the cost of assets consumed or services used in the process of generating revenues.
- Expenses take many forms and are identified by various names depending on the type of asset consumed or service used.

For example, Columbia keeps track of these types of expenses: **cost of goods sold** (such as the cost of materials), **selling expenses** (such as the cost of salespersons' salaries), **marketing expenses** (such as the cost of advertising), **administrative expenses** (such as the salaries of administrative staff, and telephone and heating costs incurred at the corporate office), **interest expense** (amounts of interest paid on various debts), and **income tax expense** (corporate taxes paid to the government).

Columbia may also have liabilities arising from these expenses.

- For example, Columbia may purchase goods on credit from suppliers. The obligations to pay for these goods are called **accounts payable**.
- Additionally, Columbia may have **interest payable** on the outstanding amounts owed to the bank.
- It may also have **wages payable** to its employees and **sales taxes payable**, **property taxes payable**, and **income taxes payable** to the government.

Columbia compares the revenues of a period with the expenses of that period to determine whether it earned a profit. When revenues exceed expenses, **net income** results. When expenses exceed revenues, a **net loss** results.

DO IT! 2 Business Activities

Classify each item as an asset, liability, common stock, revenue, or expense.

1. Cost of renting property.
2. Truck purchased.
3. Notes payable.
4. Issuance of ownership shares.
5. Amount recorded from performing services.
6. Amounts owed to suppliers.

ACTION PLAN

- **Classify each item based on its economic characteristics. Proper classification of items is critical if accounting is to provide useful information.**

Solution

1. Cost of renting property: Expense.
2. Truck purchased: Asset.
3. Notes payable: Liability.
4. Issuance of ownership shares: Common stock.
5. Amount recorded from performing services: Revenue.
6. Amounts owed to suppliers: Liability.

Related exercise material: BE1.3, DO IT! 1.2, and E1.7.

1.3 The Four Financial Statements

LEARNING OBJECTIVE 3

Describe the four financial statements and how they are prepared.

Assets, liabilities, expenses, and revenues are of interest to users of accounting information. This information is arranged in the format of four different **financial statements**, which form the backbone of financial accounting:

1. **Income statement.** Shows how successfully your business performed during a period of time, by subtracting expenses from revenues.
2. **Retained earnings statement.** Indicates how much of previous income was distributed to owners of your business in the form of dividends, and how much was retained in the business to allow for future growth.
3. **Balance sheet.** Presents a picture at a point in time of what your business owns (its assets) and what it owes (its liabilities).
4. **Statement of cash flows.** Shows where your business obtained cash during a period of time and how that cash was used.

To introduce you to these statements, we have prepared the financial statements for your outdoor guide service, Sierra Corporation, after your first month of operations (see **International Note**).

To summarize, you officially started your business in Truckee, California, on October 1, 2025. Sierra provides guide services in the Lake Tahoe area of the Sierra Nevada mountains. Its promotional materials describe outdoor day trips, such as rafting, snowshoeing, and hiking, as well as multi-day backcountry experiences. To minimize your initial investment, your customers either bring their own equipment or rent equipment through local outfitters. The financial statements for Sierra's first month of business are provided in the following pages.

International Note

The primary types of financial statements required by International Financial Reporting Standards (IFRS) and U.S. generally accepted accounting principles (GAAP) are the same. However, in practice, some format differences do exist in presentations commonly employed by IFRS companies as compared to GAAP companies.

International Notes highlight differences between U.S. and international accounting standards.

Income Statement

HELPFUL HINT

The financial statement heading identifies the company, the type of statement, and the time period covered.

The **income statement** reports a company's revenues and expenses and resulting net income or loss for a period of time (see Decision Tools). To indicate that its income statement reports the results of operations for a **specific period of time**, Sierra Corporation dates the income statement "For the Month Ended October 31, 2025." The income statement lists the company's revenues followed by its expenses. Finally, Sierra determines the net income (or net loss) by deducting expenses from revenues. Sierra's income statement is shown in **Illustration 1.5** (see **Helpful Hint**). Congratulations, you are already showing a profit!

ILLUSTRATION 1.5
Sierra Corporation's income statement

Sierra Corporation
Income Statement
For the Month Ended October 31, 2025

Revenues		
Service revenue		$10,600
Expenses		
Salaries and wages expense	$5,200	
Supplies expense	1,500	
Rent expense	900	
Interest expense	50	
Insurance expense	50	
Depreciation expense	40	
Total expenses		7,740
Net income		$ 2,860

Decision Tools

The income statement helps users determine if the company's operations are profitable.

Decision Tools that are useful for business decision-making are highlighted throughout the text. A summary of the Decision Tools is also provided in each chapter.

Why are financial statement users interested in net income?

- **Investors are interested in a company's past net income because it provides useful information for predicting future net income.** Investors buy and sell stock based on their beliefs about a company's future performance. If investors believe that Sierra will be successful in the future and that this will result in a higher stock price, they will buy its stock.
- **Creditors use the income statement to predict future earnings.** When a bank loans money to a company, it believes that it will be repaid in the future. If it didn't think it would be repaid, it wouldn't loan the money. Therefore, prior to making the loan the bank loan officer uses the income statement as a source of information to predict whether the company will be profitable enough to repay its loan.

Thus, reporting a strong profit will make it easier for Sierra to raise additional cash either by issuing shares of stock or borrowing.

Amounts received from issuing stock are not revenues, and amounts paid out as dividends are not expenses. As a result, they are not reported on the income statement. For example, Sierra Corporation does not treat as revenue the $10,000 of cash received from issuing new stock (see Illustration 1.8), nor does it regard as a business expense the $500 of dividends paid (see Illustration 1.6) (see Ethics Note).

ETHICS NOTE

When companies find errors in previously released income statements, they restate those numbers. Perhaps because of the increased scrutiny shortly after Sarbanes-Oxley was implemented, companies filed a record 1,195 restatements.

DO IT! 3a Part 1 Financial Statements—The Income Statement

ACTION PLAN

- **Report the revenues and expenses for a period of time in an income statement.**

Part 1: CSU Corporation began operations on January 1, 2025. The following information is available for CSU on December 31, 2025.

Accounts receivable	$ 1,800	Retained earnings	$ 0	Supplies expense	$ 200
Accounts payable	2,000	Equipment	16,000	Cash	1,400
Rent expense	9,000	Insurance expense	1,000	Dividends	600
Notes payable	5,000	Service revenue	17,000		
Common stock	10,000	Supplies	4,000		

Prepare an income statement.

Solution

CSU Corporation Income Statement For the Year Ended December 31, 2025		
Revenues		
Service revenue		$17,000
Expenses		
Rent expense	$9,000	
Insurance expense	1,000	
Supplies expense	200	
Total expenses		10,200
Net income		$ 6,800

Related exercise material: BE1.6, BE1.7, BE1.8, DO IT! 1.3a, E1.9, E1.10, E1.14, E1.15, E1.16, E1.18, and E1.19.

Retained Earnings Statement

If Sierra Corporation is profitable, at the end of each period it must decide what portion of profits to pay to shareholders in dividends. In theory, it could pay all of its current-period profits, but few companies do this. Why? Because they want to retain part of the profits to allow for further expansion. High-growth companies, such as **Google** and **Facebook**, often pay no dividends. **Retained earnings** is the net income retained in the corporation.

The **retained earnings statement** shows the amounts and causes of changes in retained earnings for a specific time period (see **Decision Tools**). The time period is the same as that covered by the income statement. The beginning retained earnings amount appears on the first line of the statement. Then, the company adds net income and deducts dividends to determine the retained earnings at the end of the period. If a company has a net loss, it deducts (rather than adds) that amount in the retained earnings statement. **Illustration 1.6** presents Sierra's retained earnings statement (see **Helpful Hint**).

Decision Tools

The retained earnings statement helps users determine the company's policy toward dividends and growth.

HELPFUL HINT

The heading of this statement identifies the company, the type of statement, and the time period covered by the statement.

ILLUSTRATION 1.6

Sierra Corporation's retained earnings statement

Sierra Corporation Retained Earnings Statement For the Month Ended October 31, 2025	
Retained earnings, October 1	$ 0
Add: Net income	2,860
	2,860
Less: Dividends	500
Retained earnings, October 31	$2,360

By monitoring the retained earnings statement, financial statement users can evaluate dividend payment practices.

- Some investors seek companies, such as **Dow Chemical**, that have a history of paying high dividends.
- Other investors seek companies, such as **Amazon.com**, that reinvest earnings to increase the company's growth instead of paying dividends.
- Lenders monitor their corporate customers' dividend payments because any money paid in dividends reduces a company's ability to repay its debts.

ACTION PLAN

- **Show the amounts and causes (net income and dividends) of changes in retained earnings during the period in the retained earnings statement.**

DO IT! 3a Part 2 Financial Statements—The Retained Earnings Statement

Part 2: CSU Corporation began operations on January 1, 2025. The following information is available for CSU on December 31, 2025.

Accounts receivable	$ 1,800	Retained earnings	$ 0	Supplies expense	$ 200
Accounts payable	2,000	Equipment	16,000	Cash	1,400
Rent expense	9,000	Insurance expense	1,000	Dividends	600
Notes payable	5,000	Service revenue	17,000		
Common stock	10,000	Supplies	4,000		

Prepare a retained earnings statement. Refer to **DO IT! 3a Part 1** for net income.

Solution

CSU Corporation
Retained Earnings Statement
For the Year Ended December 31, 2025

Retained earnings, January 1	$ 0
Add: Net income	6,800
	6,800
Less: Dividends	600
Retained earnings, December 31	$6,200

Related exercise material: BE1.7, BE1.10, DO IT! 1.3a, E1.9, E1.10, E1.13, E1.16, E1.17, and E1.18.

Balance Sheet

Decision Tools

The balance sheet helps users determine whether the company relies on debt or stockholders' equity to finance its assets.

The **balance sheet** reports assets and claims to assets at a specific **point** in time (see **Decision Tools**). Claims to assets are subdivided into two categories: claims of creditors and claims of owners. As noted earlier, claims of creditors are called **liabilities**. The owners' claim to assets is called **stockholders' equity**.

Illustration 1.7 shows the relationship among the categories on the balance sheet in equation form.

- This equation is referred to as the **basic accounting equation**.
- This relationship is where the name "balance sheet" comes from. Assets must balance with the claims to assets.

ILLUSTRATION 1.7
Basic accounting equation

Assets = Liabilities + Stockholders' Equity

HELPFUL HINT

The heading of a balance sheet must identify the company, the statement, and the date.

ALTERNATIVE TERMINOLOGY

Liabilities are also referred to as *debt*.

As you can see from looking at Sierra Corporation's balance sheet in **Illustration 1.8**, the balance sheet presents the company's financial position as of a specific date—in this case, October 31, 2025 (see **Helpful Hint**). It lists assets first. Assets are listed in the order of their liquidity, that is, how quickly they could be converted to cash.

Assets are followed by liabilities and stockholders' equity (see **Alternative Terminology**). Stockholders' equity is comprised of two parts: (1) common stock and (2) retained earnings. As noted earlier, common stock results when the company sells new shares of stock;

retained earnings is the net income retained in the corporation. Sierra has common stock of $10,000 and retained earnings of $2,360, for total stockholders' equity of $12,360.

ILLUSTRATION 1.8
Sierra Corporation's balance sheet

Sierra Corporation
Balance Sheet
October 31, 2025

Assets		
Cash		$15,200
Accounts receivable		200
Supplies		1,000
Prepaid insurance		550
Equipment, net		4,960
Total assets		$21,910
Liabilities and Stockholders' Equity		
Liabilities		
Notes payable	$ 5,000	
Accounts payable	2,500	
Unearned service revenue	800	
Salaries and wages payable	1,200	
Interest payable	50	
Total liabilities		$ 9,550
Stockholders' equity		
Common stock	10,000	
Retained earnings	2,360	
Total stockholders' equity		12,360
Total liabilities and stockholders' equity		$21,910

Creditors analyze a company's balance sheet to determine the likelihood that they will be repaid.

- Creditors carefully evaluate the nature of the company's assets and liabilities.
- In operating Sierra's guide service, the balance sheet will be used to determine whether cash on hand is sufficient for immediate cash needs.
- The balance sheet will also be used to evaluate the relationship between debt and stockholders' equity to determine whether the company has a satisfactory proportion of debt and common stock financing.

DO IT! 3a Part 3 Financial Statements—The Balance Sheet

Part 3: CSU Corporation began operations on January 1, 2025. The following information is available for CSU on December 31, 2025.

Accounts receivable	$ 1,800	Retained earnings	$ 0	Supplies expense	$ 200
Accounts payable	2,000	Equipment	16,000	Cash	1,400
Rent expense	9,000	Insurance expense	1,000	Dividends	600
Notes payable	5,000	Service revenue	17,000		
Common stock	10,000	Supplies	4,000		

Prepare a balance sheet. Refer to **DO IT! 3a Part 2** for the ending balance in Retained Earnings.

ACTION PLAN

- **Present the assets and claims to those assets (liabilities and equity) at a specific point in time in the balance sheet.**

Solution

CSU Corporation Balance Sheet December 31, 2025		
Assets		
Cash		$ 1,400
Accounts receivable		1,800
Supplies		4,000
Equipment		16,000
Total assets		$23,200
Liabilities and Stockholders' Equity		
Liabilities		
Notes payable	$ 5,000	
Accounts payable	2,000	
Total liabilities		$ 7,000
Stockholders' equity		
Common stock	10,000	
Retained earnings	6,200	
Total stockholders' equity		16,200
Total liabilities and stockholders' equity		$23,200

Related exercise material: BE1.5, BE1.6, BE1.7, BE1.8, BE1.9, BE1.10, DO IT! 1.3a, E1.12, E1.16, E1.17, and E1.22.

Statement of Cash Flows

Decision Tools

The statement of cash flows helps users determine if the company generates enough cash from operations to fund its investing activities.

The primary purpose of a **statement of cash flows** is to provide financial information about the cash receipts and cash payments of a business for a specific period of time (see Decision Tools). To help investors, creditors, and others in their analysis of a company's cash position, the statement of cash flows reports the cash effects of a company's **operating, investing,** and **financing** activities. In addition, the statement shows the net increase or decrease in cash during the period, and the amount of cash at the end of the period.

Users are interested in the statement of cash flows because they want to know what is happening to a company's most important resource. The statement of cash flows provides answers to these simple but important questions:

- Where did cash come from during the period?
- How was cash used during the period?
- What was the change in the cash balance during the period?

HELPFUL HINT

The heading of this statement identifies the company, the type of statement, and the time period covered by the statement. Negative numbers are shown in parentheses.

The statement of cash flows for Sierra Corporation, in **Illustration 1.9**, shows that cash increased $15,200 during the month (see Helpful Hint). This increase resulted because operating activities (services to clients) increased cash $5,700, and financing activities increased cash $14,500. Investing activities used $5,000 of cash for the purchase of equipment.

ILLUSTRATION 1.9
Sierra Corporation's statement of cash flows

Sierra Corporation Statement of Cash Flows For the Month Ended October 31, 2025		
Cash flows from operating activities		
Cash receipts from operating activities	$11,200	
Cash payments for operating activities	(5,500)	
Net cash provided by operating activities		$ 5,700

Cash flows from investing activities		
Purchased office equipment	(5,000)	
Net cash used by investing activities		(5,000)
Cash flows from financing activities		
Issuance of common stock	10,000	
Issuance of note payable	5,000	
Payment of dividend	(500)	
Net cash provided by financing activities		14,500
Net increase in cash		15,200
Cash at beginning of period		0
Cash at end of period		$15,200

ILLUSTRATION 1.9
(continued)

People, Planet, and Profit Insight

marekuliasz/Getty Images

Beyond Financial Statements

Columbia Sportswear doesn't just focus on financial success. Several of its factories continue to participate in a project to increase health awareness of female factory workers in developing countries. Columbia is also a founding member of the Sustainable Apparel Coalition, which strives to reduce the environmental and social impact of the apparel industry. In addition, the company monitors all of the independent factories that produce its products to ensure that they comply with the company's Standards of Manufacturing Practices. These standards address such issues as forced labor, child labor, harassment, wages and benefits, health and safety, and the environment.

With that in mind, should we expand our financial statements to take into account ecological and social performance, in addition to financial results, in evaluating a company? The idea 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 stockholders' 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. Measurement of these factors is difficult, but many interesting and useful efforts are underway.

Why might a company's stockholders be interested in its environmental and social performance? (Answer is available at the end of the chapter.)

Interrelationships of Statements

Illustration 1.10 shows the financial statements of Sierra Corporation (see **Helpful Hints**). Because the results on some financial statements become inputs to other statements, the statements are interrelated. These interrelationships can be seen in Sierra's financial statements, as follows.

1. **The retained earnings statement uses the results of the income statement.** Sierra reported net income of $2,860 for the period. Net income is added to the beginning amount of retained earnings to determine ending retained earnings.
2. **The balance sheet and retained earnings statement are also interrelated.** Sierra reports the ending amount of $2,360 on the retained earnings statement as the retained earnings amount on the balance sheet.
3. **The statement of cash flows relates to information on the balance sheet.** The statement of cash flows shows how the Cash account changed during the period. It shows the amount of cash at the beginning of the period, the sources and uses of cash during the period, and the $15,200 of cash at the end of the period. The ending amount of cash shown on the statement of cash flows must agree with the amount of cash on the balance sheet.

Study these interrelationships carefully. **To prepare financial statements, you must understand the sequence in which these amounts are determined and how each statement**

ILLUSTRATION 1.10

Sierra Corporation's financial statements

HELPFUL HINT

Note that final sums are double-underlined.

HELPFUL HINT

The arrows in this illustration show the interrelationships of the four financial statements.

HELPFUL HINT

Negative amounts are presented in parentheses.

Sierra Corporation
Income Statement
For the Month Ended October 31, 2025

Revenues		
Service revenue		$10,600
Expenses		
Salaries and wages expense	$5,200	
Supplies expense	1,500	
Rent expense	900	
Interest expense	50	
Insurance expense	50	
Depreciation expense	40	
Total expenses		7,740
Net income		$ 2,860

Sierra Corporation
Retained Earnings Statement
For the Month Ended October 31, 2025

Retained earnings, October 1	$ 0
Add: Net income	2,860
	2,860
Less: Dividends	500
Retained earnings, October 31	$2,360

Sierra Corporation
Balance Sheet
October 31, 2025

Assets		
Cash		$15,200
Accounts receivable		200
Supplies		1,000
Prepaid insurance		550
Equipment, net		4,960
Total assets		$21,910
Liabilities and Stockholders' Equity		
Liabilities		
Notes payable	$ 5,000	
Accounts payable	2,500	
Unearned service revenue	800	
Salaries and wages payable	1,200	
Interest payable	50	
Total liabilities		$ 9,550
Stockholders' equity		
Common stock	10,000	
Retained earnings	2,360	
Total stockholders' equity		12,360
Total liabilities and stockholders' equity		$21,910

Sierra Corporation
Statement of Cash Flows
For the Month Ended October 31, 2025

Cash flows from operating activities		
Cash receipts from operating activities	$11,200	
Cash payments for operating activities	(5,500)	
Net cash provided by operating activities		$ 5,700
Cash flows from investing activities		
Purchased office equipment	(5,000)	
Net cash used by investing activities		(5,000)
Cash flows from financing activities		
Issuance of common stock	10,000	
Issuance of note payable	5,000	
Payment of dividend	(500)	
Net cash provided by financing activities		14,500
Net increase in cash		15,200
Cash at beginning of period		0
Cash at end of period		$15,200

DO IT! 3a Part 4 Financial Statements

Part 4: BRB Corporation began operations on January 1, 2025. The following information is available for BRB on December 31, 2025.

Accounts receivable	$ 1,600	Retained earnings	$ 0	Supplies expense	$ 300
Accounts payable	3,000	Equipment	21,000	Cash	2,400
Rent expense	7,000	Insurance expense	2,000	Dividends	700
Notes payable	4,000	Service revenue	21,000		
Common stock	12,000	Supplies	5,000		

Prepare an income statement, a retained earnings statement, and a balance sheet.

ACTION PLAN

- Report the revenues and expenses for a period of time in an income statement.
- Show the amounts and causes (net income and dividends) of changes in retained earnings during the period in the retained earnings statement.
- Present the assets and claims to those assets (liabilities and equity) at a specific point in time in the balance sheet.

Solution

BRB Corporation
Income Statement
For the Year Ended December 31, 2025

Revenues		
Service revenue		$21,000
Expenses		
Rent expense	$7,000	
Insurance expense	2,000	
Supplies expense	300	
Total expenses		9,300
Net income		$11,700

BRB Corporation
Retained Earnings Statement
For the Year Ended December 31, 2025

Retained earnings, January 1	$ 0
Add: Net income	11,700
	11,700
Less: Dividends	700
Retained earnings, December 31	$11,000

BRB Corporation
Balance Sheet
December 31, 2025

Assets		
Cash		$ 2,400
Accounts receivable		1,600
Supplies		5,000
Equipment		21,000
Total assets		$30,000
Liabilities and Stockholders' Equity		
Liabilities		
Notes payable	$ 4,000	
Accounts payable	3,000	
Total liabilities		$ 7,000
Stockholders' equity		
Common stock	12,000	
Retained earnings	11,000	
Total stockholders' equity		23,000
Total liabilities and stockholders' equity		$30,000

Related exercise material: BE1.5, BE1.6, BE1.7, BE1.8, BE1.9, BE1.10, DO IT! 1.3a, E1.9, E1.10, E1.11, E1.12, E1.13, E1.14, E1.15, E1.16, E1.17, E1.18, E1.19, and E1.22.

Elements of an Annual Report

Publicly traded U.S. companies must provide shareholders with an **annual report**. The annual report always includes the financial statements introduced in this chapter. The annual report also includes other important information such as a management discussion and analysis section, notes to the financial statements, and an independent auditor's report. No analysis of a company's financial situation and performance is complete without a review of these items.

Management Discussion and Analysis

The **management discussion and analysis (MD&A)** section presents management's views on the company's:

- Ability to pay near-term obligations.
- Ability to fund operations and expansion.
- Results of operations.

Management must highlight favorable or unfavorable trends and identify significant events and uncertainties that affect these three factors. This discussion obviously involves a number of subjective estimates and opinions. A brief excerpt from the MD&A section of a recent **Columbia Sportswear** annual report, which addresses its liquidity requirements, is presented in **Illustration 1.11**.

ILLUSTRATION 1.11
Columbia Sportswear's management discussion and analysis
Real World

Columbia Sportswear Company
Management's Discussion and Analysis of Seasonality and Variability of Business

Our business is affected by the general seasonal trends common to the industry, including discretionary consumer shopping and spending patterns, as well as seasonal weather. Our products are marketed on a seasonal basis, and our sales are weighted substantially toward the third and fourth quarters, while our operating costs are more equally distributed throughout the year.

Notes to the Financial Statements

Explanatory notes and supporting schedules accompany every set of financial statements and are an integral part of the statements. The **notes to the financial statements** clarify the financial statements and provide additional detail. Information in the notes does not have to be quantifiable (numeric). Examples of notes are:

- Descriptions of the significant accounting policies and methods used in preparing the statements.
- Explanations of uncertainties and contingencies.
- Various statistics and details too voluminous to be included in the statements.

The notes are essential to understanding a company's operating performance and financial position.

Illustration 1.12 is an excerpt from the notes to recent **Columbia Sportswear** financial statements. It describes the methods that the company uses to account for revenues.

ILLUSTRATION 1.12
Notes to Columbia Sportswear's financial statements
Real World

Columbia Sportswear Company
Notes to Financial Statements
Revenue Recognition

Revenues are recognized when our performance obligations are satisfied as evidenced by transfer of control of promised goods to our customers, in an amount that reflects the consideration we expect to be entitled to receive in exchanges for those goods or services. Within our wholesale channel, control generally transfers to the customer upon shipment to, or upon receipt by, the customer depending on the terms of sale with the customer. Within our DTC channel, control generally transfers to the customer at the time of sale within our retail stores and concession-based arrangements and upon shipment to the customer with respect to e-commerce transactions.

Auditor's Report

An **auditor's report** is prepared by an independent outside auditor. It states the auditor's opinion as to the fairness of the presentation of the financial position and results of operations and their conformance with generally accepted accounting principles.

An **auditor** is an accounting professional who conducts an independent examination of a company's financial statements. Only accountants who meet certain criteria and thereby attain the designation **certified public accountant (CPA)** may certify audits.

- If the auditor is satisfied that the financial statements provide a fair representation of the company's financial position and results of operations in accordance with generally accepted accounting principles, then the auditor expresses an **unqualified opinion**.
- If the auditor expresses anything other than an unqualified opinion, then readers should only use the financial statements with caution.
- That is, without an unqualified opinion, we cannot have complete confidence that the financial statements give a fair picture of the company's financial health.
- A new auditing standard requires the auditor to report any **critical audit matters.** These are items that are material in size that involve challenging, subjective, or complex auditor judgment.

For example, **Blockbuster** once dominated movie rentals in the United States with over 9,000 stores. But it faltered when the upstart **Netflix** rapidly took over the movie-rental business. Blockbuster's auditor then stated that its financial situation raised "substantial doubt about the Company's ability to continue as a going concern." Shortly after that, the company filed for bankruptcy.

Illustration 1.13 is an excerpt from the auditor's report from Columbia Sportswear's 2019 annual report. Columbia received an unqualified opinion from its auditor, **Deloitte & Touche.**

ILLUSTRATION 1.13
Excerpt from auditor's report on Columbia Sportswear's financial statements
Real World

Columbia Sportswear Company
Excerpt from Auditor's Report

We have audited the accompanying consolidated balance sheets of Columbia Sportswear Company and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income, equity, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Accounting Across the Organization

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Spinning the Career Wheel

How will the study of accounting help you? A working knowledge of accounting is desirable for virtually every field of business. Some examples of how accounting is used in business careers include the following.

General management: Managers of Harley-Davidson, a Qdoba franchise, and a Trek bike shop all need to understand accounting data in order to make wise business decisions.

Marketing: Marketing specialists at **Hulu** must be sensitive to costs and benefits to ensure that marketing efforts increase company profits.

Finance: Do you want to work for **Robinhood**, **E-Trade**, or **Goldman Sachs**? Financial fields rely heavily on accounting knowledge to analyze financial statements. In fact, it is difficult to get a good job in a finance function without two or three courses in accounting.

Real estate: Because a third party—the bank—is almost always involved in financing a real estate transaction, brokers at **Prudential Real Estate** must understand the numbers involved.

Accounting: Certified public accountants (CPAs) examine (audit) the financial statements and issue opinions on the accuracy of the financial presentation. Some CPAs offer tax advice and planning. Others work for for-profit companies such as **Starbucks** or **Google**, or for non-profit entities such as the **Red Cross**, where they manage the accounting information systems and prepare financial statements. Opportunities also exist in government, including the **Federal Bureau of Investigation (FBI)**. Finally, forensic accountants conduct investigations into theft and fraud.

How might accounting help you? (Answer is available at the end of the chapter.)

ACTION PLAN

- **Realize that financial statements provide information about a company's performance and financial position.**
- **Be familiar with the other elements of the annual report in order to gain a fuller understanding of a company.**

DO IT! 3b Components of Annual Reports

State whether each of the following items is most closely associated with the management discussion and analysis (MD&A), the notes to the financial statements, or the auditor's report.

1. Descriptions of significant accounting policies.
2. Unqualified opinion.
3. Explanations of uncertainties and contingencies.
4. Description of ability to fund operations and expansion.
5. Description of results of operations.
6. Certified public accountant (CPA).

Solution

1. Descriptions of significant accounting policies: Notes.
2. Unqualified opinion: Auditor's report.
3. Explanations of uncertainties and contingencies: Notes.
4. Description of ability to fund operations and expansion: MD&A.
5. Description of results of operations: MD&A.
6. Certified public accountant (CPA): Auditor's report.

Related exercise material: BE1.11, DO IT! 1.3b, and E1.25.

USING THE DECISION TOOLS | Under Armour, Inc.

Using the Decision Tools comprehensive exercises ask you to apply business information and the decision tools presented in the chapter. Most of these exercises are based on the companies highlighted in the Feature Story.

There is a good chance that you are wearing one of **Under Armour, Inc.**'s products right now. Under Armour is a competitor to **Columbia Sportswear**. Suppose that you are considering investing in shares of Under Armour's common stock.

Instructions

Answer these questions related to your decision whether to invest.

a. What financial statements should you evaluate?

b. What should these financial statements tell you?

c. Do you care if the financial statements have been audited? Explain.

d. Appendix B contains financial statements for Columbia, and Appendix C contains those for Under Armour. You can make many comparisons between Columbia and Under Armour in terms of their respective results from operations and financial position. Compare their respective total assets, total revenues, and net cash provided by operating activities for 2020.

Solution

a. Before you invest, you should evaluate the income statement, retained earnings statement, balance sheet, and statement of cash flows.

b. You would probably be most interested in the income statement because it summarizes past performance and thus gives an indication of future performance. The retained earnings statement provides a record of the company's dividend history. The balance sheet reveals the relationship between assets and liabilities. The statement of cash flows reveals where the company is getting and spending its cash. This is especially important for a company that wants to grow.

c. You would want audited financial statements. These statements indicate that a CPA (certified public accountant) has examined and expressed an opinion whether the statements present fairly the financial position and results of operations of the company. Investors and creditors should not make decisions without studying audited financial statements.

d. Many interesting comparisons can be made between the two companies (all numbers are in thousands). Columbia is smaller, with total assets of $2,836,571 versus $5,030,628 for Under Armour, and it has lower revenue—$2,501,554 versus $4,474,667 for Under Armour. However, Columbia's net cash provided by operating activities of $276,077 is greater than Under Armour's $212,864. However, while useful, these basic measures are not enough to determine whether one company is a better investment than the other. In later chapters, you will learn tools that will allow you to compare the relative profitability and financial health of these and other companies.

Appendix 1A Career Opportunities in Accounting

LEARNING OBJECTIVE *4

Explain the career opportunities in accounting.

Why is accounting such a popular major and career choice?

1. **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."
2. **Accounting matters.** Interest in accounting has increased, ironically, because of the attention caused by the accounting failures of companies such as **Enron** and **WorldCom**. 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.
3. **The Sarbanes-Oxley Act (SOX) significantly increased the accounting and internal control requirements for corporations.** This dramatically increased demand for professionals with accounting training.
4. **Emerging technologies such as automation, blockchain, and data analytics are changing the way accountants work.** With those skills, accountants add value to business decision-making.

Accountants are in such demand that it is not uncommon for accounting students to have accepted a job offer a year before graduation. As **Illustration 1A.1** reveals, the job options of people with accounting degrees are virtually unlimited.

ILLUSTRATION 1A.1 **Career options in accounting**

Areas of Accounting Careers	Type of Work	Examples of Employers	Certification Opportunities
Public accounting	• In **auditing**, accountants examine (audit) the financial statements and issue opinions on the fairness of the financial presentation. • In **taxation**, CPAs offer tax advice and planning. • In **management consulting**, accountants design and install accounting software and enterprise resource planning systems and support mergers and acquisitions.	**Deloitte, EY, KPMG, PwC, Grant Thornton, BDO, Baker Tilly**	Certified public accountants (CPAs), enrolled agent (EA), certified information systems auditor (CISA)
Private accounting	• Financial accountants manage the accounting information system and prepare financial statements. • Managerial accountants manage costs and budgets. • Internal auditors ensure compliance with policies and regulations.	For-profit: **Starbucks, Google, Under Armour** Non-profit: **Salvation Army, Red Cross**	Certified management accountant (CMA), certified internal auditor (CIA)
Governmental accounting	• There are opportunities in government at the local, state, and federal levels.	**Internal Revenue Service (IRS), Federal Bureau of Investigation (FBI)**	Certified government financial manager (CGFM)
Forensic accounting	• In **forensic accounting**, accountants conduct **investigations** into theft and fraud.	Insurance companies, law firms, FBI	Certified fraud examiner (CFE)

"Show Me the Money"

How much can a new accountant make? Take a look at the average salaries for college graduates in public and private accounting shown in **Illustration 1A.2**.[1] Keep in mind if you also have a CPA license, you'll make 10–15% more when you start out.

ILLUSTRATION 1A.2

Salary estimates for jobs in public and corporate accounting

Employer	Jr. Level (0–3 yrs.)	Sr. Level (4–6 yrs.)
Public accounting (large firm)	$63,250–$83,250	$78,500–$106,500
Public accounting (medium firm)	$56,500–$67,750	$70,500–$96,000
Public accounting (small company)	$51,500–$60,500	$63,750–$81,500
Corporate accounting (large company)	$53,750–$69,500	$68,750–$87,750

Illustration 1A.3 lists some examples of upper-level salaries for managers in corporate accounting. Note that geographic region, experience, education, CPA certification, and company size each play a role in determining salary.

ILLUSTRATION 1A.3

Upper-level management salaries in corporate accounting

Position	Large Company	Small to Medium Company
Chief financial officer	$207,000–$465,750	$105,250–$208,750
Corporate controller	$140,000–$224,750	$92,000–$161,250
Tax manager	$112,000–$158,250	$88,000–$124,750

[1]See *startheregoplaces.com/students/why-accounting/salary-and-demand/* for information regarding the salaries listed in Illustrations 1A.2 and 1A.3.

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

Review and Practice

Learning Objectives Review

1 Identify the forms of business organization and the uses of accounting information.

A sole proprietorship is a business owned by one person. A partnership is a business owned by two or more people associated as partners. A corporation is a separate legal entity for which evidence of ownership is provided by shares of stock.

Internal users are managers who need accounting information to plan, organize, and run business operations. The primary external users are investors and creditors. Investors (stockholders) use accounting information to decide whether to buy, hold, or sell shares of a company's stock. Creditors (suppliers and bankers) use accounting information to assess the risk of granting credit or loaning money to a business. Other groups who have an indirect interest in a business are taxing authorities, customers, labor unions, and regulatory agencies.

2 Explain the three principal types of business activity.

Financing activities involve collecting the necessary funds to support the business. Investing activities involve acquiring the resources necessary to run the business. Operating activities involve putting the resources of the business into action to generate a profit.

3 Describe the four financial statements and how they are prepared.

An income statement presents the revenues and expenses of a company for a specific period of time. A retained earnings statement summarizes the changes in retained earnings that have occurred for a specific period of time. A balance sheet reports the assets, liabilities, and stockholders' equity of a business at a specific date. A statement of cash flows summarizes information concerning the cash inflows (receipts) and outflows (payments) for a specific period of time.

Assets are resources owned by a business. Liabilities are the debts and obligations of the business. Liabilities represent claims of creditors on the assets of the business. Stockholders' equity represents the claims of owners on the assets of the business. Stockholders' equity is subdivided into two parts: common stock and retained earnings. The basic accounting equation is Assets = Liabilities + Stockholders' Equity.

Within the annual report, the management discussion and analysis provides management's interpretation of the company's results and financial position as well as a discussion of plans for the future. Notes to the financial statements provide additional explanation or detail to make the financial statements more informative. The auditor's report expresses an opinion as to whether the financial statements present fairly the company's results of operations and financial position.

*4 Explain the career opportunities in accounting.

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

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Are the company's operations profitable?	Income statement	The income statement reports a company's revenues and expenses and resulting net income or loss for a period of time.	If the company's revenues exceed its expenses, it will report net income; otherwise, it will report a net loss.
What is the company's policy toward dividends and growth?	Retained earnings statement	The retained earnings statement reports how much of this year's income the company paid out in dividends to shareholders.	A company striving for rapid growth will pay a low (or no) dividend.

(continues)

(continued)

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Does the company rely primarily on debt or stockholders' equity to finance its assets?	Balance sheet	The balance sheet reports the company's resources and claims to those resources; there are two types of claims: liabilities and stockholders' equity.	Compare the amount of debt versus the amount of stockholders' equity to determine whether the company relies more on creditors or owners for its financing.
Does the company generate sufficient cash from operations to fund its investing activities?	Statement of cash flows	The statement of cash flows shows the amount of net cash provided or used by operating activities, investing activities, and financing activities.	Compare the amount of net cash provided by operating activities with the amount of net cash used by investing activities. Any deficiency in cash from operating activities must be made up with cash from financing activities.

Glossary Review

Accounting The information system that identifies, records, and communicates the economic events of an organization to interested users. (p. 1-4).

Annual report A report prepared by corporate management that presents financial information including financial statements, a management discussion and analysis section, notes, and an independent auditor's report. (p. 1-20).

Assets Resources owned by a business. (p. 1-9).

***Auditing** The examination of financial statements by a certified public accountant in order ro express an opinion as to the fairness of presentation. (p. 1-24).

Auditor's report A report prepared by an independent outside auditor stating the auditor's opinion as to the fairness of the presentation of the financial position and results of operations and their conformance with generally accepted accounting principles. (p. 1-21).

Balance sheet A financial statement that reports the assets and claims to those assets at a specific point in time. (p. 1-14).

Basic accounting equation Assets = Liabilities + Stockholders' Equity. (p. 1-14).

Certified public accountant (CPA) An individual who has met certain criteria and is thus allowed to perform audits of corporations. (p. 1-21).

Common stock Term used to describe the total amount paid in by stockholders for the shares they purchase. (p. 1-9).

Corporation A business organized as a separate legal entity owned by stockholders. (p. 1-3).

Data analytics The evaluation of data, often employing both software and statistics, to draw inferences. (p. 1-6).

Dividends Payments of cash from a corporation to its stockholders. (p. 1-9).

Expenses The cost of assets consumed or services used in the process of generating revenues. (p. 1-10).

***Forensic accounting** An area of accounting that uses accounting, auditing, and investigative skills to conduct investigations into theft and fraud. (p. 1-24).

Income statement A financial statement that reports a company's revenues and expenses and resulting net income or net loss for a specific period of time. (p. 1-12).

Liabilities Amounts owed to creditors in the form of debts and other obligations. (p. 1-9).

***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. 1-24).

Management discussion and analysis (MD&A) A section of the annual report that presents management's views on the company's ability to pay near-term obligations, its ability to fund operations and expansion, and its results of operations. (p. 1-20).

Net income The amount by which revenues exceed expenses. (p. 1-10).

Net loss The amount by which expenses exceed revenues. (p. 1-10).

Notes to the financial statements Notes that clarify information presented in the financial statements and provide additional detail. (p. 1-20).

Partnership A business owned by two or more persons associated as partners. (p. 1-3).

Retained earnings The amount of net income retained in the corporation. (p. 1-13).

Retained earnings statement A financial statement that summarizes the amounts and causes of changes in retained earnings for a specific time period. (p. 1-13).

Revenue The increase in assets or decrease in liabilities resulting from the sale of goods or the performance of services in the normal course of business. (p. 1-10).

Sarbanes-Oxley Act (SOX) Regulations passed by Congress to reduce unethical corporate behavior. (p. 1-7).

Sole proprietorship A business owned by one person. (p. 1-3).

Statement of cash flows A financial statement that provides financial information about the cash receipts and cash payments of a business for a specific period of time. (p. 1-16).

Stockholders' equity The owners' claim to assets. (p. 1-14).

***Taxation** An area of public accounting involving tax advice, tax planning, preparing tax returns, and representing clients before governmental agencies. (p. 1-24).

Practice Multiple-Choice Questions

1. **(LO 1)** Which is **not** one of the three forms of business organization?
   - a. Sole proprietorship.
   - b. Creditorship.
   - c. Partnership.
   - d. Corporation.

2. **(LO 1)** Which is an advantage of corporations relative to partnerships and sole proprietorships?
   - a. Lower taxes.
   - b. Harder to transfer ownership.
   - c. Reduced legal liability for investors.
   - d. Most common form of organization.

3. **(LO 1)** Which statement about users of accounting information is **incorrect**?
   - a. Management is considered an internal user.
   - b. Taxing authorities are considered external users.
   - c. Present creditors are considered external users.
   - d. Regulatory authorities are considered internal users.

4. **(LO 1)** Which of the following did **not** result from the Sarbanes-Oxley Act?
   - a. Top management must now certify the accuracy of financial information.
   - b. Penalties for fraudulent activity increased.
   - c. Independence of auditors increased.
   - d. Tax rates on corporations increased.

5. **(LO 2)** Which is **not** one of the three primary business activities?
   - a. Financing.
   - b. Operating.
   - c. Advertising.
   - d. Investing.

6. **(LO 2)** Which of the following is an example of a financing activity?
   - a. Issuing shares of common stock.
   - b. Selling goods on account.
   - c. Buying delivery equipment.
   - d. Buying inventory.

7. **(LO 2)** Net income will result during a time period when:
   - a. assets exceed liabilities.
   - b. assets exceed revenues.
   - c. expenses exceed revenues.
   - d. revenues exceed expenses.

8. **(LO 3)** The financial statements for Macias Corporation contained the following information.

Accounts receivable	$ 5,000
Sales revenue	75,000
Cash	15,000
Salaries and wages expense	20,000
Rent expense	10,000

What was Macias Corporation's net income?
   - a. $60,000.
   - b. $15,000.
   - c. $65,000.
   - d. $45,000.

9. **(LO 3)** What section of a statement of cash flows indicates the cash spent on new equipment during the past accounting period?
   - a. The investing activities section.
   - b. The operating activities section.
   - c. The financing activities section.
   - d. The statement of cash flows does not give this information.

10. **(LO 3)** Which statement presents information as of a specific point in time?
   - a. Income statement.
   - b. Balance sheet.
   - c. Statement of cash flows.
   - d. Retained earnings statement.

11. **(LO 3)** Which financial statement reports assets, liabilities, and stockholders' equity?
   - a. Income statement.
   - b. Retained earnings statement.
   - c. Balance sheet.
   - d. Statement of cash flows.

12. **(LO 3)** Stockholders' equity represents:
   - a. claims of creditors.
   - b. claims of employees.
   - c. the difference between revenues and expenses.
   - d. claims of owners.

13. **(LO 3)** As of December 31, 2025, Rockford Corporation has assets of $3,500 and stockholders' equity of $1,500. What are the liabilities for Rockford as of December 31, 2025?
   - a. $1,500.
   - b. $1,000.
   - c. $2,500.
   - d. $2,000.

14. **(LO 3)** The element of a corporation's annual report that describes the corporation's accounting methods is/are the:
   - a. notes to the financial statements.
   - b. management discussion and analysis.
   - c. auditor's report.
   - d. income statement.

15. **(LO 3)** The element of the annual report that presents an opinion regarding the fairness of the presentation of the financial position and results of operations is/are the:
   - a. income statement.
   - b. auditor's opinion.
   - c. balance sheet.
   - d. comparative statements.

Solutions

1. **b.** Creditorship is not a form of business organization. The other choices are incorrect because (a) sole proprietorship, (c) partnership, and (d) corporation are all forms of business organization.

2. **c.** An advantage of corporations is that investors are not personally liable for debts of the business. The other choices are incorrect because (a) lower taxes, (b) harder to transfer ownership, and (d) most common form of organization are not true of corporations.

3. **d.** Regulatory authorities are considered external, not internal, users. The other choices are true statements.

4. **d.** The Sarbanes-Oxley Act (SOX) was created to reduce unethical corporate behavior and decrease the likelihood of future corporate scandals, not to address tax rates. The other choices are incorrect because (a) top management must now certify the accuracy of financial information, (b) penalties for fraudulent activity increased, and (c) increased independence of auditors all resulted from SOX.

5. **c.** Advertising is a type of operating activity. The other choices are incorrect because (a) financing, (b) operating, and (d) investing are the three primary business activities.

6. **a.** Issuing shares of common stock is a financing activity. The other choices are incorrect because (b) selling goods on account is an operating activity, (c) buying delivery equipment is an investing activity, and (d) buying inventory is an operating activity.

7. **d.** When a company earns more revenues than expenses, it will report net income during a time period. The other choices are incorrect because (a) assets and liabilities are on the balance sheet, not the income statement; (b) assets are on the balance sheet, not the income statement; and (c) net income results when revenues exceed expenses, not when expenses exceed revenues.

8. **d.** Net income = Sales revenue ($75,000) − Salaries and wages expense ($20,000) − Rent expense ($10,000) = $45,000. The other choices are therefore incorrect.

9. **a.** The investing activities section of the statement of cash flows provides information about property, plant, and equipment accounts, not (b) the operating activities section or (c) the financing activities section. Choice (d) is incorrect as the statement of cash flows does provide this information.

10. **b.** The balance sheet presents information as of a specific point in time. The other choices are incorrect because the (a) income statement, (c) statement of cash flows, and (d) retained earnings statement all cover a period of time.

11. **c.** The balance sheet is a formal presentation of the accounting equation, such that Assets = Liabilities + Stockholders' Equity, not the (a) income statement, (b) retained earnings statement, or (d) statement of cash flows.

12. **d.** Stockholders' equity represents claims of owners. The other choices are incorrect because (a) claims of creditors and (b) claims of employees are liabilities. Choice (c) is incorrect because the difference between revenues and expenses is net income.

13. **d.** Using the accounting equation, liabilities can be computed by subtracting stockholders' equity from assets, or $3,500 − $1,500 = $2,000, not (a) $1,500, (b) $1,000, or (c) $2,500.

14. **a.** The corporation's accounting methods are described in the notes to the financial statements, not in the (b) management discussion and analysis, (c) auditor's report, or (d) income statement.

15. **b.** The element of the annual report that presents an opinion regarding the fairness of the presentation of the financial position and results of operations is the auditor's opinion, not the (a) income statement, (c) balance sheet, or (d) comparative statements.

Practice Brief Exercises

Use basic accounting equation.

1. **(LO 3)** At the beginning of the year, Ortiz Company had total assets of $900,000 and total liabilities of $440,000. Answer the following questions.

   a. If total assets decreased $100,000 during the year and total liabilities increased $80,000 during the year, what is the amount of stockholders' equity at the end of the year?

   b. During the year, total liabilities decreased $100,000 during the year and stockholders' equity increased $200,000. What is the amount of total assets at the end of the year?

   c. If total assets increased $50,000 during the year and stockholders' equity increased $60,000 during the year, what is the amount of total liabilities at the end of the year?

Solution

1. a.	Assets	−	Liabilities	=	Stockholders' Equity
	($900,000 − $100,000)	−	($440,000 + $80,000)	=	$280,000
b.	Liabilities	+	Stockholders' Equity	=	Assets
	($440,000 − $100,000)	+	($900,000 − $440,000 + $200,000)	=	$1,000,000
c.	Assets	−	Stockholders' Equity	=	Liabilities
	($900,000 + $50,000)	−	($900,000 − $440,000 + $60,000)	=	$430,000

Determine where items appear on financial statements.

2. **(LO 3)** Indicate whether the following items would appear on the income statement (IS), balance sheet (BS), or retained earnings statement (RES).

   a. ______ Common stock.
   b. ______ Cash.
   c. ______ Salaries and wages expense.
   d. ______ Service revenue.
   e. ______ Accounts payable.

Solution

2. a. BS Common stock.
   b. BS Cash.
   c. IS Salaries and wages expense.
   d. IS Service revenue.
   e. BS Accounts payable.

3. **(LO 3)** Presented below in alphabetical order are balance sheet items for Feagler Company at December 31, 2025. Prepare a balance sheet following the format of Illustration 1.8.

Prepare a balance sheet.

Accounts receivable	$12,500
Cash	38,000
Common stock	5,000
Notes payable	40,000
Retained earnings	5,500

Solution

3.

Feagler Company
Balance Sheet
December 31, 2025

Assets		
Cash		$38,000
Accounts receivable		12,500
Total assets		$50,500
Liabilities and Stockholders' Equity		
Liabilities		
Notes payable	$40,000	
Total liabilities		$40,000
Stockholders' equity		
Common stock	5,000	
Retained earnings	5,500	
Total stockholders' equity		10,500
Total liabilities and stockholders' equity		$50,500

4. **(LO 3)** Identify whether the following items would appear on the balance sheet (BS) or income statement (IS) of a corporation.

Determine where items appear on financial statements.

   a. ______ Income taxes payable.
   b. ______ Cost of goods sold.
   c. ______ Supplies.
   d. ______ Notes payable.
   e. ______ Salaries and wages expense.
   f. ______ Service revenue.
   g. ______ Depreciation expense.
   h. ______ Prepaid insurance.
   i. ______ Interest payable.

Solution

4. a. BS Income taxes payable.
   b. IS Cost of goods sold.
   c. BS Supplies.
   d. BS Notes payable.
   e. IS Salaries and wages expense.
   f. IS Service revenue.
   g. IS Depreciation expense.
   h. BS Prepaid insurance.
   i. BS Interest payable.

Practice Exercises

Prepare an income statement.

1. **(LO 3)** The following items and amounts were taken from Ricardo Inc.'s 2025 income statement and balance sheet.

Cash	$ 84,700	Inventory	$ 64,618
Retained earnings	123,192	Accounts receivable	88,419
Cost of goods sold	483,854	Sales revenue	693,485
Salaries and wages expense	125,000	Income taxes payable	6,499
Prepaid insurance	7,818	Accounts payable	49,384
Interest expense	994	Service revenue	8,998

Instructions

Prepare an income statement for Ricardo Inc. for the year ended December 31, 2025.

Solution

1.

Ricardo Inc.
Income Statement
For the Year Ended December 31, 2025

Revenues		
Sales revenue	$693,485	
Service revenue	8,998	
Total revenues		$702,483
Expenses		
Cost of goods sold	483,854	
Salaries and wages expense	125,000	
Interest expense	994	
Total expenses		609,848
Net income		$ 92,635

Compute net income and prepare a balance sheet.

2. **(LO 3)** Cozy Bear is a private camping ground near the Mountain Home Recreation Area. It has compiled the following financial information as of December 31, 2025.

Service revenue (from camping fees)	$148,000	Dividends	$ 9,000
Sales revenue (from general store)	35,000	Bonds payable	50,000
Accounts payable	16,000	Expenses during 2025	135,000
Cash	18,500	Supplies	12,500
Equipment	129,000	Common stock	40,000
		Retained earnings (1/1/2025)	15,000

Instructions

a. Determine net income from Cozy Bear for 2025.

b. Prepare a retained earnings statement and a balance sheet for Cozy Bear as of December 31, 2025.

Solution

2. **a.**

Service revenue	$148,000
Sales revenues	35,000
Total revenue	183,000
Expenses	135,000
Net income	$ 48,000

b.

Cozy Bear
Retained Earnings Statement
For the Year Ended December 31, 2025

Retained earnings, January 1	$15,000
Add: Net income	48,000
	63,000
Less: Dividends	9,000
Retained earnings, December 31	$54,000

Cozy Bear
Balance Sheet
December 31, 2025

Assets		
Cash		$ 18,500
Supplies		12,500
Equipment		129,000
Total assets		$160,000
Liabilities and Stockholders' Equity		
Liabilities		
Accounts payable	$16,000	
Bonds payable	50,000	
Total liabilities		$ 66,000
Stockholders' equity		
Common stock	40,000	
Retained earnings	54,000	
Total stockholders' equity		94,000
Total liabilities and stockholders' equity		$160,000

Practice Problem

Prepare financial statements.

(LO 3) Jeff Andringa, a former college hockey player, quit his job and started Ice Camp, a hockey camp for kids ages 8 to 18. Eventually, he would like to open hockey camps nationwide. Jeff has asked you to help him prepare financial statements at the end of 2025, his first year of operations. He relates the following facts about his business activities.

In order to get the business off the ground, Jeff decided to incorporate. He sold shares of common stock to a few close friends, as well as bought some of the shares himself. He initially raised $25,000 through the sale of these shares. In addition, the company took out a $10,000 loan at a local bank.

Ice Camp purchased, for $12,000 cash, a bus for transporting kids. The company also bought hockey goals and other miscellaneous equipment with $1,500 cash. The company earned camp tuition of $100,000 during the year but had collected only $80,000 of this amount. Thus, at the end of the year, its customers still owed $20,000. The company rents time at a local rink for $50 per hour. Total rink rental costs during the year were $8,000, insurance was $10,000, salary expense was $20,000, and supplies used totaled $9,000, all of which were paid in cash. The company incurred $800 in interest expense on the bank loan, which it still owed at the end of the year.

The company paid dividends during the year of $5,000 cash. The balance in the corporate bank account at December 31, 2025, was $49,500.

Instructions

Using the format of the Sierra Corporation statements in this chapter, prepare an income statement, retained earnings statement, balance sheet, and statement of cash flows. (*Hint:* Prepare the statements in the order stated to take advantage of the flow of information from one statement to the next, as shown in Illustration 1.10.)

Solution

Ice Camp
Income Statement
For the Year Ended December 31, 2025

Revenues		
Service revenue		$100,000
Expenses		
Salaries and wages expense	$20,000	
Insurance expense	10,000	
Supplies expense	9,000	
Rent expense	8,000	
Interest expense	800	
Total expenses		47,800
Net income		$ 52,200

Ice Camp
Retained Earnings Statement
For the Year Ended December 31, 2025

Retained earnings, January 1, 2025	$ 0
Add: Net income	52,200
	52,200
Less: Dividends	5,000
Retained earnings, December 31, 2025	$47,200

Ice Camp
Balance Sheet
December 31, 2025

Assets		
Cash		$49,500
Accounts receivable		20,000
Equipment ($12,000 + $1,500)		13,500
Total assets		$83,000
Liabilities and Stockholders' Equity		
Liabilities		
Notes payable	$10,000	
Interest payable	800	
Total liabilities		$10,800
Stockholders' equity		
Common stock	25,000	
Retained earnings	47,200	
Total stockholders' equity		72,200
Total liabilities and stockholders' equity		$83,000

Ice Camp
Statement of Cash Flows
For the Year Ended December 31, 2025

Cash flows from operating activities		
Cash receipts from operating activities	$80,000	
Cash payments for operating activities	(47,000)	
Net cash provided by operating activities		$33,000
Cash flows from investing activities		
Purchase of equipment	(13,500)	
Net cash used by investing activities		(13,500)
Cash flows from financing activities		
Issuance of common stock	25,000	
Issuance of notes payable	10,000	
Dividends paid	(5,000)	
Net cash provided by financing activities		30,000
Net increase in cash		49,500
Cash at beginning of period		0
Cash at end of period		$49,500

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Questions

1. What are the three basic forms of business organizations?

2. What are the advantages to a business of being formed as a corporation? What are the disadvantages?

3. What are the advantages to a business of being formed as a partnership or sole proprietorship? What are the disadvantages?

4. Is it possible to create a company using an organizational form that has the advantages of both a partnership and a corporation? Explain.

5. "Accounting is ingrained in our society and is vital to our economic system." Do you agree? Explain.

6. Who are the internal users of accounting data? How does accounting provide relevant data to the internal users?

7. Who are the external users of accounting data? Give examples.

8. What are the four most common types of data analytics, and what basic question does each address?

9. What are the three main types of business activity? Give examples of each activity.

10. Listed here are some items found in the financial statements of Finzelberg. Indicate in which financial statement(s) each item would appear.

   a. Service revenue.
   b. Equipment.
   c. Advertising expense.
   d. Accounts receivable.
   e. Common stock.
   f. Interest payable.

11. Why would a bank want to monitor the dividend payment practices of the corporations to which it lends money?

12. "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 balance sheet." Do you agree? Explain.

13. What is the primary purpose of the statement of cash flows?

14. What are the three main categories of the statement of cash flows? Why do you think these categories were chosen?

15. What is retained earnings? What items increase the balance in retained earnings? What items decrease the balance in retained earnings?

16. What is the basic accounting equation?

17. **a.** Define the terms assets, liabilities, and stockholders' equity.
   b. What items affect stockholders' equity?

18. Which of these items are liabilities of White Glove Cleaning Service?

   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.

19. How are each of the following financial statements interrelated? (a) Retained earnings statement and income statement. (b) Retained earnings statement and balance sheet. (c) Balance sheet and statement of cash flows.

20. What is the purpose of the management discussion and analysis section (MD&A)?

21. Why is it important for financial statements to receive an unqualified auditor's opinion?

22. What types of information are presented in the notes to the financial statements?

23. The accounting equation is Assets = Liabilities + Stockholders' Equity. Appendix A reproduces **Apple**'s financial statements. Replacing words in the equation with dollar amounts, what is Apple's accounting equation at September 26, 2020?

24. What are the characteristics of a "critical audit matter"?

Brief Exercises

Describe forms of business organization.

BE1.1 **(LO 1), K** Match each of the following forms of business organization with a set of characteristics: sole proprietorship (SP), partnership (P), and corporation (C).

a. _____ Shared control, tax advantages, increased skills and resources.

b. _____ Simple to set up and maintains control with owner.

c. _____ Easier to transfer ownership and raise funds, no personal liability.

Identify users of accounting information.

BE1.2 **(LO 1), K** The following lists situations that require the use of accounting information.

1. Trying to determine whether the company complied with tax laws.
2. Trying to determine whether the company can pay its obligations.
3. Trying to determine whether an advertising proposal will be cost-effective.
4. Trying to determine whether the company's net income will result in a stock price increase.
5. Trying to determine whether the company should employ debt or equity financing.

Match each of the situations with the following users of accounting information.

a. _____ Investors in common stock.

b. _____ Marketing managers.

c. _____ Creditors.

d. _____ Chief financial officer.

e. _____ Internal Revenue Service.

Classify items by activity.

BE1.3 **(LO 2), K** Indicate to which business activity, operating activity (O), investing activity (I), or financing activity (F), each item relates.

a. _____ Cash received from customers.

b. _____ Cash paid to stockholders (dividends).

c. _____ Cash received from issuing new common stock.

d. _____ Cash paid to suppliers.

e. _____ Cash paid to purchase a new office building.

Determine effect of transactions on stockholders' equity.

BE1.4 **(LO 3), C** Presented below are a number of transactions. Determine whether each transaction affects common stock (C), dividends (D), revenues (R), expenses (E), or does not affect stockholders' equity (NSE). Provide titles for the revenues and expenses.

a. _____ Costs incurred for advertising.

b. _____ Cash received for services performed.

c. _____ Costs incurred for insurance.

d. _____ Amounts paid to employees.

e. _____ Cash distributed to stockholders.

f. _____ Cash received in exchange for allowing the use of the company's building.

g. _____ Costs incurred for utilities used.

h. _____ Cash purchase of equipment.

i. _____ Cash received from investors.

Prepare a balance sheet.

BE1.5 **(LO 3), AP** In alphabetical order below are balance sheet items for Karol Company at December 31, 2025. Prepare a balance sheet following the format of Illustration 1.8.

Accounts payable	$65,000
Accounts receivable	71,000
Cash	22,000
Common stock	18,000
Retained earnings	10,000

Determine where items appear on financial statements.

BE1.6 **(LO 3), K** **Eskimo Pie Corporation** markets a broad range of frozen treats, including its famous Eskimo Pie ice cream bars. The following items were taken from a recent income statement and balance sheet. In each case, identify whether the item would appear on the balance sheet (BS) or income statement (IS).

a. _____ Income tax expense.
b. _____ Inventory.
c. _____ Accounts payable.
d. _____ Retained earnings.
e. _____ Equipment.
f. _____ Sales revenue.
g. _____ Cost of goods sold.
h. _____ Common stock.
i. _____ Accounts receivable.
j. _____ Interest expense.

Determine proper financial statement.

BE1.7 **(LO 3), K** Indicate which statement you would examine to find each of the following items: income statement (IS), balance sheet (BS), retained earnings statement (RES), or statement of cash flows (SCF).

a. _____ Revenue during the period.
b. _____ Supplies on hand at the end of the year.
c. _____ Cash received from issuing new bonds during the period.
d. _____ Total debts outstanding at the end of the period.

Use basic accounting equation.

BE1.8 **(LO 3), AP** Use the basic accounting equation to answer these questions.

a. The liabilities of Lantz Company are $90,000 and the stockholders' equity is $230,000. What is the amount of Lantz's total assets?
b. The total assets of Salley Company are $170,000 and its stockholders' equity is $80,000. What is the amount of its total liabilities?
c. The total assets of Brandon Co. are $800,000 and its liabilities are equal to one-fourth of its total assets. What is the amount of Brandon's stockholders' equity?

Use basic accounting equation.

BE1.9 **(LO 3), AP** At the beginning of the year, Morales Company had total assets of $800,000 and total liabilities of $500,000. (Treat each item independently.)

a. If total assets increased $150,000 during the year and total liabilities decreased $80,000, what is the amount of stockholders' equity at the end of the year?
b. During the year, total liabilities increased $100,000 and stockholders' equity decreased $70,000. What is the amount of total assets at the end of the year?
c. If total assets decreased $80,000 and stockholders' equity increased $110,000 during the year, what is the amount of total liabilities at the end of the year?

Identify assets, liabilities, and stockholders' equity.

BE1.10 **(LO 3), K** Indicate whether each of these items is an asset (A), a liability (L), or part of stockholders' equity (SE).

a. _____ Accounts receivable.
b. _____ Salaries and wages payable.
c. _____ Equipment.
d. _____ Supplies.
e. _____ Common stock.
f. _____ Notes payable.

Determine required parts of annual report.

BE1.11 **(LO 3), K** Which is **not** a required part of an annual report of a publicly traded company?

a. Statement of cash flows.
b. Notes to the financial statements.
c. Management discussion and analysis.
d. All of these are required.

DO IT! Exercises

Identify benefits of business organization forms.

DO IT! 1.1a **(LO 1), C** Identify each of the following organizational characteristics with the business organizational form or forms with which it is associated.

a. Easier to transfer ownership.
b. Easier to raise funds.
c. More owner control.
d. Tax advantages.
e. No personal legal liability.

Identify accounting terms.

DO IT 1.1b **(LO 1), C** Match each of the following terms with its definition, classification type, or associated phrase.

a. _____ Accounting.
b. _____ Internal users of financial information.

1. Creditors, regulatory authorities.
2. Increased independence of outside auditors.

c. _____ Element of Sarbanes-Oxley Act. 3. Information system that identifies, records, and communicates the economic events of an organization to interested users.

d. _____ External users of financial information. 4. Identify the stakeholders.

e. _____ Steps in solving an ethical dilemma. 5. Production supervisors, company officers.

Classify financial statement elements.

DO IT! 1.2 (LO 2), K Classify each item as an asset, liability, common stock, revenue, or expense.

a. Issuance of ownership shares.
b. Land purchased.
c. Amounts owed to suppliers.
d. Bonds payable.
e. Amount recorded from selling a product.
f. Cost of advertising.

Prepare financial statements.

DO IT! 1.3a (LO 3), AP Gray Corporation began operations on January 1, 2025. The following information is available for Gray on December 31, 2025.

Accounts payable	$ 5,000	Notes payable	$ 7,000
Accounts receivable	2,000	Rent expense	10,000
Advertising expense	4,000	Retained earnings	?
Cash	3,100	Service revenue	25,000
Common stock	15,000	Supplies	1,900
Dividends	2,500	Supplies expense	1,700
Equipment	26,800		

Prepare an income statement, a retained earnings statement, and a balance sheet for Gray Corporation.

Identify components of annual reports.

DO IT! 1.3b (LO 3), K Indicate whether each of the following items is most closely associated with the management discussion and analysis (MD&A), the notes to the financial statements, or the auditor's report.

a. Description of ability to pay near-term obligations.
b. Unqualified opinion.
c. Details concerning liabilities, too voluminous to be included in the statements.
d. Description of favorable and unfavorable trends.
e. Certified public accountant (CPA).
f. Descriptions of significant accounting policies.

Exercises

Match items with descriptions.

E1.1 (LO 1, 2, 3), K Here is a list of words or phrases discussed in this chapter:

1. Corporation.
2. Creditor.
3. Accounts receivable.
4. Partnership.
5. Stockholder.
6. Common stock.
7. Accounts payable.
8. Auditor's opinion.
9. Hybrid organizational forms.

Instructions

Match each word or phrase above with the best description of it.

_____ a. An expression about whether financial statements conform with generally accepted accounting principles.
_____ b. A business that raises money by issuing shares of stock.
_____ c. The portion of stockholders' equity that results from receiving cash from investors.
_____ d. Obligations to suppliers of goods.
_____ e. Amounts due from customers.
_____ f. A party to whom a business owes money.
_____ g. Combines tax advantages with limited liability.
_____ h. A party that invests in common stock.
_____ i. A business that is owned jointly by two or more individuals but does not issue stock.

E1.2 **(LO 1), C** Consider the following statements.

Identify forms of business organization.

	Sole Proprietorship	Partnership	Corporation
1. No personal liability.			
2. Owners pay personal income tax on company income.			
3. Generally the easiest form of organization to raise capital.			
4. Ownership indicated by shares.			
5. Owned by one person.			
6. Limited life.			
7. Usually the easiest form of organization to set up.			

Instructions

Complete the above by indicating if each of the statements is normally true (T) or false (F) for each type of business organization: sole proprietorship, partnership, and corporation.

E1.3 **(LO 1), C** The following list presents different types of evaluations made by various users of accounting information.

Identify users of accounting information.

1. Determining if the company can pay for purchases made on account.
2. Determining if the company has complied with income tax regulations.
3. Determining if the company might afford a 1% hourly wage increase.
4. Determining if an advertising campaign was cost-effective.
5. Determining if the company's net income might result in a share price increase.
6. Determining if the company should use debt or equity financing.

Instructions

Complete the following by indicating (a) the number of the evaluation (1 to 6) that the user would most likely make, and (b) if the user is internal or external.

	(a) Type of Evaluation	(b) Type of User
Investor		
Marketing manager		
Creditor		
Chief financial officer		
Internal Revenue Service		
Labor union		

E1.4 **(LO 1, 2, 3), K** The following terms or phrases are discussed in this chapter.

Match items with descriptions.

1. Certified public accountant (CPA).
2. Management discussion and analysis (MD&A).
3. Revenue.
4. Dividends.
5. Stockholders' equity.
6. Net loss.
7. Sole proprietorship.
8. Basic accounting equation.
9. Expenses.
10. Liabilities.
11. Sarbanes-Oxley Act (SOX).

Instructions

Match each term or phrase to its description below.

a. ______ Assets = Liabilities + Stockholders' Equity.

b. ______ An individual who has met certain criteria and is thus allowed to perform audits of corporations.

c. ______ Payments of cash from a corporation to its stockholders.

d. ______ The cost of assets consumed or services used in the process of generating revenues.

e. ______ Amounts owed to creditors in the form of debts and other obligations.

f. ______ A section of the annual report that presents management's views on the company's ability to pay near-term obligations, its ability to fund operations and expansion, and its results of operations.

g. ______ The amount by which expenses exceed revenues.

h. ______ The increase in assets or decrease in liabilities resulting from the sale of goods or the performance of services in the normal course of business.

i. ______ Regulations passed by Congress to reduce unethical corporate behavior.

j. ______ A business owned by one person.

k. ______ The owners' claim to assets.

Identify business activities.

E1.5 **(LO 2), C** All businesses are involved in three types of activities—financing, investing, and operating. Listed below are the names and descriptions of companies in several different industries.

Abitibi-Consolidated Inc.—manufacturer and marketer of newsprint
California State University—Northridge Student Union—university student union
Oracle Corporation—computer software developer and retailer
Aquilini Investment Group—owner of the Vancouver Canucks ice hockey team
Grant Thornton LLP—professional accounting and business advisory firm
Southwest Airlines—low-cost airline

Instructions

a. For each of the above companies, provide examples of (1) a financing activity, (2) an investing activity, and (3) an operating activity that the company likely engages in.

b. Which of the activities that you identified in (a) are common to most businesses? Which activities are not?

Classify business activities.

E1.6 **(LO 2), K** Consider the following business activities that occur at a Colorado ski area.

1. ______ Cash receipts from customers paying for daily ski passes.
2. ______ Payments made to purchase additional snow-making equipment.
3. ______ Payments made to repair the snow-grooming machines.
4. ______ Receipt of funds from the bank to finance the purchase of additional snow-making equipment.
5. ______ Issue of shares to raise funds for a planned expansion.
6. ______ Repayment of a portion of the bank loan (see item 4).
7. ______ Payment of salaries to the ski-lift operators.
8. ______ Payment of dividend to shareholders.

Instructions

Classify each of the above items by type of business activity: operating (O), investing (I), or financing (F).

Classify accounts.

E1.7 **(LO 2, 3), C** The Bonita Vista Golf & Country Club details the following accounts in its financial statements.

Accounts payable	______
Accounts receivable	______
Equipment	______
Sales revenue	______
Service revenue	______
Inventory	______
Mortgage payable	______
Supplies expense	______
Rent expense	______
Salaries and wages expense	______

Instructions

Classify each of the accounts as an asset (A), liability (L), stockholders' equity (SE), revenue (R), or expense (E) item.

E1.8 (LO 3), K Consider the following typical accounts and statement items.

Identify financial statements.

1. ______	Interest income.	**9.** ______	Inventory.
2. ______	Cash.	**10.** ______	Income tax expense.
3. ______	Cash provided by operating activities.	**11.** ______	Interest expense.
4. ______	Service revenue.	**12.** ______	Net cash used by investing activities.
5. ______	Common stock.	**13.** ______	Equipment.
6. ______	Dividends.	**14.** ______	Total stockholders' equity.
7. ______	Retained earnings, beginning of period.	**15.** ______	Bank loan payable.
8. ______	Accounts receivable.		

Instructions

Indicate on which statement—income statement (IS), balance sheet (BS), retained earning statement (RE), and/or statement of cash flows (SCF)—you would find each of the above accounts or items.

E1.9 (LO 3), AP This information relates to Benser Co. for the year 2025.

Prepare income statement and retained earnings statement.

Retained earnings, January 1, 2025	$67,000
Advertising expense	1,800
Dividends	6,000
Rent expense	10,400
Service revenue	58,000
Utilities expense	2,400
Salaries and wages expense	30,000

Instructions

Prepare an income statement and a retained earnings statement for the year ending December 31, 2025.

E1.10 (LO 3), AP Suppose the following information was taken from the 2025 financial statements of pharmaceutical giant **Merck & Co.** (All dollar amounts are in millions.)

Prepare income statement and retained earnings statement.

Retained earnings, January 1, 2025	$43,698.8
Cost of goods sold	9,018.9
Selling and administrative expenses	8,543.2
Dividends	3,597.7
Sales revenue	38,576.0
Research and development expense	5,845.0
Income tax expense	2,267.6

Instructions

a. After analyzing the data, prepare an income statement and a retained earnings statement for the year ending December 31, 2025.

b. Suppose that Merck decided to reduce its research and development expense by 50%. What would be the short-term implications? What would be the long-term implications? How do you think the stock market would react?

E1.11 (LO 3), AP Presented here is information for Zheng Inc. for 2025.

Prepare a retained earnings statement.

Retained earnings, January 1	$130,000
Service revenue	400,000
Total expenses	175,000
Dividends	65,000

Instructions

Prepare the 2025 retained earnings statement for Zheng Inc.

E1.12 (LO 3), AP The following information is available for Randall Inc.

Prepare a balance sheet.

Accounts receivable	$ 2,400	Cash	$ 6,250
Accounts payable	3,700	Supplies	3,760
Interest payable	580	Unearned service revenue	850
Salaries and wages expense	4,500	Salaries and wages payable	745
Notes payable	31,500	Depreciation expense	670
Common stock	50,700	Equipment (net)	108,200
Inventory	2,840		

Instructions

Using the information above, prepare a balance sheet as of December 31, 2025. (*Hint:* Solve for the missing retained earnings amount after first determining total assets and total liabilities.)

Interpret financial data.

E1.13 **(LO 3), AN** Consider each of the following independent situations.

a. The retained earnings statement of Lee Corporation shows dividends of $68,000, while net income for the year was $75,000.

b. The statement of cash flows for Steele Corporation shows that cash provided by operating activities was $10,000, cash used in investing activities was $110,000, and cash provided by financing activities was $130,000.

Instructions

For each company, provide a brief discussion interpreting these financial data. For example, you might discuss the company's financial health or its apparent growth philosophy.

Identify financial statement components and prepare income statement.

E1.14 **(LO 3), AP** The following items and amounts were taken from Lonyear Inc.'s 2025 income statement and balance sheet.

______	Cash	$ 84,700	______	Accounts receivable	$ 88,419
______	Retained earnings	123,192	______	Sales revenue	584,951
______	Cost of goods sold	438,458	______	Notes payable	6,499
______	Salaries and wages expense	115,131	______	Accounts payable	49,384
______	Prepaid insurance	7,818	______	Service revenue	4,806
______	Inventory	64,618	______	Interest expense	1,882

Instructions

a. In each, case, identify on the blank line whether the item is an asset (A), liability (L), stockholders' equity (SE), revenue (R), or expense (E) item.

b. Prepare an income statement for Lonyear Inc. for the year ended December 31, 2025.

Identify financial statement components and prepare income statement.

E1.15 **(LO 3), AP** The following items and amounts were taken from Familia Inc.'s 2025 income statement and balance sheet, the end of its first year of operations.

______	Interest expense	$ 2,200	______	Equipment, net	$54,700
______	Interest payable	700	______	Depreciation expense	3,200
______	Notes payable	11,800	______	Supplies	4,100
______	Sales revenue	44,300	______	Common stock	26,800
______	Cash	2,900	______	Supplies expense	900
______	Salaries and wages expense	15,600			

Instructions

a. In each case, identify on the blank line whether the item is an asset (A), liability (L), stockholders' equity (SE), revenue (R), or expense (E) item.

b. Prepare an income statement for Familia Inc. for December 31, 2025.

Calculate missing amounts.

E1.16 **(LO 3), AN** Here are incomplete financial statements for Donavan, Inc.

Donavan, Inc.
Balance Sheet

Assets		**Liabilities and Stockholders' Equity**	
Cash	$ 7,000	Liabilities	
Inventory	10,000	Accounts payable	$ 5,000
Buildings (net)	45,000	Stockholders' equity	
Total assets	$62,000	Common stock	(a)
		Retained earnings	(b)
		Total liabilities and stockholders' equity	$62,000

Income Statement	
Revenues	$85,000
Cost of goods sold	(c)
Salaries and wages expense	10,000
Net income	$ (d)

Retained Earnings Statement	
Beginning retained earnings	$12,000
Add: Net income	(e)
Less: Dividends	5,000
Ending retained earnings	$27,000

Instructions

Calculate the missing amounts.

E1.17 **(LO 3), AN** Here are incomplete financial statements for Oway Corporation.

Calculate missing amounts.

Oway Corporation
Balance Sheet

Assets		Liabilities and Stockholders' Equity	
Cash	$ 29,000	Liabilities	
Supplies	(a)	Notes payable	$22,000
Equipment (net)	65,000	Stockholders' equity	
Total assets	$ (b)	Common stock	38,000
		Retained earnings	(c)
		Total liabilities and stockholders' equity	$ (d)

Income Statement	
Revenues	$53,000
Depreciation expense	(e)
Salaries and wages expense	10,000
Interest expense	1,000
Net income	$25,000

Retained Earnings Statement	
Beginning retained earnings	$ (f)
Add: Net income	(g)
Less: Dividends	6,000
Ending retained earnings	$37,000

Instructions

Calculate the missing amounts.

E1.18 **(LO 3), AP** Otay Lakes Park is a private camping ground near the Mount Miguel Recreation Area. It has compiled the following financial information as of December 31, 2025.

Compute net income and prepare a retained earnings statement and balance sheet.

Service revenue (from camping fees)	$132,000	Dividends	$ 9,000
Sales revenue (from general store)	25,000	Notes payable	50,000
Accounts payable	11,000	Expenses during 2025	126,000
Cash	8,500	Supplies	5,500
Equipment	114,000	Common stock	40,000
		Retained earnings (1/1/2025)	5,000

Instructions

a. Determine Otay Lakes Park's net income for 2025.

b. Prepare a retained earnings statement and a balance sheet for Otay Lakes Park as of December 31, 2025.

c. Upon seeing this income statement, Walt Jones, the campground manager, immediately concluded, "The general store is more trouble than it is worth—let's get rid of it." The marketing director isn't so sure this is a good idea. What do you think?

Identify financial statement components and prepare an income statement.

E1.19 **(LO 3), AP** **Kellogg Company** is the world's leading producer of ready-to-eat cereal and a leading producer of grain-based convenience foods such as frozen waffles and cereal bars. Suppose the following items were taken from its 2025 income statement and balance sheet. (All dollars are in millions.)

____	Retained earnings	$5,481	____	Bonds payable	$ 4,835
____	Cost of goods sold	7,184	____	Inventory	910
____	Selling and administrative expenses	3,390	____	Sales revenue	12,575
____	Cash	334	____	Accounts payable	1,077
____	Notes payable	44	____	Common stock	105
____	Interest expense	295	____	Income tax expense	498

Instructions

a. In each case, identify whether the item is an asset (A), liability (L), stockholders' equity (SE), revenue (R), or expense (E).

b. Prepare an income statement for Kellogg Company for the year ended December 31, 2025.

Prepare a statement of cash flows.

E1.20 **(LO 3), AP** This information is for Williams Corporation for the year ended December 31, 2025.

Cash received from lenders	$20,000
Cash received from customers	50,000
Cash paid for new equipment	28,000
Cash dividends paid	8,000
Cash paid to suppliers	16,000
Cash balance 1/1/25	12,000

Instructions

a. Prepare the 2025 statement of cash flows for Williams Corporation.

b. Suppose you are one of Williams' creditors. Referring to the statement of cash flows, evaluate Williams' ability to repay its creditors.

Prepare a statement of cash flows.

E1.21 **(LO 3), AP** Suppose the following data are derived from the 2025 financial statements of **Southwest Airlines**. (All dollars are in millions.) Southwest has a December 31 year-end.

Cash balance, January 1, 2025	$1,390
Cash paid for repayment of debt	122
Cash received from issuance of common stock	144
Cash received from issuance of long-term debt	500
Cash received from customers	9,823
Cash paid for property and equipment	1,529
Cash paid for dividends	14
Cash paid for repurchase of common stock	1,001
Cash paid for goods and services	6,978

Instructions

a. After analyzing the data, prepare a statement of cash flows for Southwest Airlines for the year ended December 31, 2025.

b. Discuss whether the company's net cash provided by operating activities was sufficient to finance its investing activities. If it was not, how did the company finance its investing activities?

Correct an incorrectly prepared balance sheet.

E1.22 **(LO 3), AP** Wayne Holtz is the bookkeeper for Beeson Company. Wayne has been trying to get the balance sheet of Beeson Company to balance. It finally balanced, but now he's not sure it is correct.

Beeson Company
Balance Sheet
December 31, 2025

Assets		Liabilities and Stockholders' Equity	
Cash	$18,000	Accounts payable	$16,000
Supplies	9,500	Accounts receivable	(12,000)
Equipment	40,000	Common stock	40,000
Dividends	8,000	Retained earnings	31,500
Total assets	$75,500	Total liabilities and stockholders' equity	$75,500

Instructions

Prepare a correct balance sheet.

Classify items as assets, liabilities, and stockholders' equity, and prepare accounting equation.

Excel

E1.23 (LO 3), AP Suppose the following items were taken from the balance sheet of Nike, Inc. (All dollars are in millions.)

1.	____ Cash	$2,291.1	7.	____ Inventory	$2,357.0
2.	____ Accounts receivable	2,883.9	8.	____ Income taxes payable	86.3
3.	____ Common stock	2,874.2	9.	____ Equipment	1,957.7
4.	____ Notes payable	342.9	10.	____ Retained earnings	5,818.9
5.	____ Buildings	3,759.9	11.	____ Accounts payable	2,815.8
6.	____ Mortgage payable	1,311.5			

Instructions

Perform each of the following.

a. Classify each of these items as an asset (A), liability (L), or stockholders' equity (SE) item.

b. Determine Nike's accounting equation by calculating the value of total assets, total liabilities, and total stockholders' equity.

c. To what extent does Nike rely on debt versus equity financing?

Use financial statement relationships to determine missing amounts.

E1.24 (LO 3), AN The summaries of data from the balance sheet, income statement, and retained earnings statement for two corporations, Walco Corporation and Gunther Enterprises, are presented as follows for 2025.

	Walco Corporation	Gunther Enterprises
Beginning of year		
Total assets	$110,000	$150,000
Total liabilities	70,000	(d)
Total stockholders' equity	(a)	70,000
End of year		
Total assets	(b)	180,000
Total liabilities	120,000	55,000
Total stockholders' equity	60,000	(e)
Changes during year in retained earnings		
Dividends	(c)	5,000
Total revenues	215,000	(f)
Total expenses	165,000	80,000

Instructions

Determine the missing amounts. Assume all changes in stockholders' equity are due to changes in retained earnings.

Classify various items in an annual report.

E1.25 (LO 3), K The annual report provides financial information in a variety of formats, including the following.

Management discussion and analysis (MD&A)
Financial statements
Notes to the financial statements
Auditor's opinion

Instructions

For each of the following, state in what area of the annual report the item would be presented. If the item would probably not be found in an annual report, state "Not disclosed."

a. The total cumulative amount received from stockholders in exchange for common stock.

b. An independent assessment concerning whether the financial statements present a fair depiction of the company's results and financial position.

c. The interest rate that the company is being charged on all outstanding debts.

d. Total revenue from operating activities.

e. Management's assessment of the company's results.

f. The names and positions of all employees hired in the last year.

Classify accounts and prepare balance sheet.

E1.26 **(LO 3), AP** The following list of accounts, in alphabetical order, is for Aventura Inc. at November 30, 2025.

____ Accounts payable	$ 26,200	____ Inventory	$18,000
____ Accounts receivable	19,500	____ Land	44,000
____ Buildings	100,000	____ Mortgage payable	97,500
____ Cash	20,000	____ Notes payable	34,000
____ Common stock	20,000	____ Retained earnings	48,500
____ Equipment, net	30,000	____ Supplies	700
____ Income taxes payable	6,000		

Instructions

a. For each of the above accounts, identify whether it is an asset (A), liability (L), or stockholders' equity (SE) item.

b. Prepare a balance sheet at November 30, 2025.

Problems

Determine forms of business organization.

P1.1 **(LO 1), C** **Writing** Presented below are five independent situations.

a. Three physics professors at MIT have formed a business to improve the speed of information transfer over the Internet for stock exchange transactions. Each has contributed an equal amount of cash and knowledge to the venture. Although their approach looks promising, they are concerned about the legal liability that their business might confront.

b. Bob Colt, a college student looking for summer employment, opened a bait shop in a small shed at a local marina.

c. Alma Ortiz and Jaime Falco each owned separate shoe manufacturing businesses. They have decided to combine their businesses. They expect that within the coming year they will need significant funds to expand their operations.

d. Alice, Donna, and Sam recently graduated with marketing degrees. They have been friends since childhood. They have decided to start a consulting business focused on marketing sporting goods over the Internet.

e. Don Rolls has developed a low-cost GPS device that can be implanted into pets so that they can be easily located when lost. He would like to build a small manufacturing facility to make the devices and then sell them to veterinarians across the country. Don has no savings or personal assets. He wants to maintain control over the business.

Instructions

In each case, explain what form of organization the business is likely to take—sole proprietorship, partnership, or corporation. Give reasons for your choice.

Identify users and uses of financial statements.

P1.2 **(LO 3), C** **Writing** Financial decisions often place heavier emphasis on one type of financial statement over the others. Consider each of the following hypothetical situations independently.

a. **The North Face** is considering extending credit to a new customer. The terms of the credit would require the customer to pay within 30 days of receipt of goods.

b. An investor is considering purchasing common stock of **Amazon.com**. The investor plans to hold the investment for at least 5 years.

c. **JPMorgan Chase** is considering extending a loan to a small company. The company would be required to make interest payments at the end of each year for 5 years, and to repay the loan at the end of the fifth year.

d. The president of **Campbell Soup** is trying to determine whether the company is generating enough cash to increase the amount of dividends paid to investors in this and future years, and still have enough cash to buy equipment as it is needed.

Instructions

In each situation, state whether the decision-maker would be most likely to place primary emphasis on information provided by the income statement, balance sheet, or statement of cash flows. In each case provide a brief justification for your choice. Choose only one financial statement in each case.

P1.3 (LO 3), AP On June 1, 2025, Elite Service Co. was started with an initial investment in the company of $22,100 cash. Here are the assets, liabilities, and common stock of the company at June 30, 2025, and the revenues and expenses for the month of June, its first month of operations:

Prepare an income statement, retained earnings statement, and balance sheet; discuss results.

Excel

Cash	$ 4,600	Notes payable	$12,000
Accounts receivable	4,000	Accounts payable	500
Service revenue	7,500	Supplies expense	1,000
Supplies	2,400	Maintenance and repairs expense	600
Advertising expense	400	Utilities expense	300
Equipment	26,000	Salaries and wages expense	1,400
Common stock	22,100		

During June, the company issued no additional stock but paid dividends of $1,400.

Check figures provide a key number to let you know you are on the right track.

Instructions

a. Prepare an income statement and a retained earnings statement for the month of June and a balance sheet at June 30, 2025.

a. Net income $ 3,800
Ret. earnings $ 2,400
Tot. assets $37,000

b. Briefly discuss whether the company's first month of operations was a success.

c. Discuss the company's decision to distribute a dividend.

P1.4 (LO 3), AP Reese Inc., a provider of consulting services, was founded on October 1, 2025. At the end of the first month of operations, the company decided to prepare an income statement, retained earnings statement, and balance sheet using the following information.

Prepare an income statement, retained earnings statement, and balance sheet.

Accounts payable	$ 3,300	Supplies	$ 2,460
Interest expense	410	Supplies expense	380
Equipment (net)	48,200	Depreciation expense	270
Salaries and wages expense	2,500	Service revenue	20,920
Bonds payable	21,500	Salaries and wages payable	445
Unearned service revenue	4,065	Common stock	9,100
Accounts receivable	1,300	Interest payable	140
Cash	3,950		

Instructions

Using the information, prepare an income statement and retained earnings statement for the month of October 2025 and a balance sheet as of October 31, 2025.

End. retained earnings $17,360

P1.5 (LO 3), AP Presented below is selected financial information for Rojo Corporation for December 31, 2025.

Determine items included in a statement of cash flows, prepare the statement, and comment.

Inventory	$ 25,000	Cash paid to purchase equipment	$ 12,000
Cash paid to suppliers	104,000	Equipment	40,000
Buildings	200,000	Service revenue	100,000
Common stock	50,000	Cash received from customers	132,000
Cash dividends paid	7,000	Cash received from issuing	
Cash at beginning of period	9,000	common stock	22,000

Instructions

a. Prepare the statement of cash flows for Rojo Corporation.

a. Net cash increase $31,000

b. Comment on the adequacy of net cash provided by operating activities to fund the company's investing activities and dividend payments.

Comment on proper accounting treatment and prepare a corrected balance sheet.

P1.6 **(LO 3), AN** **Writing** Micado Corporation was formed on January 1, 2025. At December 31, 2025, Miko Liu, the president and sole stockholder, decided to prepare a balance sheet, which appeared as follows.

Micado Corporation
Balance Sheet
December 31, 2025

Assets		Liabilities and Stockholders' Equity	
Cash	$20,000	Accounts payable	$30,000
Accounts receivable	50,000	Notes payable	15,000
Inventory	36,000	Boat loan	22,000
Boat	24,000	Stockholders' equity	63,000

Miko willingly admits that she is not an accountant by training. She is concerned that her balance sheet might not be correct. She has provided you with the following additional information.

1. The boat actually belongs to Miko, not to Micado Corporation. However, because she thinks she might take customers out on the boat occasionally, she decided to list it as an asset of the company. To be consistent, she also listed as a liability of the corporation her personal loan that she took out at the bank to buy the boat.
2. The inventory was originally purchased for $25,000, but due to a surge in demand Miko now thinks she could sell it for $36,000. She thought it would be best to record it at $36,000.
3. Included in the accounts receivable balance is $10,000 that Miko loaned to her brother 5 years ago. Miko included this in the receivables of Micado Corporation so she wouldn't forget that her brother owes her money.

Instructions

a. Comment on the proper accounting treatment of the three items above.

b. Tot. assets $85,000

b. Provide a corrected balance sheet for Micado Corporation. (*Hint:* To get the balance sheet to balance, adjust stockholders' equity.)

Continuing Case

The **Cookie Creations** case starts in Chapter 1 and continues in every chapter. Complete case details and instructions are available in Wiley Course Resources.

leungchopan/ Shutterstock.com

Cookie Creations

CC1 Natalie Koebel spent much of her childhood learning the art of cookie-making from her grandmother. They spent many happy hours mastering every type of cookie imaginable and later devised new recipes that were both healthy and delicious. Now at the start of her second year in college, Natalie is investigating possibilities for starting her own business as part of the entrepreneurship program in which she is enrolled.

A long-time friend insists that Natalie has to include cookies in her business plan. After a series of brainstorming sessions, Natalie 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 group sessions (which will probably be more entertainment than education) and individual lessons. Natalie also decides to include children in her target market. The first difficult decision is coming up with the perfect name for her business. She settles on "Cookie Creations," and then moves on to more important issues.

Instructions

a. What form of business organization—proprietorship, partnership, or corporation—do you recommend that Natalie use for her business? Discuss the benefits and weaknesses of each form that Natalie might consider.

b. Will Natalie need accounting information? If yes, what information will she need and why? How often will she need this information?

c. Identify specific asset, liability, revenue, and expense accounts that Cookie Creations will likely use to record its business transactions.

d. Should Natalie open a separate bank account for the business? Why or why not?

e. Natalie expects she will have to use her car to drive to people's homes and to pick up supplies, but she also needs to use her car for personal reasons. She recalls from her first-year accounting course something about keeping business and personal assets separate. She wonders what she should do for accounting purposes. What do you recommend?

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT1.1 The financial statements of **Apple Inc.** are presented in Appendix A.

Instructions

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

a. What were Apple's total assets at September 26, 2020? At September 28, 2019?

b. How much cash (and cash equivalents) did Apple have on September 26, 2020?

c. What amount of accounts payable did Apple report on September 26, 2020? On September 28, 2019?

d. What were Apple's net sales in the year ending September 26, 2020? In the year ending September 28, 2019? In the year ending September 29, 2018?

e. What is the amount of the change in Apple's net income from 2019 to 2020?

Comparative Analysis Problem: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT1.2 **Columbia Sportswear Company**'s financial statements are presented in Appendix B. Financial statements of **Under Armour, Inc.** are presented in Appendix C.

Instructions

a. Based on the information in these financial statements, determine the following for each company.

   1. Total liabilities at December 31, 2020.
   2. Net property, plant, and equipment at December 31, 2020.
   3. Net cash provided or (used) in investing activities for 2020.
   4. Net income for 2020.

b. What conclusions concerning the two companies can you draw from these data?

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT1.3 **Amazon.com, Inc.**'s financial statements are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

a. Based on the information contained in these financial statements, determine the following for each company.

   1. Total assets at December 31, 2020, for Amazon and for Walmart at January 31, 2021.
   2. Receivables (net) at December 31, 2020, for Amazon and for Walmart at January 31, 2021.
   3. Net sales (product only) for the year ended in 2020 (2021 for Walmart).
   4. Net income for year ended in 2020 (2021 for Walmart).

b. What conclusions concerning these two companies can be drawn from these data?

Interpreting Financial Statements

CT1.4 **Xerox** was not having a particularly pleasant year. The company's stock price had already fallen in the previous year from $60 per share to $30. Just when it seemed things couldn't get worse, Xerox's stock fell to $4 per share. The following data were taken from the statement of cash flows of Xerox. (All dollars are in millions.)

Cash used in operating activities		$ (663)
Cash used in investing activities		(644)
Financing activities		
Dividends paid	$ (587)	
Net cash received from issuing debt	3,498	
Cash provided by financing activities		2,911

Instructions

Analyze the information and then answer the following questions.

a. If you were a creditor of Xerox, what reaction might you have to the above information?

b. If you were an investor in Xerox, what reaction might you have to the above information?

c. If you were evaluating the company as either a creditor or a stockholder, what other information would you be interested in seeing?

d. Xerox decided to pay a cash dividend. This dividend was approximately equal to the amount paid in the previous year. Discuss the issues that were probably considered in making this decision.

Real-World Focus

CT1.5 You can easily search the Internet to find summary information about companies. This information includes basic descriptions of the company's location, activities, industry, financial health, and financial performance.

Instructions

Go to the **Yahoo! Finance** website, type in a company name, and then use the links (such as Financials) to locate the information necessary to answer the following questions.

a. What is the company's net income? Over what period was this measured?

b. What is the company's total sales? Over what period was this measured?

c. What is the company's industry?

d. What are the names of four companies in this industry?

e. Choose one of the competitors. What is this competitor's name? What is its total sales? What is its net income?

CT1.6 The *Wall Street Journal* published an article by Michael Rapoport entitled "Coming Soon: What Auditors Really Think About Company Numbers." It provides a discussion about changes to be made to the auditor's report.

Instructions

Read the article and then answer the following questions.

a. What did the old auditor's report primarily focus on?

b. What does the new report provide beyond the old report? What are some examples of items that might be discussed?

c. How do the requirements of the new report compare to the requirements of auditor reports in other countries?

d. What criteria must be met in other for an item to be disclosed in the new report?

Decision-Making Across the Organization

CT1.7 Sylvia Ayala recently accepted a job in the production department at **Johnson & Johnson**. Before she starts work, she decides to review the company's annual report to better understand its operations.

The content and organization of corporate annual reports have become fairly standardized. Excluding the public relations part of the report (pictures, products, etc.), the following are the traditional financial portions of the annual report.

- Financial Highlights
- Letter to the Stockholders
- Management's Discussion and Analysis
- Financial Statements
- Notes to the Financial Statements
- Management's Responsibility for Financial Reporting
- Management's Report on Internal Control over Financial Reporting

- Report of Independent Registered Public Accounting Firm
- Selected Financial Data

The official SEC filing of the annual report is called a **Form 10-K**, which often omits the public relations pieces found in most standard annual reports.

Instructions

Search the Internet to find Johnson & Johnson's 10-K report dated for the year ended January 3, 2021, to answer the following questions.

a. What CPA firm performed the audit of Johnson & Johnson's financial statements?

b. What was the amount of Johnson & Johnson's basic earnings per share for the year ended January 3, 2021?

c. What are the company's net sales in foreign countries during the year ended January 3, 2021?

d. What were net sales during the year ended December 30, 2018?

e. How many shares of common stock have been authorized?

f. How much cash was spent on capital expenditures during the year ended January 3, 2021?

g. Over what life does the company depreciate its buildings?

h. What was the value of inventory on December 29, 2019?

Communication Activity

CT1.8 Marci Ling is the bookkeeper for Samco Company, Inc. Marci has been trying to get the company's balance sheet to balance. She finally got it to balance, but she still isn't sure that it is correct.

Samco Company, Inc.
Balance Sheet
For the Month Ended December 31, 2025

Assets		Liabilities and Stockholders' Equity	
Equipment	$18,000	Common stock	$12,000
Cash	9,000	Accounts receivable	(6,000)
Supplies	1,000	Dividends	(2,000)
Accounts payable	(4,000)	Notes payable	10,000
Total assets	$24,000	Retained earnings	10,000
		Total liabilities and stockholders' equity	$24,000

Instructions

Explain to Marci Ling in a memo (a) the purpose of a balance sheet, and (b) why this balance sheet is incorrect and what she should do to correct it.

Ethics Cases

CT1.9 Rules governing the investment practices of individual certified public accountants prohibit them from investing in the stock of a company that their firm audits. The Securities and Exchange Commission (SEC) became concerned that some accountants were violating this rule. In response to an SEC investigation, **PricewaterhouseCoopers** (PwC) fired 10 people and spent $25 million educating employees about the investment rules and installing an investment tracking system.

Instructions

Answer the following questions.

a. Why do you think rules exist that restrict auditors from investing in companies that are audited by their firms?

b. Some accountants argue that they should be allowed to invest in a company's stock as long as they themselves aren't involved in working on the company's audit or consulting. What do you think of this idea?

c. Today, a very high percentage of publicly traded companies are audited by only four very large public accounting firms. These firms also do a high percentage of the consulting work that is done for publicly traded companies. How does this fact complicate the decision regarding whether CPAs should be allowed to invest in companies audited by their firm?

d. Suppose you were a CPA and you had invested in IBM when IBM was not one of your firm's clients. Two years later, after IBM's stock price had fallen considerably, your firm won the IBM audit contract. You will be involved in working with the IBM audit. You know that your firm's rules require that you sell your shares immediately. If you do sell immediately, you will sustain a large loss. Do you think this is fair? What would you do?

e. Why do you think PwC took such extreme steps in response to the SEC investigation?

CT1.10 Ethical behavior is fundamental to communications between investors and companies. However, it is difficult for company founders to control their enthusiasm in discussions related to their company, such that sometimes new companies overstate their potential for future success, either intentionally or unintentionally, in order to generate investor interest.

For example, **Nikola Corporation**, a pioneer in electric semi-trucks, was investigated by U.S. securities regulators because critics claimed that the company's chairperson made false claims about the company's progress in his efforts to make Nikola "the Tesla of semi-trucks." Shortly after its stock began trading publicly, the company was estimated to be worth $30 billion, even though it had yet to produce its first electric truck. Similarly, **Tesla**'s founder and CEO, Elon Musk, has been investigated by the Securities and Exchange Commission a number of times regarding the accuracy of his communications, including Tweets.

Instructions

In groups, discuss the following topics.

a. Should companies be held accountable for the fairness of their communications, or instead should it be the responsibility of investors to determine whether company statements are true and fair?

b. Suppose that you founded a new company. What steps would you take to ensure that your communications were accurate, while still generating enthusiasm with investors?

c. Search the Internet to find information about the allegations and any results of regulatory investigations regarding the accuracy of Elon Musk's communications about Tesla. Provide a brief summary of your findings.

d. What are the potential costs to society of inaccurate company communications to investors?

All About You

CT1.11 Some people are tempted to make their finances look worse to get financial aid. Companies sometimes also manage their financial numbers in order to accomplish certain goals. Earnings management is the planned timing of revenues, expenses, gains, and losses to smooth out bumps in net income. In managing earnings, companies' actions vary from being within the range of ethical activity, to being both unethical and illegal attempts to mislead investors and creditors.

Instructions

Provide responses for each of the following questions.

a. Discuss whether you think each of the following actions (adapted from the **FinAid** website) to increase the chances of receiving financial aid is ethical.

1. Spend down the student's assets and income first, before spending parents' assets and income.
2. Accelerate necessary expenses to reduce available cash. For example, if you need a new car, buy it before applying for financial aid.
3. State that a truly financially dependent child is independent.
4. Have a parent take an unpaid leave of absence for long enough to get below the "threshold" level of income.

b. What are some reasons why a **company** might want to overstate its earnings?

c. What are some reasons why a **company** might want to understate its earnings?

d. Under what circumstances might an otherwise ethical person decide to illegally overstate or understate earnings?

FASB Codification Activity

CT1.12 The FASB has developed the Financial Accounting Standards Board Accounting Standards Codification (or more simply "the Codification"). The FASB's primary goal in developing the Codification is to provide in one place all the authoritative literature related to a particular topic. To provide easy access to the Codification, the FASB also developed the Financial Accounting Standards Board Codification Research System (CRS). CRS is an online, real-time database that provides easy access to the

Codification. The Codification and the related CRS provide a topically organized structure, subdivided into topic, subtopics, sections, and paragraphs, using a numerical index system.

You may find this system useful in your present and future studies, and so we have provided an opportunity to use this online system as part of the *Expand Your Critical Thinking* section.

Instructions

Academic access to the FASB Codification is available through university subscriptions, obtained from the **American Accounting Association**. This subscription covers an unlimited number of students within a single institution. Once this access has been obtained by your school, you should log in and familiarize yourself with the resources that are accessible at the FASB Codification site.

Considering People, Planet, and Profit

CT1.13 Although **Clif Bar & Company** is not a public company, it does share its financial information with its employees as part of its open-book management approach. Further, although it does not publicly share its financial information, it does provide a different form of an annual report to external users. In this report, the company provides information regarding its sustainability efforts.

Instructions

Go to the "Who We Are" page at the Clif Bar website and then identify the company's five aspirations.

Answers to Insight and Accounting Across the Organization Questions

Owning a Piece of the Bar **Q:** What are the benefits to the company and to the employees of making the financial statements available to all employees? **A:** If employees can read and use financial reports, a company will benefit in the following ways. The **marketing department** will make better decisions about products to offer and prices to charge. The **finance department** will make better decisions about debt and equity financing and how much to distribute in dividends. The **production department** will make better decisions about when to buy new equipment and how much inventory to produce. The **human resources department** will be better able to determine whether employees can be given raises. Finally, **all employees** will be better informed about the basis on which they are evaluated, which will increase employee morale.

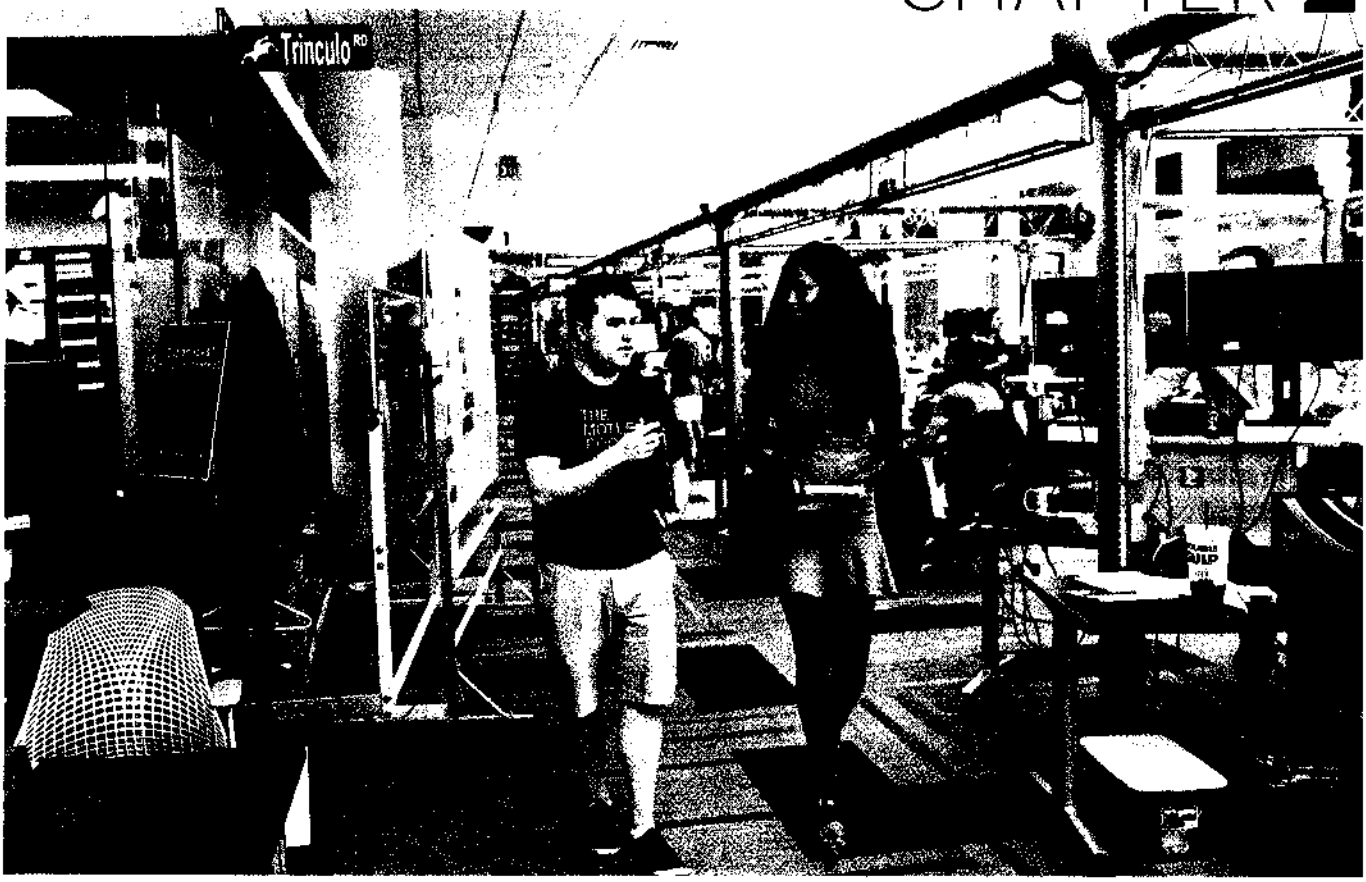
Using Data Science to Create Art **Q:** How can "big data" improve decision-making? **A:** Companies analyze the large amounts of data now available to improve cost estimation for future projects as well as identify bottlenecks and opportunities to increase the efficiency of production processes.

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:** They felt pressured by their supervisors to make the company's financial statements look better than warranted. They should be prosecuted for fraudulent activities under the Sarbanes-Oxley Act, as they knowingly misstated financial statement data.

Beyond Financial Statements **Q:** Why might a company's stockholders 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 oil spill disaster is a classic example of the problems that can occur for a company and its stockholders. BP's stock 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.

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.

CHAPTER 2



A Further Look at Financial Statements

Chapter Preview

If you are thinking of purchasing **Best Buy** stock, or any stock, how can you decide what the shares are worth? If you manage **Columbia Sportswear's** credit department, how should you determine whether to extend credit to a new customer? If you are a financial executive at **Alphabet Inc.** (**Google**), how do you decide whether your company is generating adequate cash to expand operations without borrowing? Your decision in each of these situations will be influenced by a variety of considerations. One of them should be your careful analysis of a company's financial statements.

In this chapter, we take a closer look at the balance sheet and introduce some useful ways for evaluating the information provided by the financial statements. We also examine the financial reporting concepts underlying the financial statements. We begin by introducing the classified balance sheet.

Feature Story

Just Fooling Around?

Two early pioneers in providing investment information online to the masses were Tom and David Gardner, brothers who created an online investor website called **The Motley Fool**. The name comes from Shakespeare's *As You Like It*. The fool in Shakespeare's play was the only one who could speak unpleasant truths to kings and queens without being killed. Tom and David view themselves as 21st-century "fools," revealing the "truths" of the stock market to the small investor, who they feel has been taken advantage of by Wall Street insiders.

The Motley Fool's online bulletin board enables investors to exchange information and insights about companies. (Similar services are provided by **TikTok**, **Twitter**, **Reddit**, **Facebook**, and others.) Critics of these bulletin boards contend that they are simply high-tech rumor mills that cause investors to bid up stock prices to unreasonable levels. For example, the stock of **PairGain Technologies** jumped 32% in a single day as a result of a bogus takeover rumor on an investment bulletin board. Some observers are concerned that small investors—ironically, the very people the Gardner brothers are trying to help—will be hurt the most by misinformation and intentional scams.

Rather than getting swept away by rumors, investors must sort out the good information from the bad. One thing is certain—as information services such as The Motley Fool increase in number, gathering information will become even easier. Evaluating it will be the harder task.

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Identify the sections of a classified balance sheet.	• Current assets • Long-term investments • Property, plant, and equipment • Intangible assets • Current liabilities • Long-term liabilities • Stockholders' equity	**DO IT! 1a** Assets Section of Classified Balance Sheet **1b** Balance Sheet Classifications
LO 2 Use ratios to evaluate a company's profitability, liquidity, and solvency.	• Ratio analysis • Using the income statement • Using a classified balance sheet	**DO IT! 2** Ratio Analysis
LO 3 Discuss financial reporting concepts.	• The standard-setting environment • Qualities of useful information • Assumptions in financial reporting • Principles in financial reporting • Cost constraint	**DO IT! 3** Financial Accounting Concepts and Principles

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.
Visit Wiley Course Resources for additional tutorials and practice opportunities.

2.1 The Classified Balance Sheet

LEARNING OBJECTIVE 1

Identify the sections of a classified balance sheet.

A balance sheet presents a snapshot of a company's financial position at a point in time. It lists individual asset, liability, and stockholders' equity items. To improve users' understanding of a company's financial position, companies often prepare what is referred to as a **classified** balance sheet instead.

- A classified balance sheet 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 balance sheet generally contains the standard classifications listed in **Illustration 2.1**.

ILLUSTRATION 2.1
Standard balance sheet classifications

Assets	Liabilities and Stockholders' Equity
Current assets	Current liabilities
Long-term investments	Long-term liabilities
Property, plant, and equipment	Stockholders' equity
Intangible assets	

These groupings help financial statement readers determine such things as:

1. Whether the company has enough assets to pay its debts as they come due.
2. The claims of short- and long-term creditors on the company's total assets.

Many of these groupings can be seen in the balance sheet of Franklin Corporation shown in **Illustration 2.2** (see **Helpful Hint**). In the sections that follow, we explain each of these groupings.

Current Assets

Current assets are defined as follows.

- Assets that a company expects to convert to cash or use up within one year or its operating cycle, whichever is longer. In Illustration 2.2, Franklin Corporation had current assets of $22,100.
- For most businesses, the cutoff for classification as current assets is one year from the balance sheet 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 the supplies 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 required to go from cash to cash in producing revenue—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 long-term.

ILLUSTRATION 2.2
Classified balance sheet

Franklin Corporation
Balance Sheet
October 31, 2025

Assets			
Current assets			
Cash		$ 6,600	
Debt 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			
Stock investments		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	
Unearned sales revenue		900	
Salaries and wages payable		1,600	
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		14,000	
Retained earnings		20,050	
Total stockholders' equity			34,050
Total liabilities and stockholders' equity			$61,400

HELPFUL HINT

Recall that the accounting equation is Assets = Liabilities + Stockholders' Equity.

Companies list current assets in order of liquidity, that is, the order in which they expect to convert them into cash *(follow this rule when doing your homework)*. Common types of current assets, listed in order of liquidity, are:

1. Cash.
2. Investments (such as short-term U.S. government securities).
3. Receivables (accounts receivable, notes receivable, and interest receivable).

4. Inventories.
5. Prepaid expenses (insurance and supplies).

Why are receivables considered more liquid than inventory? Inventory must be sold before it is converted to cash (and is often sold on account), whereas receivables are converted to cash upon collection.

As explained later in the chapter, a company's current assets are important in assessing its short-term debt-paying ability.

Long-Term Investments

Long-term investments generally include the following (see **Alternative Terminology**).

- Investments in stocks and bonds of other corporations that are held for more than one year.
- Long-term assets such as land or buildings that a company is not currently using in its operating activities.
- Long-term notes receivable.

ALTERNATIVE TERMINOLOGY

Long-term investments are often referred to simply as *investments*.

In Illustration 2.2, Franklin Corporation reported total long-term investments of $7,200 on its balance sheet.

Property, Plant, and Equipment

Property, plant, and equipment is defined as follows.

- Assets with relatively long useful lives that are currently used in operating the business (see **Alternative Terminology**).
- This category includes land, buildings, equipment, delivery vehicles, and furniture.

ALTERNATIVE TERMINOLOGY

Property, plant, and equipment is sometimes called *fixed assets* or *plant assets*.

In Illustration 2.2, Franklin Corporation reported property, plant, and equipment of $29,000.

Notice that in Illustration 2.2, Franklin Corporation subtracts $5,000 in Accumulated Depreciation—Equipment from the Equipment account. **Depreciation** is the systematic allocation of the cost of an asset to expense over number of years (rather than expensing the full purchase price in the year of purchase). The assets that the company depreciates are reported on the balance sheet at cost less accumulated depreciation, often referred to as book value. The **accumulated depreciation** account shows the total amount of depreciation that the company has expensed thus far in the asset's life.

In Illustration 2.2, Franklin Corporation reported accumulated depreciation of $5,000, so the book value of the equipment is $19,000 ($24,000 – $5,000). *In your homework, present each accumulated depreciation account immediately below the related plant asset, as shown in Illustration 2.2 for Franklin Corporation.*

Intangible Assets

Many companies have assets that do not have physical substance and yet often are very valuable:

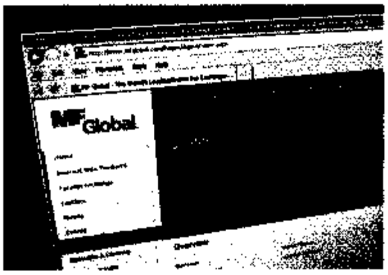
- We call these assets **intangible assets** (see **Helpful Hint**).
- One common intangible is goodwill.
- Other intangibles include patents, copyrights, and trademarks or trade names that give the company **exclusive right** of use for a specified period of time.

HELPFUL HINT

Sometimes intangible assets are reported under a broader heading called "*Other assets*."

In Illustration 2.2, Franklin Corporation reported intangible assets of $3,100.

Investor Insight Best Buy



Bloomberg/Getty Images

I Heard It Through the Grapevine

To show how investor bulletin boards work, suppose that you had $10,000 to invest. You were considering Best Buy, the largest seller of electronics equipment in the United States. You scanned the Internet investor bulletin boards and found messages posted by two different investors. Here are excerpts from actual postings:

TMPVenus: "Where are the prospects for positive movement for this company? Poor margins, poor management, astronomical P/E!"

broachman: "I believe that this is a LONG TERM winner, and presently at a good price."

One says sell, and one says buy. Which posting should you believe? If at that time you had taken "broachman's" advice and purchased the stock, the $10,000 you invested would have been worth over $300,000 five years later. Best Buy was one of America's best-performing stocks during that five-year period of time.

How much reliance should you place on information posted to investor bulletin boards when you are considering investing money? (Answer is available at the end of the chapter.)

ACTION PLAN

- **Present current assets first. Current assets are cash and other resources that the company expects to convert to cash or use up within one year.**
- **Present current assets in the order in which the company expects to convert them into cash.**
- **Subtract accumulated depreciation—equipment from equipment to determine net equipment.**

DO IT! 1a Assets Section of Classified Balance Sheet

Baxter Hoffman recently received the following information related to Hoffman Corporation's December 31, 2025, balance sheet.

Prepaid insurance	$ 2,300	Inventory	$3,400
Cash	800	Accumulated depreciation— equipment	2,700
Equipment	10,700	Accounts receivable	1,100
Debt investments (long-term)	2,100	Trademarks	4,700

Prepare the assets section of Hoffman Corporation's classified balance sheet.

Solution

Hoffman Corporation
Balance Sheet (partial)
December 31, 2025

Assets		
Current assets		
Cash	$ 800	
Accounts receivable	1,100	
Inventory	3,400	
Prepaid insurance	2,300	
Total current assets		$ 7,600
Long-term investments		
Debt investments		2,100
Property, plant, and equipment		
Equipment	10,700	
Less: Accumulated depreciation—equipment	2,700	8,000
Intangible assets		
Trademarks		4,700
Total assets		$22,400

Related exercise material: BE2.2, DO IT! 2.1a, E2.3, and E2.4.

Current Liabilities

In the liabilities and stockholders' equity section of the balance sheet, the first grouping is current liabilities.

- **Current liabilities** are obligations that the company is to pay within the next year or operating cycle, whichever is longer.
- Common examples are accounts payable, salaries and wages payable, notes payable, unearned revenue, interest payable, and income taxes payable.
- Also included as current liabilities are current maturities of long-term obligations—payments to be made within a year of the balance sheet date on long-term obligations.

In Illustration 2.2, Franklin Corporation reported five different types of current liabilities, for a total of $16,050.

Long-Term Liabilities

Long-term liabilities (long-term debt) 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 balance sheet and show the details of the debt in notes that accompany the financial statements. Others list the various types of long-term liabilities. In Illustration 2.2, Franklin Corporation reported long-term liabilities of $11,300.

Stockholders' Equity

Stockholders' equity consists of two parts: common stock and retained earnings.

- Companies record as **common stock** the investments of assets into the business by the stockholders (see Alternative Terminology).
- They record as **retained earnings** the income retained for use in the business.
- These two parts, combined, make up **stockholders' equity** on the balance sheet.

ALTERNATIVE TERMINOLOGY

Common stock is sometimes called *capital stock*.

In Illustration 2.2, Franklin Corporation reported common stock of $14,000 and retained earnings of $20,050.

DO IT! 1b Balance Sheet Classifications

The following financial statement items were taken from the financial statements of Callahan Corp.

_______ Salaries and wages payable	_______ Equipment
_______ Service revenue	_______ Accumulated depreciation—equipment
_______ Interest payable	_______ Depreciation expense
_______ Goodwill	_______ Retained earnings
_______ Debt investments (short-term)	_______ Unearned service revenue
_______ Mortgage payable (due in 3 years)	
_______ Investment in real estate	

Match each of the items to its proper balance sheet classification, shown below. If the item would not appear on a balance sheet, use "NA."

ACTION PLAN

- **Analyze whether each financial statement item is an asset, liability, or stockholders' equity item.**
- **Determine if asset and liability items are current or long-term.**

Current assets (CA)
Long-term investments (LTI)
Property, plant, and equipment (PPE)
Intangible assets (IA)

Current liabilities (CL)
Long-term liabilities (LTL)
Stockholders' equity (SE)

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	NA	Depreciation expense
CA	Debt investments (short-term)	SE	Retained earnings
LTL	Mortgage payable (due in 3 years)	CL	Unearned service revenue

Related exercise material: BE2.1, BE2.2, DO IT! 2.1b, E2.1, E2.2, E2.3, E2.5, E2.6, E2.7, E2.8, and E2.9.

2.2 Analyzing the Financial Statements Using Ratios

LEARNING OBJECTIVE 2

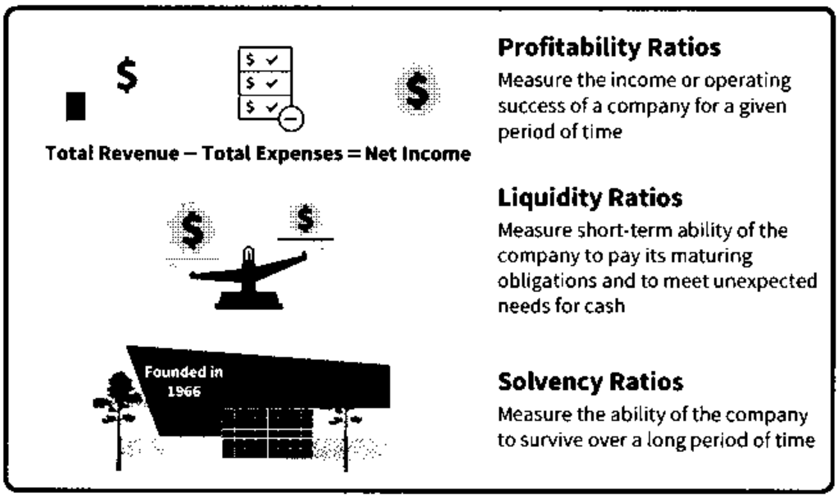
Use ratios to evaluate a company's profitability, liquidity, and solvency.

We previously introduced the four financial statements. We discussed how these statements provide information about a company's performance and financial position. Here, we extend this discussion by showing you specific tools that you can use to analyze financial statements in order to make a more meaningful evaluation of a company.

Ratio Analysis

Ratio analysis expresses the relationship among selected items of financial statement data. A **ratio** expresses the mathematical relationship between one quantity and another. For analysis of the primary financial statements, we classify ratios as shown in **Illustration 2.3**.

ILLUSTRATION 2.3
Financial ratio classifications



A single ratio by itself is not very meaningful. Accordingly, in this and the following chapters, we will use various comparisons to shed light on company performance:

1. **Intracompany comparisons** covering two years for the same company.
2. **Industry-average comparisons** based on average ratios for particular industries.
3. **Intercompany comparisons** based on comparisons with a competitor in the same industry.

Next, we use some ratios and comparisons to analyze the financial statements of **Best Buy**.

Using the Income Statement

Best Buy generates profits for its stockholders by selling electronics.

- The income statement reveals how successful the company is at generating a profit from its sales.
- The income statement reports the amount earned during the period (revenues) and the costs incurred during the period (expenses).

Illustration 2.4 shows a simplified income statement for Best Buy. From this income statement, we can see that Best Buy's net income increased from $1,464 million to $1,541 million.

ILLUSTRATION 2.4

Best Buy's income statement

Real World

Best Buy Co., Inc.
Income Statements
For the Year Ended February 1, 2020,
and the Year Ended February 2, 2019 (in millions)

	2020	**2019**
Revenues		
Net sales and other revenue	$43,686	$42,940
Expenses		
Cost of goods sold	33,590	32,918
Selling, general, and administrative expenses and other	8,103	8,134
Income tax expense	452	424
Total expenses	42,145	41,476
Net income (loss)	$ 1,541	$ 1,464

hhgregg was a competitor of Best Buy. hhgregg was much smaller than Best Buy. At one time, hhgregg operated 228 stores in 20 states. Then, one year it reported a net loss of $54,879,000. The next year, it filed for bankruptcy. Just because a company has a net loss does not mean it is about to go bankrupt. However, because net losses are not sustainable over the long-term, they are worthy of investigation.

To evaluate the profitability of Best Buy, we will use ratio analysis. **Profitability ratios**, such as earnings per share, measure the operating success of a company for a given period of time.

Earnings per Share

Earnings per share (EPS) measures the net income earned on each share of common stock (see **Decision Tools**). Stockholders usually think in terms of the number of shares they own or plan to buy or sell, so stating net income earned as a per share amount provides a useful perspective for determining the investment return. Advanced accounting courses present more refined techniques for calculating earnings per share.

- A basic approach for calculating earnings per share is to divide earnings available to common stockholders by weighted-average common shares outstanding during the year.

Decision Tools

Earnings per share helps users compare a company's performance with that of previous years.

- What is "earnings available to common stockholders"? It is an earnings amount calculated as net income less dividends paid on another type of stock, called preferred stock (Net income − Preferred dividends).

By comparing earnings per share of **a single company over time**, we can evaluate its relative earnings performance from the perspective of a stockholder—that is, on a per share basis. It is very important to note that comparisons of earnings per share across companies are **not meaningful** because of the wide variations in the numbers of shares of outstanding stock among companies.

Illustration 2.5 shows the earnings per share calculation for **Best Buy** in 2020 and 2019, based on the information presented below. To simplify our calculations, we assumed that any change in the number of shares of common stock for Best Buy occurred in the middle of the year.

(in millions)	2020	2019
Net income	$1,541	$1,464
Preferred dividends	−0−	−0−
Shares of common stock outstanding at beginning of year	266	283
Shares of common stock outstanding at end of year	256	266

ILLUSTRATION 2.5
Best Buy's earnings per share

$$\text{Earnings per Share} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Weighted-Average Common Shares Outstanding}}$$

($ and shares in millions)	2020	2019
Earnings per share	$\frac{\$1{,}541 - \$0}{(266 + 256) \div 2} = \$5.90$	$\frac{\$1{,}464 - \$0}{(283 + 266) \div 2} = \$5.33$

Best Buy's earnings per share increased from $5.33 to $5.90. This increase occurred because its net income increased and its outstanding shares decreased.

Using a Classified Balance Sheet

You can learn a lot about a company's financial health by also evaluating the relationship between its various assets and liabilities. **Illustration** 2.6 provides a simplified balance sheet for **Best Buy**.

ILLUSTRATION 2.6
Best Buy's balance sheet

Real World

Best Buy Co., Inc.
Balance Sheets
(in millions)

	February 1, 2020	February 3, 2019
Assets		
Current assets		
Cash and cash equivalents	$ 2,229	$ 1,980
Receivables	1,149	1,015
Merchandise inventories	5,174	5,409
Other current assets	305	466
Total current assets	8,857	8,870
Property and equipment	9,228	9,200
Less: Accumulated depreciation	6,900	6,690
Net property and equipment	2,328	2,510
Other assets	4,406	1,521
Total assets	$15,591	$12,901

ILLUSTRATION 2.6
(continued)

Liabilities and Stockholders' Equity	February 1, 2020	February 3, 2019
Current liabilities		
Accounts payable	$ 5,288	$ 5,257
Unredeemed gift card liabilities	281	290
Accrued compensation payable	410	482
Other current liabilities	2,081	1,484
Total current liabilities	8,060	7,513
Long-term liabilities		
Long-term debt	1,257	1,332
Other long-term liabilities	2,795	750
Total long-term liabilities	4,052	2,082
Total liabilities	12,112	9,595
Stockholders' equity		
Common stock	26	27
Retained earnings and other	3,453	3,279
Total stockholders' equity	3,479	3,306
Total liabilities and stockholders' equity	$15,591	$12,901

Liquidity

Suppose you are a banker at **CitiGroup** considering lending money to Best Buy, or you are a sales manager at **Apple** interested in selling computers and cell phones to Best Buy on credit.

- You would be concerned about Best Buy's **liquidity**—its ability to pay obligations expected to become due within the next year or operating cycle.
- You would look closely at the relationship of its current assets to current liabilities.

Working Capital One measure of liquidity is **working capital**, which is the difference between the amounts of current assets and current liabilities (see **Illustration** 2.7).

Working Capital = Current Assets − Current Liabilities

ILLUSTRATION 2.7
Working capital

- When current assets exceed current liabilities, working capital is positive. When this occurs, there is a greater likelihood that the company will pay its liabilities.
- When working capital is negative, a company might not be able to pay short-term creditors, and the company might ultimately be forced into bankruptcy.

Best Buy had working capital in 2020 of $797 million ($8,857 million − $8,060 million).

Current Ratio **Liquidity ratios** measure the short-term ability of the company to pay its maturing obligations and to meet unexpected needs for cash. One liquidity ratio is the **current ratio**, computed as current assets divided by current liabilities (see **Decision Tools**).

- 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.

Decision Tools
The current ratio helps users determine if a company can meet its near-term obligations.

Illustration 2.8 shows the 2020 and 2019 current ratios for **Best Buy**.

What does the ratio actually mean? Best Buy's 2020 current ratio of 1.10:1 means that for every dollar of current liabilities, Best Buy has $1.10 of current assets. Best Buy's current ratio decreased in 2020, which suggests its liquidity declined.

One potential weakness of the current ratio is that it does not take into account the **composition** of the current assets.

ILLUSTRATION 2.8
Current ratio

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Best Buy
($ in millions)

2020	2019
$\frac{\$8,857}{\$8,060} = 1.10:1$	1.18:1

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?

- A satisfactory current ratio does not disclose whether a portion of the current assets is tied up in slow-moving inventory.
- The composition of the current assets matters because a dollar of cash is more readily available to pay the bills than is a dollar of inventory.

For example, suppose a company's cash balance declined while its merchandise inventory increased substantially. If inventory increased because the company is having difficulty selling its products, then the current ratio might not fully reflect the reduction in the company's liquidity (see **Ethics Note**).

Accounting Across the Organization REL Consultancy Group


jorgeantonio/Getty Images

Can a Company Be Too Liquid?

There actually is a point where a company can be too liquid—that is, it can have too much working capital. 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 from the REL Consultancy Group, the thousand largest U.S. companies had cumulative excess working capital of $1.017 trillion in a recent year. This was an 18% increase, which REL said represented a "deterioration in the management of operations." 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.

More recently, a different study found that companies reduced the number of days it took to convert working capital into cash received from customers from 37.1 days down to 35.7 days.

Sources: Maxwell Murphy, "The Big Number," *Wall Street Journal* (November 9, 2011); and Tatyana Shumsky and Nina Trentmann, "Finance Chiefs Look to Free Up Working Capital Ahead of Rate Increases," *Wall Street Journal* (August 21, 2017).

What can various company managers do to ensure that working capital is managed efficiently to maximize net income? (Answer is available at the end of the chapter.)

Solvency

Now suppose that instead of being a short-term creditor, you are interested in either buying Best Buy's stock or extending the company a long-term loan.

- Long-term creditors and stockholders are interested in a company's **solvency**—its ability to pay interest as it comes due and to repay the balance of a debt due at its maturity.
- **Solvency ratios** measure the ability of the company to survive over a long period of time.

HELPFUL HINT

Some users evaluate solvency using a ratio of liabilities divided by stockholders' equity. The higher this "debt to equity" ratio, the lower is a company's solvency.

Debt to Assets Ratio The **debt to assets ratio** is one measure of solvency. It is calculated by dividing total liabilities (both current and long-term) by total assets. It measures the percentage of total financing provided by creditors rather than stockholders (see **Helpful Hint**).

- Debt financing is more risky than equity financing because debt must be repaid at specific points in time, whether the company is performing well or not.
- Thus, the higher the percentage of debt financing, the riskier the company.

The higher the percentage of total liabilities (debt) to total assets, the greater the risk that the company may be unable to pay its debts as they come due. Illustration 2.9 shows the debt to assets ratios for Best Buy.

ILLUSTRATION 2.9
Debt to assets ratio

$$\text{Debt to Assets Ratio} = \frac{\textbf{Total Liabilities}}{\textbf{Total Assets}}$$

Best Buy
($ in millions)

2020	2019
$\frac{\$12,112}{\$15,591} = 78\%$	74%

The 2020 ratio of 78% means that every dollar of assets was financed by 78 cents of debt. The higher the ratio, the more reliant the company is on debt financing.

- A company with a high debt to assets ratio has a lower equity "buffer" available to creditors if the company becomes insolvent.
- Thus, from the creditors' point of view, a high ratio of debt to assets is undesirable (see Decision Tools).

> **Decision Tools**
> The debt to assets ratio helps users determine if a company can meet its long-term obligations.

The adequacy of this ratio is often judged in light of the company's earnings. At one time, Best Buy and its competitor hhgregg relied on debt financing in a roughly equal fashion, but hhgregg went bankrupt. This is largely explained by the fact that hhgregg's income was insufficient to pay its debt obligations as they came due. Generally, companies with relatively stable earnings, such as public utilities, can support higher debt to assets ratios than can cyclical companies with widely fluctuating earnings, such as many high-tech companies. In later chapters, you will learn additional ways to evaluate solvency.

Investor Insight **When Debt Is Good**

Photo-Dave/Getty Images

Debt financing differs greatly across industries and companies. Here are some debt to assets ratios for selected companies in a recent year:

	Debt to Assets Ratio
Google	23%
Nike	41
Microsoft	48
ExxonMobil	48
Tesla	76

Discuss the difference in the debt to assets ratio of Google and Tesla. (Answer is available at the end of the chapter.)

DO IT! 2 Ratio Analysis

The following information is available for Ozone Inc.

	2025	2024
Current assets	$ 88,000	$ 60,800
Total assets	400,000	341,000
Current liabilities	40,000	38,000

ACTION PLAN

- **Use the formula for earnings per share (EPS): (Net income − Preferred dividends) ÷ Weighted-average common shares outstanding.**

- **Use the formula for the current ratio: Current assets ÷ Current liabilities.**
- **Use the formula for the debt to assets ratio: Total liabilities ÷ Total assets.**

	2025	2024
Total liabilities	120,000	150,000
Net income	100,000	50,000
Preferred dividends	10,000	10,000
Common dividends	5,000	2,500
Common shares outstanding at beginning of year	60,000	40,000
Common shares outstanding at end of year	120,000	60,000

a. Compute earnings per share for 2025 and 2024 for Ozone, and comment on the change. Ozone's primary competitor, Frost Corporation, had earnings per share of $2 in 2025. Comment on the difference in the ratios of the two companies.

b. Compute the current ratio and debt to assets ratio for each year, and comment on the changes.

Solution

a. Earnings per share

2025	2024
$\frac{(\$100{,}000 - \$10{,}000)}{(120{,}000 + 60{,}000) \div 2} = \$1.00$	$\frac{(\$50{,}000 - \$10{,}000)}{(60{,}000 + 40{,}000) \div 2} = \$0.80$

Ozone's profitability, as measured by the amount of income available to each share of common stock, increased by 25% [($1.00 − $0.80) ÷ $0.80] during 2025. Earnings per share should not be compared across companies because the number of shares issued by companies varies widely. Thus, we cannot conclude that Frost Corporation is more profitable than Ozone based on its higher EPS.

b.

	2025	2024
Current ratio	$\frac{\$88{,}000}{\$40{,}000} = 2.20{:}1$	$\frac{\$60{,}800}{\$38{,}000} = 1.60{:}1$
Debt to assets ratio	$\frac{\$120{,}000}{\$400{,}000} = 30\%$	$\frac{\$150{,}000}{\$341{,}000} = 44\%$

The company's liquidity, as measured by the current ratio, improved from 1.60:1 to 2.20:1. Its solvency also improved, as measured by the debt to assets ratio, which declined from 44% to 30%.

Related exercise material: BE2.4, BE2.5, BE2.6, DO IT! 2.2, E2.11, E2.13, E.2.14, and E2.15.

2.3 Financial Reporting Concepts

LEARNING OBJECTIVE 3

Discuss financial reporting concepts.

You have learned about the four financial statements and some basic ways to interpret those statements. In this section, we discuss concepts that underlie these financial statements. It would be unwise to make business decisions based on financial statements without understanding the implications of these concepts.

The Standard-Setting Environment

How does **Best Buy** decide on the type of financial information to disclose? What format should it use? How should it measure assets, liabilities, revenues, and expenses? Accounting professionals at Best Buy and all other U.S. companies get guidance from a set of accounting standards that have authoritative support, referred to as **generally accepted accounting principles (GAAP)**.

Standard-setting bodies, in consultation with the accounting profession and the business community, determine these accounting standards.

- The **Securities and Exchange Commission (SEC)** is the agency of the U.S. government that oversees U.S. financial markets and accounting standard-setting bodies.
- The **Financial Accounting Standards Board (FASB)** is the primary accounting standard-setting body in the United States.
- The **Public Company Accounting Oversight Board (PCAOB)** determines U.S. auditing standards and reviews the performance of auditing firms.
- The **International Accounting Standards Board (IASB)** issues standards called **International Financial Reporting Standards (IFRS)**, which have been adopted by many countries outside of the United States (see **International Note**). Foreign companies that wish to have their shares traded on U.S. stock exchanges do not have to prepare reports that conform with GAAP, as long as their reports conform with IFRS. **Illustration 2.10** shows a global view of the accounting standard-setting bodies and guidance.

International Note
Over 115 countries use international standards. For example, all countries in the European Union follow IFRS.

ILLUSTRATION 2.10
World view of the standard-setting environment

FASB, SEC, PCAOB with GAAP guidance	■ IASB and IFRS guidance

International Insight

Toru-Hanai/Pool/Getty Images

The Korean Discount

If you think that accounting standards don't matter, consider past events in South Korea. For many years, international investors complained that the financial reports of South Korean companies were inadequate and inaccurate. Accounting practices there often resulted in huge differences between stated revenues and actual revenues. Because investors did not have 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 often referred to as the "Korean discount."

In response, Korean regulators adopted 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, and Japan, have either adopted international standards or created standards that are based on the international standards.

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

What is meant by the phrase "make the country's businesses more transparent"? Why would increasing transparency spur economic growth? (Answer is available at the end of the chapter.)

Qualities of Useful Information

The FASB and IASB use 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 FASB, useful information should possess two fundamental qualities, relevance and faithful representation, as shown in **Illustration 2.11.**

ILLUSTRATION 2.11
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 omitting it or misstating it could influence the decision of a financial statement user.

Faithful Representation Faithful representation means that information accurately depicts what really existed or 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 material error.**

Enhancing Qualities

In addition to the two fundamental qualities of relevance and faithful representation, the FASB also describes a number of enhancing qualities of useful information. These include **comparability**, **consistency**, **verifiability**, **timeliness**, and **understandability**, as shown in Illustration 2.12.

ILLUSTRATION 2.12
Enhancing qualities of useful information

Comparability When different companies use the same accounting principles, **comparability** results.

Consistency The quality of **consistency** means that a company uses the same accounting principles and methods from year to year.

Verifiable Information is verifiable if independent observers, using the same methods, obtain similar results. As noted in Chapter 1, certified public accountants (CPAs) perform audits of financial statements to verify their accuracy.

Timely 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. The SEC requires that large public companies provide their annual reports to investors within 60 days of their year-end.

Understandability 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.

Accounting Across the Organization

skodonnell/Getty Images

What Do These Companies Have in Common?

Another issue related to comparability is the accounting time period. An accounting period that is one-year long is called a **fiscal year.** But a fiscal year need not match the calendar year. For example, a company could end its fiscal year on April 30 rather than on December 31.

Why do companies choose the particular year-ends that they do? For example, why doesn't every company use December 31 as its accounting year-end? Many companies choose to end their accounting year when inventory or operations are at a low point. This is advantageous because compiling accounting information requires much time and effort by managers, so they would rather do it when they aren't as busy operating the business. Also, inventory is easier and less costly to count when its volume is low.

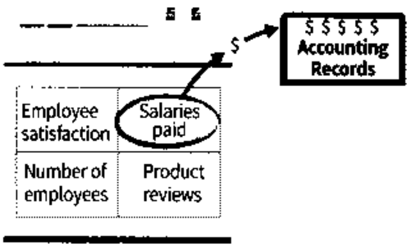
Some companies whose year-ends differ from December 31 are **Delta Air Lines**, June 30; **The Walt Disney Company**, September 30; and **Dunkin' Donuts, Inc.**, October 31. In the notes to its financial statements, **Best Buy** states that its accounting year-end is the Saturday nearest the end of January.

What problems might Best Buy's year-end create for analysts? (Answer is available at the end of the chapter.)

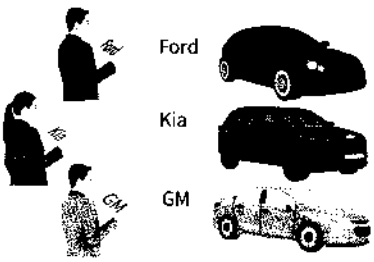
Assumptions in Financial Reporting

To develop accounting standards, the FASB relies on some key assumptions, as shown in **Illustration 2.13** (see **Ethics Note**). These include assumptions about the monetary unit, economic entity, periodicity, and going concern.

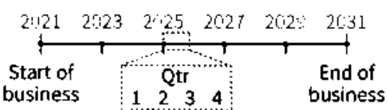
ILLUSTRATION 2.13
Key assumptions in financial reporting



Monetary Unit Assumption The monetary unit assumption 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. This assumption relies on the monetary unit remaining relatively stable in value.



Economic Entity Assumption The economic entity assumption states that every economic entity can be separately identified and accounted for. In order to assess a company's performance and financial position accurately, it is important to not blur company transactions with personal transactions (especially those of its managers) or transactions of other companies.



Periodicity Assumption The periodicity assumption 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. Notice that the income statement, retained earnings statement, and statement of cash flows all cover periods of one year, and the balance sheet is prepared at the end of each year.

Going Concern Assumption The going concern assumption 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. 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

GAAP 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) 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** indicates that assets and liabilities should be reported at fair value (the price that would be received if an asset was sold or the amount that would be required to be paid to 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.

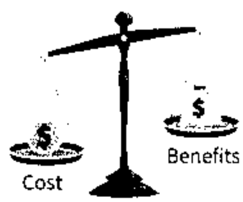
In choosing between cost and fair value, the FASB uses two qualities that make accounting information useful for decision-making—relevance and faithful representation.

- In determining which measurement principle to use, the FASB weighs the factual nature of cost figures versus the relevance of fair value.
- In general, the FASB indicates that most assets must follow the historical cost principle because market values may not be representationally faithful.
- Only in situations where assets are actively traded, such as investment securities, is the fair value principle applied.

Full Disclosure Principle

The **full disclosure principle** requires that companies disclose sufficient details regarding 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.

Illustration 2.14 summarizes aspects of the conceptual framework.

ILLUSTRATION 2.14
Summary of conceptual framework

Objective of Financial Reporting

To provide financial information that is useful to existing and potential investors and creditors in making decisions about providing resources to the company.

Qualitative Characteristics of Useful Financial Information

Fundamental Qualitative Characteristics		Enhancing Qualitative Characteristics
1. Relevance	2. Faithful representation	1. Comparability
• Predictive value	• Complete	2. Verifiability
• Confirmatory value	• Neutral	3. Timeliness
• Materiality	• Free from material error	4. Understandability

ILLUSTRATION 2.14
(continued)

Assumptions	**Principles**
• Monetary unit	• Measurement
• Economic entity	• Historical cost
• Periodicity	• Fair value
• Going concern	• Full disclosure

Cost Constraint

DO IT! 3 Financial Accounting Concepts and Principles

The following items guide the FASB when it creates accounting standards.

Relevance	Periodicity assumption
Faithful representation	Going concern assumption
Comparability	Historical cost principle
Consistency	Full disclosure principle
Monetary unit assumption	Materiality
Economic entity assumption	

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 omitting or misstating an item could influence the decision of a financial statement user.
4. ________ The reporting of sufficient details regarding circumstances and events 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 balance sheet 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 errors and bias in financial statements.
11. ________ Reporting only those things that can be measured in dollars.

ACTION PLAN

- **Understand the need for conceptual guidelines in accounting.**
- **List the characteristics of useful financial information.**
- **Review the assumptions, principles, and constraint that comprise the guidelines in accounting.**

Solution

1. Comparability
2. Going concern assumption
3. Materiality
4. Full disclosure principle
5. Periodicity assumption
6. Relevance
7. Historical cost principle
8. Consistency
9. Economic entity assumption
10. Faithful representation
11. Monetary unit assumption

Related exercise material: BE2.9, BE2.10, BE2.11, DO IT! 2.3, E2.16, E2.17, E2.18, and E2.19.

USING THE DECISION TOOLS | Tweeter Home Entertainment

In this chapter, we evaluated a home electronics giant, Best Buy. **Tweeter Home Entertainment** sold consumer electronics products from 154 stores on the East Coast under various names. It specialized in products with high-end features. Tweeter filed for bankruptcy in June 2007 and was acquired by another company in July 2007. Financial data for Tweeter, prior to its bankruptcy, are provided below.

	September 30	
(amounts in millions)	**2006**	**2005**
Current assets	$146.4	$158.2
Total assets	258.6	284.0
Current liabilities	107.1	119.0
Total liabilities	190.4	201.1
Total common stockholders' equity	68.2	82.9
Net income (loss)	(16.5)	(74.4)
Dividends paid	0	0
Weighted-average shares of common stock (millions)	25.2	24.6

Instructions

Using the data provided, answer the following questions and discuss how these results might have provided an indication of Tweeter's financial troubles.

1. Calculate the current ratio for Tweeter for 2006 and 2005 and discuss its liquidity position.
2. Calculate the debt to assets ratio for Tweeter for 2006 and 2005 and discuss its solvency.
3. Calculate the earnings per share for Tweeter for 2006 and 2005, and discuss its change in profitability.
4. Best Buy's accounting year-end was February 28, 2006; Tweeter's was September 30, 2006. How does this difference affect your ability to compare their profitability?

Solution

1. Current ratio:
   2006: $146.4 ÷ $107.1 = 1.37:1   *2005:* $158.2 ÷ $119.0 = 1.33:1
   Tweeter's liquidity improved slightly from 2005 to 2006, but in both years it would most likely have been considered inadequate. In 2006, Tweeter had only $1.37 in current assets for every dollar of current liabilities. Sometimes larger companies, such as Best Buy, can function with lower current ratios because they have alternative sources of working capital. But a company of Tweeter's size would normally want a higher ratio.

2. Debt to assets ratio:
   2006: $190.4 ÷ $258.6 = 73.6%   *2005:* $201.1 ÷ $284.0 = 70.8%
   Tweeter's solvency, as measured by its debt to assets ratio, declined from 2005 to 2006. Its ratio of 73.6% meant that every dollar of assets was financed by 73.6 cents of debt. For a retailer, this is extremely high reliance on debt. This low solvency suggests Tweeter's ability to meet its debt payments was questionable.

3. Loss per share:
   2006: −$16.5 ÷ 25.2 = −$0.65 per share
   2005: −$74.4 ÷ 24.6 = −$3.02 per share
   Tweeter's loss per share declined substantially. However, this was little consolation for its shareholders, who experienced losses in previous years as well. The company's lack of profitability, combined with its poor liquidity and solvency, increased the likelihood that it would eventually file for bankruptcy.

4. Tweeter's income statement covers 7 months not covered by Best Buy's. Suppose that the economy changed dramatically during this 7-month period, either improving or declining. This change in the economy would be reflected in Tweeter's income statement but would not be reflected in Best Buy's income statement until the following March, thus reducing the usefulness of a comparison of the income statements of the two companies.

Review and Practice

Learning Objectives Review

1 Identify the sections of a classified balance sheet.

In a classified balance sheet, companies classify assets as current assets; long-term investments; property, plant, and equipment; and intangibles. They classify liabilities as either current or long-term. A stockholders' equity section shows common stock and retained earnings.

2 Use ratios to evaluate a company's profitability, liquidity, and solvency.

Ratio analysis expresses the relationship among selected items of financial statement data. Profitability ratios, such as earnings per share (EPS), measure aspects of the operating success of a company for a given period of time.

Liquidity ratios, such as the current ratio, measure the short-term ability of a company to pay its maturing obligations and to meet unexpected needs for cash. Solvency ratios, such as the debt to assets ratio, measure the ability of a company to survive over a long period.

3 Discuss financial reporting concepts.

Generally accepted accounting principles are a set of rules and practices recognized as a general guide for financial reporting purposes. The basic objective of financial reporting is to provide information that is useful for decision-making.

To be judged useful, information should have the primary characteristics of **relevance** and **faithful representation**. In addition, useful information is 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 **periodicity 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 **full disclosure principle** requires that companies disclose sufficient details regarding circumstances and events that would make a difference to financial statement users.

The **cost constraint** weighs the cost that companies incur to provide a type of information against its benefit to financial statement users.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
How does the company's earnings performance compare with that of previous years?	Net income available to common stockholders and weighted-average common shares outstanding	$\text{Earnings per share} = \dfrac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted-average common shares outstanding}}$	A higher measure suggests improved performance, although the number is subject to manipulation. Values should not be compared across companies.
Can the company meet its near-term obligations?	Current assets and current liabilities	$\text{Current ratio} = \dfrac{\text{Current assets}}{\text{Current liabilities}}$	Higher ratio suggests favorable liquidity.
Can the company meet its long-term obligations?	Total liabilities and total assets	$\text{Debt to assets ratio} = \dfrac{\text{Total liabilities}}{\text{Total assets}}$	Lower value suggests favorable solvency.

Glossary Review

Classified balance sheet A balance sheet that groups together similar assets and similar liabilities, using a number of standard classifications and sections. (p. 2-3).

Comparability Ability to compare the accounting information of different companies because they use the same accounting principles. (p. 2-16).

Consistency Use of the same accounting principles and methods from year to year within a company. (p. 2-16).

Cost constraint Constraint that 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. (p. 2-18).

Current assets Assets that companies expect to convert to cash or use up within one year or the operating cycle, whichever is longer. (p. 2-3).

Current liabilities Obligations that a company expects to pay within the next year or operating cycle, whichever is longer. (p. 2-7).

Current ratio A measure of liquidity computed as current assets divided by current liabilities. (p. 2-11).

Debt to assets ratio A measure of solvency calculated as total liabilities divided by total assets. It measures the percentage of total financing provided by creditors. (p. 2-12).

Earnings per share (EPS) A measure of the net income earned on each share of common stock; computed as net income minus preferred dividends divided by the weighted-average number of common shares outstanding during the year. (p. 2-9).

Economic entity assumption An assumption that every economic entity can be separately identified and accounted for. (p. 2-17).

Fair value principle Assets and liabilities should be reported at fair value (the price received to sell an asset or settle a liability). (p. 2-18).

Faithful representation Information that accurately depicts what really happened. (p. 2-16).

Financial Accounting Standards Board (FASB) The primary accounting standard-setting body in the United States. (p. 2-15).

Full disclosure principle Accounting principle that dictates that companies disclose sufficient details regarding circumstances and events that would make a difference to financial statement users. (p. 2-18).

Generally accepted accounting principles (GAAP) A set of accounting standards that have substantial authoritative support and which guide accounting professionals. (p. 2-15).

Going concern assumption The assumption that the company will continue in operation for the foreseeable future. (p. 2-17).

Historical cost principle An accounting principle that states that companies should record assets at their cost. (p. 2-18).

Intangible assets Assets that do not have physical substance. (p. 2-5).

International Accounting Standards Board (IASB) An accounting standard-setting body that issues standards adopted by many countries outside of the United States. (p. 2-15).

International Financial Reporting Standards (IFRS) Accounting standards, issued by the IASB, that have been adopted by many countries outside of the United States. (p. 2-15).

Liquidity The ability of a company to pay obligations that are expected to become due within the next year or operating cycle. (p. 2-11).

Liquidity ratios Measures of the short-term ability of the company to pay its maturing obligations and to meet unexpected needs for cash. (p. 2-11).

Long-term investments Generally, (1) investments in stocks and bonds of other corporations that companies hold for more than one year; (2) long-term assets, such as land and buildings, not currently being used in the company's operations; and (3) long-term notes receivable. (p. 2-5).

Long-term liabilities (long-term debt) Obligations that a company expects to pay after one year. (p. 2-7).

Materiality Whether omitting or misstating an item could influence the decision of a financial statement user. (p. 2-16).

Monetary unit assumption An assumption that requires that only those things that can be expressed in money are included in the accounting records. (p. 2-17).

Operating cycle The average time required to purchase inventory, sell it on account, and then collect cash from customers—that is, go from cash to cash. (p. 2-3).

Periodicity assumption An assumption 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. (p. 2-17).

Profitability ratios Measures of the operating success of a company for a given period of time. (p. 2-9).

Property, plant, and equipment Assets with relatively long useful lives that are currently used in operating the business. (p. 2-5).

Public Company Accounting Oversight Board (PCAOB) The group charged with determining auditing standards and reviewing the performance of auditing firms. (p. 2-15).

Ratio An expression of the mathematical relationship between one quantity and another. (p. 2-8).

Ratio analysis A technique that expresses the relationship among selected items of financial statement data. (p. 2-8).

Relevance The quality of information that indicates the information makes a difference in a decision. (p. 2-16).

Securities and Exchange Commission (SEC) The agency of the U.S. government that oversees U.S. financial markets and accounting standard-setting bodies. (p. 2-15).

Solvency The ability of a company to pay interest as it comes due and to repay the balance of debt due at its maturity. (p. 2-12).

Solvency ratios Measures of the ability of the company to survive over a long period of time. (p. 2-12).

Timely Information that is available to decision-makers before it loses its capacity to influence decisions. (p. 2-16).

Understandability Information presented in a clear and concise fashion so that users can interpret it and comprehend its meaning. (p. 2-16).

Verifiable The quality of information that occurs when independent observers, using the same methods, obtain similar results. (p. 2-16).

Working capital The difference between the amounts of current assets and current liabilities. (p. 2-11).

Practice Multiple-Choice Questions

1. (LO 1) In a classified balance sheet, assets are usually classified as:
   a. current assets; long-term assets; property, plant, and equipment; and intangible assets.
   b. current assets; long-term investments; property, plant, and equipment; and common stock.
   c. current assets; long-term investments; tangible assets; and intangible assets.
   d. current assets; long-term investments; property, plant, and equipment; and intangible assets.
2. (LO 1) Current assets are listed:
   a. by order of expected conversion to cash.
   b. by importance.
   c. by longevity.
   d. alphabetically.
3. (LO 1) The correct order of presentation in a classified balance sheet for the following current assets is:
   a. accounts receivable, cash, prepaid insurance, inventory.
   b. cash, inventory, accounts receivable, prepaid insurance.
   c. cash, accounts receivable, inventory, prepaid insurance.
   d. inventory, cash, accounts receivable, prepaid insurance.
4. (LO 1) 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:
   a. property, plant, and equipment.
   b. land expense.
   c. a long-term investment.
   d. an intangible asset.
5. (LO 1) The balance in retained earnings is **not** affected by:
   a. net income.
   b. net loss.
   c. issuance of common stock.
   d. dividends.
6. (LO 2) Which is an indicator of profitability?
   a. Current ratio.
   b. Earnings per share.
   c. Debt to assets ratio.
   d. Total assets.
7. (LO 2) For 2025, Spanos Corporation reported net income $26,000, net sales $400,000, and weighted-average common shares outstanding 4,000. There were preferred dividends of $2,000. What was the 2025 earnings per share?
   a. $6.00.
   b. $6.50.
   c. $99.50.
   d. $100.00.
8. (LO 2) Which of these measures is an evaluation of a company's ability to pay current liabilities?
   a. Earnings per share.
   b. Current ratio.
   c. Both earnings per share and current ratio.
   d. None of the answer choices is correct.
9. (LO 2) The following ratios are available for Reilly Inc. and O'Hare Inc.

	Current Ratio	Debt to Assets Ratio	Earnings per Share
Reilly Inc.	2:1	75%	$3.50
O'Hare Inc.	1.5:1	40%	$2.75

   Compared to O'Hare Inc., Reilly Inc. has:
   a. higher liquidity, higher solvency, and higher profitability.
   b. lower liquidity, higher solvency, and higher profitability.
   c. higher liquidity, lower solvency, and higher profitability.
   d. higher liquidity and lower solvency, but profitability cannot be compared based on information provided.
10. (LO 2) Companies that can support higher debt to assets ratios are characterized by having:
   a. stable earnings.
   b. fluctuating earnings.
   c. few plant assets.
   d. low amounts of receivables.
11. (LO 3) Generally accepted accounting principles are:
   a. a set of standards and rules that are recognized as a general guide for financial reporting.
   b. usually established by the Internal Revenue Service.
   c. the guidelines used to resolve ethical dilemmas.
   d. fundamental truths that can be derived from the laws of nature.
12. (LO 3) What organization issues U.S. accounting standards?
   a. Financial Accounting Standards Board.
   b. International Accounting Standards Committee.
   c. International Auditing Standards Committee.
   d. None of the answer choices is correct.
13. (LO 3) What is the primary criterion by which accounting information can be judged?
   a. Consistency.
   b. Predictive value.
   c. Usefulness for decision-making.
   d. Comparability.

14. (LO 3) Neutrality is an ingredient of:

	Faithful Representation	Relevance
a.	Yes	Yes
b.	No	No
c.	Yes	No
d.	No	Yes

15. (LO 3) The characteristic of information that evaluates whether omitting or misstating an item could influence the decision of a financial statement user.

a. Comparability.

b. Materiality.

c. Cost.

d. Consistency.

Solutions

1. **d.** Assets are classified as current assets; long-term investments; property, plant and equipment; and intangible assets. The other choices are incorrect because (a) long-term assets includes long-term investments; property, plant, and equipment; and intangible assets; (b) common stock refers to the equity of the firm and is not an asset; and (c) while tangible assets describes property, plant, and equipment, it is better to use the more common terminology of property, plant, and equipment.

2. **a.** Current assets should be listed by order of expected conversion to cash (liquidity), not (b) by importance, (c) by longevity, or (d) alphabetically.

3. **c.** The correct order of presentation for current assets is cash, accounts receivable, inventory, and then prepaid insurance. The other choices are therefore incorrect.

4. **c.** Land or buildings that are currently not used in operations are considered to be long-term investments. The other choices are incorrect because (a) this classification is for property, plant, and equipment used in operations; (b) land is never expensed; and (d) intangible assets have no physical existence and are used in the production of income.

5. **c.** Issuance of common stock has no impact on retained earnings. The other choices are incorrect because (a) net income increases retained earnings, (b) net loss decreases retained earnings, and (d) dividends decrease retained earnings.

6. **b.** Earnings per share is a measure of profitability. The other choices are incorrect because (a) the current ratio is a measure of liquidity, (c) the debt to assets ratio is a measure of solvency, and (d) total assets is a measure of size.

7. **a.** Earnings per share = Net income ($26,000) less Preferred dividends ($2,000) divided by Weighted-average common shares outstanding (4,000) = $6.00 per share, not (b) $6.50, (c) $99.50, or (d) $100.00.

8. **b.** The current ratio measures liquidity. Higher current ratios indicate higher liquidity. The other choices are incorrect because (a) earnings per share is a measure of a firm's profitability, not its ability to pay its current liabilities; (c) one of these answers is incorrect; and (d) there is a correct answer.

9. **d.** Reilly Inc. has higher liquidity as it has a higher current ratio, and lower solvency due to its higher debt to assets ratio. However, profitability cannot be compared across companies using earnings per share because of the wide variations in the number of shares of common stock of different companies. The other choices are therefore incorrect.

10. **a.** In order to meet debt payments as they come due, a company must have a stable earnings stream. The other choices are incorrect as they do not address the ability to meet debt payments as they come due.

11. **a.** All U.S. companies get guidance from a set of rules and practices that have authoritative support, referred to as generally accepted accounting principles (GAAP). Standard-setting bodies, in consultation with the accounting profession and the business community, determine these accounting standards. The other choices are incorrect because GAAP is (b) not established by the Internal Revenue Service, (c) not intended to provide guidance in resolving ethical dilemmas, or (d) created by people and can evolve over time, unlike laws of nature, such as those in physics and chemistry.

12. **a.** The Financial Accounting Standards Board (FASB) is the organization that issues U.S. accounting standards, not the (b) International Accounting Standards Committee or (c) International Auditing Standards Committee. Choice (d) is wrong as there is a correct answer.

13. **c.** Usefulness for decision-making is the primary criterion by which accounting information can be judged. The other choices are incorrect because (a) consistency, (b) predictive value, and (d) comparability all help to make accounting information more useful but are not the primary criterion by which accounting information is judged.

14. **c.** Neutrality is an ingredient of faithful representation but not relevance. The other choices are therefore incorrect.

15. **b.** Materiality evaluates whether omitting or misstating an item could influence the decision of a financial statement user, not (a) comparability, (c) cost, or (d) consistency.

Practice Brief Exercises

Prepare the current assets section of a balance sheet.

1. (LO 1) A list of financial statement items for Miguel Company includes the following: Accounts Receivable $25,000, Prepaid Insurance $7,000, Cash $8,000, Supplies $11,000, and Stock Investments (short-term) $14,000. Prepare the current assets section of the balance sheet, listing the accounts in proper sequence.

Solution

1.

Miguel Company
Balance Sheet (partial)

Current assets	
Cash	$ 8,000
Stock investments	14,000
Accounts receivable	25,000
Supplies	11,000
Prepaid insurance	7,000
Total current assets	$65,000

2. **(LO 1)** The following are the major balance sheet classifications: *Classify accounts on balance sheet.*

Current assets (CA)	Current liabilities (CL)
Long-term investments (LTI)	Long-term liabilities (LTL)
Property, plant, and equipment (PPE)	Common stock (CS)
Intangible assets (IA)	Retained earnings (RE)

Match each of the following accounts to its proper balance sheet classification.

_____ Prepaid insurance	_____ Unearned service revenue
_____ Notes payable (short-term)	_____ Debt investments (short-term)
_____ Equipment	_____ Accumulated depreciation—equipment
_____ Mortgage payable	_____ Stock investments (long-term)
_____ Copyrights	_____ Salaries and wages payable

Solution

2.

CA	Prepaid insurance	CL	Unearned service revenue
CL	Notes payable (short-term)	CA	Debt investments (short-term)
PPE	Equipment	PPE	Accumulated depreciation—equipment
LTL	Mortgage payable	LTI	Stock investments (long-term)
IA	Copyrights	CL	Salaries and wages payable

3. **(LO 2)** Maison Inc. reported the following selected information at December 31. *Calculate liquidity and solvency ratios.*

	2025
Total current assets	$ 45,584
Total assets	278,000
Total current liabilities	32,560
Total liabilities	189,040

Calculate (a) the current ratio and (b) the debt to assets ratio for December 31, 2025.

Solution

3. **a.** Current ratio $= \dfrac{\text{Current assets}}{\text{Current liabilities}} = \dfrac{\$45{,}584}{\$32{,}560} = 1.40{:}1$

b. Debt to assets ratio $= \dfrac{\text{Total liabilities}}{\text{Total assets}} = \dfrac{\$189{,}040}{\$278{,}000} = 68.0\%$

Practice Exercises

Prepare assets section of a classified balance sheet.

1. (LO 1) Suppose the following information (in thousands of dollars) is available for **H. J. Heinz Company**—famous for ketchup and other fine food products—for the year ended April 30, 2025.

Prepaid insurance	$ 168,182	Buildings	$4,344,269
Land	56,007	Cash	617,687
Goodwill	4,411,521	Accounts receivable	1,161,481
Trademarks	723,243	Accumulated depreciation—	
Inventory	1,378,216	buildings	2,295,563

Instructions

Prepare the assets section of a classified balance sheet, listing the items in proper sequence and including a statement heading.

Solution

1.

H. J. Heinz Company
Balance Sheet (partial)
April 30, 2025
(in thousands)

Assets

Current assets			
Cash		$ 617,687	
Accounts receivable		1,161,481	
Inventory		1,378,216	
Prepaid insurance		168,182	
Total current assets			$ 3,325,566
Property, plant, and equipment			
Land		56,007	
Buildings	$4,344,269		
Less: Accumulated depr.—buildings	2,295,563	2,048,706	2,104,713
Intangible assets			
Goodwill		4,411,521	
Trademarks		723,243	5,134,764
Total assets			$10,565,043

Compute and interpret various ratios.

2. (LO 2) Suppose the following data were taken from the 2025 and 2024 financial statements of **American Eagle Outfitters**. (All dollars are in thousands.)

	2025	2024
Current assets	$1,020,834	$1,189,108
Total assets	1,867,680	1,979,558
Current liabilities	376,178	464,618
Total liabilities	527,216	562,246
Net income	400,019	387,359
Dividends paid on common stock	80,796	61,521
Weighted-average common shares outstanding	216,119	222,662

Instructions

Perform each of the following.

- **a.** Calculate the current ratio for each year.
- **b.** Calculate earnings per share for each year.
- **c.** Calculate the debt to assets ratio for each year.
- **d.** Discuss American Eagle's solvency in 2025 versus 2024.

Solution

2.

	2025	2024
a. Current ratio	$\frac{\$1{,}020{,}834}{\$376{,}178} = 2.71{:}1$	$\frac{\$1{,}189{,}108}{\$464{,}618} = 2.56{:}1$
b. Earning per share	$\frac{\$400{,}019}{216{,}119} = \$1.85$	$\frac{\$387{,}359}{222{,}662} = \$1.74$
c. Debt to assets ratio	$\frac{\$527{,}216}{\$1{,}867{,}680} = 28.2\%$	$\frac{\$562{,}246}{\$1{,}979{,}558} = 28.4\%$

d. American Eagle's debt to assets ratio decreased slightly from 28.4% for 2024 to 28.2% for 2025, indicating a very small increase in solvency for 2025.

Practice Problem

Prepare financial statements.

(LO 1) Listed here are items taken from the income statement and balance sheet of Bargain Electronics, Inc. for the year ended December 31, 2025. Certain items have been combined for simplification. (Amounts are given in thousands.)

Notes payable (due in 3 years)	$ 50.5
Cash	141.1
Salaries and wages expense	2,933.6
Common stock	454.9
Accounts payable	922.2
Accounts receivable	723.3
Accumulated depreciation—equipment	110.0
Equipment	1,031.0
Cost of goods sold	9,501.4
Income taxes payable	7.2
Interest expense	1.5
Mortgage payable	451.5
Retained earnings (December 31, 2025)	1,336.3
Inventory	1,636.5
Sales revenue	12,456.9
Debt investments (short-term)	382.6
Income tax expense	30.5
Goodwill	202.7
Notes payable (due in 6 months)	784.6

Instructions

Prepare an income statement and a classified balance sheet using the items listed. Do not use any item more than once.

Solution

Bargain Electronics, Inc.
Income Statement
For the Year Ended December 31, 2025
(in thousands)

Revenues		
Sales revenue		$12,456.9
Expenses		
Cost of goods sold	$9,501.4	
Salaries and wages expense	2,933.6	
Interest expense	1.5	
Income tax expense	30.5	
Total expenses		12,467.0
Net loss		$ (10.1)

Bargain Electronics, Inc.
Balance Sheet
December 31, 2025
(in thousands)

Assets		
Current assets		
Cash	$ 141.1	
Debt investments	382.6	
Accounts receivable	723.3	
Inventory	1,636.5	
Total current assets		$2,883.5
Property, plant and equipment		
Equipment	1,031.0	
Less: Accumulated depreciation—equipment	110.0	921.0
Intangible assets		
Goodwill		202.7
Total assets		$4,007.2
Liabilities and Stockholders' Equity		
Current liabilities		
Notes payable	$ 784.6	
Accounts payable	922.2	
Income taxes payable	7.2	
Total current liabilities		$1,714.0
Long-term liabilities		
Mortgage payable	451.5	
Notes payable	50.5	502.0
Total liabilities		2,216.0
Stockholders' equity		
Common stock	454.9	
Retained earnings	1,336.3	
Total stockholders' equity		1,791.2
Total liabilities and stockholders' equity		$4,007.2

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Questions

1. What is meant by the term operating cycle?
2. Define current assets. What basis is used for ordering individual items within the current assets section?
3. Distinguish between long-term investments and property, plant, and equipment.
4. How do current liabilities differ from long-term liabilities?
5. Identify the two parts of stockholders' equity in a corporation and indicate the purpose of each.
6. **a.** Geena Lowe believes that the analysis of financial statements is directed at two characteristics of a company: liquidity and profitability. Is Geena correct? Explain.

   b. Are short-term creditors, long-term creditors, and stockholders primarily interested in the same characteristics of a company? Explain.

7. Name ratios useful in assessing (a) liquidity, (b) solvency, and (c) profitability.

8. Tom Dawes, the founder of Footwear Inc., needs to raise $500,000 to expand his company's operations. He has been told that raising the money through debt will increase the riskiness of his company much more than issuing stock. He doesn't understand why this is true. Explain it to him.

9. What do these classes of ratios measure?

  a. Liquidity ratios.

  b. Profitability ratios.

  c. Solvency ratios.

10. Holding all other factors constant, indicate whether each of the following signals generally good or bad news about a company.

  a. Increase in earnings per share.

  b. Increase in the current ratio.

  c. Increase in the debt to assets ratio.

11. Which ratio or ratios from this chapter do you think should be of greatest interest to:

  a. a pension fund considering investing in a corporation's 20-year bonds?

  b. a bank contemplating a short-term loan?

  c. an investor in common stock?

12. **a.** What are generally accepted accounting principles (GAAP)?

  b. What body provides authoritative support for GAAP?

13. **a.** What is the primary objective of financial reporting?

  b. Identify the characteristics of useful accounting information.

14. Merle Hawkins, the president of Pathway Company, is pleased Pathway substantially increased its net income in 2025 while keeping its unit inventory relatively the same. Jon Dietz, chief accountant, cautions Merle, however. Dietz says that since Pathway changed its method of inventory valuation, there is a consistency problem and it is difficult to determine whether Pathway is better off. Is Dietz correct? Why or why not?

15. What is the distinction between comparability and consistency?

16. Describe the constraint inherent in the presentation of accounting information.

17. Your roommate believes that accounting standards are uniform throughout the world. Is your roommate correct? Explain.

18. Wanda Roberts is president of Best Texts. She has no accounting background. Wanda cannot understand why fair value is not used as the basis for all accounting measurement and reporting. Discuss.

19. What is the economic entity assumption? Give an example of its violation.

20. What was Apple's largest current asset, largest current liability, and largest item under "Assets" at September 26, 2020?

Brief Exercises

BE2.1 (LO 1), K The following are the major balance sheet classifications:

Classify accounts on balance sheet.

Current assets (CA)	Current liabilities (CL)
Long-term investments (LTI)	Long-term liabilities (LTL)
Property, plant, and equipment (PPE)	Common stock (CS)
Intangible assets (IA)	Retained earnings (RE)

Match each of the following accounts to its proper balance sheet classification.

______ Accounts payable	______ Buildings
______ Accounts receivable	______ Cash
______ Accumulated depreciation	______ Goodwill
______ Income taxes payable	______ Inventory
______ Investment in long-term bonds	______ Patents
______ Land	______ Supplies

BE2.2 (LO 1), K Place a number, 1 through 7, in front of each of the following balance sheet categories to designate the order in which they are to be presented in a classified balance sheet.

Identify the order of asset classifications

______ Long-term investments	______ Current assets
______ Current liabilities	______ Long-term liabilities
______ Stockholders' equity	______ Property, plant, and equipment
______ Intangible assets	

BE2.3 (LO 1), AP A list of financial statement items for Chin Company includes the following: accounts receivable $14,000, prepaid insurance $2,600, cash $10,400, supplies $3,800, and debt investments (short-term) $8,200. Prepare the current assets section of the balance sheet listing the items in the proper sequence.

Prepare the current assets section of a balance sheet.

BE2.4 (LO 2), AP The following information (in millions of dollars) is available for **L Brands** for a recent year: sales revenue $9,043, net income $220, preferred dividend $0, and weighted-average common shares outstanding 333 million. Compute the earnings per share for L Brands.

Compute earnings per share.

Calculate liquidity ratios.

BE2.5 **(LO 2), AP** These selected condensed data are taken from a recent balance sheet of **Bob Evans Farms** (in millions of dollars).

Cash	$ 29.3
Accounts receivable	20.5
Inventory	28.7
Other current assets	24.0
Total current assets	$102.5
Total current liabilities	$201.2

Compute working capital and the current ratio.

Calculate liquidity and solvency ratios.

BE2.6 **(LO 2), AP** Ross Music Inc. reported the following selected information at March 31.

	2025
Total current assets	$262,787
Total assets	439,832
Total current liabilities	293,625
Total liabilities	376,002

Calculate (a) the current ratio and (b) the debt to assets ratio for March 31, 2025.

Recognize generally accepted accounting principles.

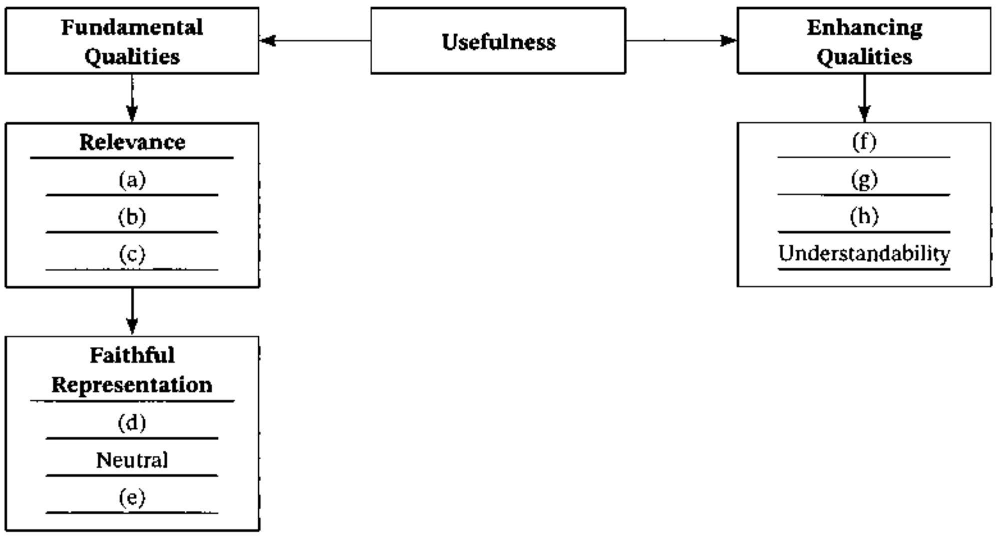
BE2.7 **(LO 3), K** Indicate whether each statement is true or false. If false, indicate how to correct the statement.

a. GAAP is a set of rules and practices established by accounting standard-setting bodies to serve as a general guide for financial reporting purposes.

b. The primary standard-setting body in the United States is the IRS.

Identify characteristics of useful information.

BE2.8 **(LO 3), K** The accompanying chart shows the qualitative characteristics of useful accounting information. Fill in the blanks.



Identify characteristics of useful information.

BE2.9 **(LO 3), K** Given the characteristics of useful accounting information, complete each of the following statements.

a. For information to be _____, it should have predictive and confirmatory value.

b. _____ means that information accurately depicts what really happened.

c. _____ means using the same accounting principles and methods from year to year within a company.

Identify characteristics of useful information.

BE2.10 **(LO 3), K** Here are some qualitative characteristics of useful accounting information:

1. Predictive value
2. Neutral
3. Verifiable
4. Timely

Match each qualitative characteristic to one of the following statements.

______ **a.** Accounting information should help provide accurate expectations about future events.

______ **b.** Accounting information cannot be selected, prepared, or presented to favor one set of interested users over another.

______ **c.** Independent observers, using the same methods, are able to obtain similar results.

______ **d.** Accounting information must be available to decision-makers before it loses its capacity to influence their decisions.

BE2.11 (LO 3), K The full disclosure principle dictates that:

Define full disclosure principle.

a. financial statements should disclose all assets at their cost.

b. financial statements should disclose only those events that can be measured in dollars.

c. financial statements should disclose sufficient detail regarding events and circumstances that would make a difference 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! Exercises

DO IT! 2.1a (LO 1), AP Mylar Corporation has collected the following information related to its December 31, 2025, balance sheet.

Prepare assets section of balance sheet.

Accounts receivable	$22,000	Equipment	$180,000
Accumulated depreciation—equipment	50,000	Inventory	58,000
Cash	13,000	Supplies	7,000
Stock investments (long-term)	1,900	Goodwill	4,100

Prepare the assets section of Mylar Corporation's balance sheet.

DO IT! 2.1b (LO 1), AP The following financial statement items were taken from the financial statements of Gomez Corp.

Classify financial statement items by balance sheet classification.

_____ Trademarks	_____ Inventory
_____ Notes payable (current)	_____ Accumulated depreciation
_____ Interest revenue	_____ Land
_____ Income taxes payable	_____ Common stock
_____ Debt investments (long-term)	_____ Advertising expense
_____ Unearned sales revenue	_____ Mortgage payable (due in 3 years)

Match each of the financial statement items to its proper balance sheet classification. (See E2.1 for a list of the balance sheet classifications.) If the item would not appear on a balance sheet, use "NA."

DO IT! 2.2 (LO 2), AP The following information is available for Nguoi Corporation.

Compute ratios and analyze.

	2025	2024
Current assets	$ 54,000	$ 36,000
Total assets	240,000	205,000
Current liabilities	22,000	30,000
Total liabilities	72,000	100,000
Net income	80,000	40,000
Preferred dividends	6,000	6,000
Common dividends	3,000	1,500
Common shares outstanding at beginning of year	40,000	30,000
Common shares outstanding at end of year	75,000	40,000

a. Compute earnings per share for 2025 and 2024 for Nguoi, and comment on the change. Nguoi's primary competitor, Matisse Corporation, had earnings per share of $1 per share in 2025. Comment on the difference in the ratios of the two companies.

b. Compute the current ratio and debt to assets ratio for each year, and comment on the changes.

DO IT! 2.3 (LO 3), K The following characteristics, assumptions, principles, and constraint guide the FASB when it creates accounting standards.

Identify financial accounting concepts and principles.

Relevance	Periodicity assumption
Faithful representation	Going concern assumption
Comparability	Historical cost principle
Consistency	Full disclosure principle
Monetary unit assumption	Materiality
Economic entity assumption	Cost constraint

Match each item above with a description below.

1. __________ Items not easily quantified in dollar terms are not reported in the financial statements.
2. __________ Accounting information must be complete, neutral, and free from material error.
3. __________ Personal transactions are not mixed with the company's transactions.

4. __________ The cost to provide information should be weighed against the benefit that users will gain from having the information available.
5. __________ A company's use of the same accounting principles from year to year.
6. __________ Assets are recorded and reported at original purchase price.
7. __________ Accounting information should help users predict future events, and should confirm or correct prior expectations.
8. __________ The life of a business can be divided into artificial segments of time.
9. __________ The reporting of sufficient details regarding circumstances and events that would make a difference to financial statement users.
10. __________ The judgment concerning whether omitting or misstating an item could influence the decision of a financial statement user.
11. __________ Assumes a business will remain in operation for the foreseeable future.
12. __________ Different companies use the same accounting principles.

Exercises

Classify accounts on balance sheet.

E2.1 **(LO 1), AP** The following are the major balance sheet classifications.

Current assets (CA)
Long-term investments (LTI)
Property, plant, and equipment (PPE)
Intangible assets (IA)
Current liabilities (CL)
Long-term liabilities (LTL)
Stockholders' equity (SE)

Instructions

Classify each of the following financial statement items taken from Ming Corporation's balance sheet.

____ Accounts payable
____ Accounts receivable
____ Accumulated depreciation—equipment
____ Buildings
____ Cash
____ Interest payable
____ Goodwill
____ Income taxes payable
____ Inventory
____ Stock investments (to be sold in 7 months)
____ Land
____ Mortgage payable
____ Supplies
____ Equipment
____ Prepaid rent

Classify financial statement items by balance sheet classification.

E2.2 **(LO 1), AP** The major balance sheet classifications are listed in E2.1.

Instructions

Classify each of the following financial statement items based upon the major balance sheet classifications listed in E2.1.

____ Prepaid advertising
____ Equipment
____ Trademarks
____ Salaries and wages payable
____ Income taxes payable
____ Retained earnings
____ Accounts receivable
____ Land (held for future use)
____ Patents
____ Bonds payable
____ Common stock
____ Accumulated depreciation—equipment
____ Unearned sales revenue
____ Inventory

Classify items as current or noncurrent, and prepare assets section of balance sheet.

E2.3 **(LO 1), AP** Suppose the following items were taken from the December 31, 2025, assets section of the **Boeing Company** balance sheet. (All dollars are in millions.)

Inventory	$16,933	Patents	$12,528
Notes receivable—due after December 31, 2026	5,466	Buildings	21,579
Notes receivable—due before December 31, 2026	368	Cash	9,215
Accumulated depreciation—buildings	12,795	Accounts receivable	5,785
		Debt investments (short-term)	2,008

Instructions

Prepare the assets section of a classified balance sheet, listing the current assets in order of their liquidity.

Prepare assets section of a classified balance sheet.

Excel

E2.4 (LO 1), AP Suppose the following information (in thousands of dollars) is available for **H. J. Heinz Company**—famous for ketchup and other fine food products—at April 30, 2025.

Prepaid insurance	$ 125,765	Buildings	$4,033,369
Land	76,193	Cash	373,145
Goodwill	3,982,954	Accounts receivable	1,171,797
Trademarks	757,907	Accumulated depreciation—	
Inventory	1,237,613	buildings	2,131,260

Instructions

Prepare the assets section of a classified balance sheet, listing the items in proper sequence and including a statement heading.

Prepare a classified balance sheet.

E2.5 (LO 1), AP These items are taken from the financial statements of Longhorn Co. at December 31, 2025.

Buildings	$105,800
Accounts receivable	12,600
Prepaid insurance	3,200
Cash	11,840
Equipment	82,400
Land	61,200
Insurance expense	780
Depreciation expense	5,300
Interest expense	2,600
Common stock	60,000
Retained earnings (January 1, 2025)	40,000
Accumulated depreciation—buildings	45,600
Accounts payable	9,500
Notes payable	93,600
Accumulated depreciation—equipment	18,720
Interest payable	3,600
Service revenue	14,700

Instructions

Prepare a classified balance sheet. Assume that $13,600 of the note payable will be paid in 2026.

Prepare a classified balance sheet.

E2.6 (LO 1), AP The following items are taken from the financial statements of Carmen Co. at December 31, 2025.

Land	$195,600
Accounts receivable	21,700
Supplies	9,200
Cash	11,840
Equipment	82,400
Buildings	261,200
Land improvements	45,780
Notes receivable (due in 2026)	5,300
Accumulated depreciation—land improvements	12,600
Common stock	75,000
Retained earnings (December 31, 2025)	495,000
Accumulated depreciation—buildings	32,600
Accounts payable	9,500
Mortgage payable	93,600
Accumulated depreciation—equipment	18,720
Interest payable	3,600
Income taxes payable	14,700
Patents	46,700
Investments in stock (long-term)	71,500
Debt investments (short-term)	4,100

Instructions

Prepare a classified balance sheet. Assume that $9,100 of the mortgage payable will be paid in 2026.

Prepare a classified balance sheet.

E2.7 **(LO 1), AP** Suppose the following items were taken from the 2025 financial statements of Texas **Instruments, Inc.** (All dollars are in millions.)

Common stock	$2,826	Accumulated depreciation—equipment	$3,547
Prepaid rent	164	Accounts payable	1,459
Equipment	6,705	Patents	2,210
Stock investments (long-term)	637	Notes payable (long-term)	810
Debt investments (short-term)	1,743	Retained earnings	6,896
Income taxes payable	128	Accounts receivable	1,823
Cash	1,182	Inventory	1,202

Instructions

Prepare a classified balance sheet in good form as of December 31, 2025.

Prepare liabilities and stockholders' equity sections.

E2.8 **(LO 1), AP** Randal Inc.'s balance sheet, dated October 28, 2025, includes the following liabilities and stockholders' equity items (in millions).

Accounts payable	$431.6	Long-term debt	$1,209.8
Common stock	642.4	Other long-term liabilities	122.6
Current portion of long-term debt	254.9	Retained earnings	979.8
Income taxes payable	14.8	Unearned sales revenue	16.0

Instructions

Prepare the liabilities and stockholders' equity sections of the balance sheet.

Prepare a balance sheet.

E2.9 **(LO 1), AP** The financial statements of Summit Ltd. includes the following items at December 31, 2025.

Accounts payable	$ 21,050	Income tax expense	$ 5,200
Accounts receivable	20,780	Interest expense	4,550
Accumulated depreciation—		Interest payable	2,100
buildings	50,600	Land	194,000
Accumulated depreciation—		Long-term investments	28,970
equipment	21,470	Mortgage payable	104,000
Buildings	133,800	Operating expenses	158,680
Cash	24,040	Prepaid insurance	1,420
Common stock	140,000	Retained earnings, January 1	116,520
Equipment	66,100	Service revenue	183,040
		Supplies	1,240

Instructions

a. Calculate net income and the ending balance of retained earnings at December 31, 2025. It is not necessary to prepare a formal income statement or retained earnings statement.

b. Prepare a balance sheet dated December 31, 2025. Assume that the company will pay $30,500 of the mortgage payable in 2026.

Prepare financial statements.

E2.10 **(LO 1), AP** The following financial statement items are for Batra Corporation at year-end, July 31, 2025.

Operating expenses	$ 32,500	Interest payable	$ 1,000
Salaries and wages expense	44,700	Supplies expense	900
Unearned sales revenue	12,000	Dividends declared	12,000
Utilities expense	2,600	Depreciation expense	3,000
Equipment	62,900	Retained earnings, August 1, 2024	17,940
Accounts payable	4,220	Rent expense	10,800
Service revenue	113,600	Income tax expense	5,000
Rent revenue	18,500	Supplies	1,500
Common stock	25,000	Debt investments (short-term)	20,000
Cash	5,060	Bank loan payable (due	
Accounts receivable	17,100	December 31, 2025)	21,800
Accumulated depreciation—		Interest expense	2,000
equipment	6,000		

Instructions

Prepare an income statement, retained earnings statement, and balance sheet for the year.

E2.11 (LO 2), AP Suppose the following information is available for **Callaway Golf Company** for the years 2025 and 2024. (Dollars are in thousands, except share information.)

Compute and interpret profitability ratio.

	2025	2024
Net sales	$ 1,117,204	$ 1,124,591
Net income (loss)	66,176	54,587
Total assets	855,338	838,078
Share information		
Common shares outstanding at year-end	64,507,000	66,282,000
Preferred dividends	–0–	–0–

There were 73,139,000 shares of common stock outstanding at the end of 2023.

Instructions

a. What was the company's earnings per share for each year?

b. Based on your findings above, how did the company's profitability change from 2024 to 2025?

c. Suppose the company had paid dividends on preferred stock and on common stock during the year. How would this affect your calculation in part (a)?

E2.12 (LO 1, 2), AP These financial statement items are for Fairview Corporation at year-end, July 31, 2025.

Prepare financial statements.

Salaries and wages payable	$ 2,080
Salaries and wages expense	57,500
Supplies expense	15,600
Equipment	18,500
Accounts payable	4,100
Service revenue	66,100
Rent revenue	8,500
Notes payable (due in 2028)	1,800
Common stock	16,000
Cash	29,200
Accounts receivable	9,780
Accumulated depreciation—equipment	6,000
Dividends	4,000
Depreciation expense	4,000
Retained earnings (beginning of the year)	34,000

Instructions

a. Prepare an income statement and a retained earnings statement for the year. Fairview Corporation did not issue any new stock during the year.

b. Prepare a classified balance sheet at July 31.

c. Compute the current ratio and debt to assets ratio.

d. Suppose that you are the president of Lunar Equipment. Your sales manager has approached you with a proposal to sell $20,000 of equipment to Fairview. He would like to provide a loan to Fairview in the form of a 10%, 5-year note payable. Evaluate how this loan would change Fairview's current ratio and debt to assets ratio, and discuss whether you would make the sale.

E2.13 (LO 2), AP Nordstrom, Inc. operates department stores in numerous states. Selected financial statement data (in millions of dollars) for a recent year follow.

Compute liquidity ratios and compare results.

	Beginning of Year	End of Year
Cash and cash equivalents	$ 358	$ 72
Receivables (net)	1,788	1,942
Merchandise inventory	956	900
Other current assets	259	303
Total current assets	$3,361	$3,217
Total current liabilities	$1,635	$1,601

Instructions

a. Compute working capital and the current ratio at the beginning of the year and at the end of the year.

b. Did Nordstrom's liquidity improve or worsen during the year?

c. Using the data in the chapter, compare Nordstrom's liquidity with **Best Buy**'s.

Compute liquidity measures and discuss findings.

E2.14 **(LO 2), AP** The chief financial officer (CFO) of Myeneke Corporation requested that the accounting department prepare a preliminary balance sheet on December 30, 2025, so that the CFO could get an idea of how the company stood. He knows that certain debt agreements with its creditors require the company to maintain a current ratio of at least 2:1. The preliminary balance sheet is as follows.

Myeneke Corp.
Balance Sheet
December 30, 2025

Current assets			Current liabilities		
Cash	$25,000		Accounts payable	$ 20,000	
Accounts receivable	30,000		Salaries and wages payable	10,000	$ 30,000
Prepaid insurance	5,000	$ 60,000	Long-term liabilities		
Equipment (net)		200,000	Notes payable		80,000
Total assets		$260,000	Total liabilities		110,000
			Stockholders' equity		
			Common stock	100,000	
			Retained earnings	50,000	150,000
			Total liabilities and stockholders' equity		$260,000

Instructions

a. Calculate the current ratio and working capital based on the preliminary balance sheet.

b. Based on the results in (a), the CFO requested that $20,000 of cash be used to pay off the balance of the Accounts Payable account on December 31, 2025. Calculate the new current ratio and working capital after the company takes these actions.

c. Discuss the pros and cons of the current ratio and working capital as measures of liquidity.

d. Was it unethical for the CFO to take these steps?

Compute and interpret solvency ratios.

E2.15 **(LO 2), AP** Suppose the following data were taken from the 2025 and 2024 financial statements of **American Eagle Outfitters**. (All numbers, including share data, are in thousands.)

	2025	**2024**
Current assets	$ 925,359	$1,020,834
Total assets	1,963,676	1,867,680
Current liabilities	401,763	376,178
Total liabilities	554,645	527,216
Net income	179,061	400,019
Dividends paid on common stock	82,394	80,796
Weighted-average common shares outstanding	205,169	216,119

Instructions

Perform each of the following.

a. Calculate the current ratio for each year.

b. Calculate earnings per share for each year.

c. Calculate the debt to assets ratio for each year.

d. Discuss American Eagle's solvency in 2025 versus 2024.

Identify qualitative characteristics.

E2.16 **(LO 3), K** Here are some fundamental and enhancing qualitative characteristics of financial information.

1. Comparability	5. Free from material error	9. Relevance
2. Completeness	6. Materiality	10. Timeliness
3. Confirmatory value	7. Neutrality	11. Understandability
4. Faithful representation	8. Predictive value	12. Verifiability

Instructions

Match each of the above characteristics to one of the following statements, using the numbers 1 to 12.

a. _____ Accounting information cannot be selected, prepared, or presented to favor one set of interested users over another.

b. _____ Accounting information must be available to decision-makers before it loses its ability to influence their decisions.

c. _____ Accounting information is prepared on the assumption that users have a reasonable understanding of accounting and general business and economic conditions.

d. _____ Accounting information provides a basis to evaluate a previously made decision.

e. _____ Accounting information includes everything that it needs to; nothing important is omitted. This is an important component of faithful representation.

f. _____ Accounting information helps users make predictions about the outcome of past, present, and future events.

g. _____ Accounting information about one company can be evaluated against the accounting information from another company.

h. _____ Accounting information is included if its omission or misstatement could influence the decisions of financial statement users. This is an important component of relevance.

i. _____ All the accounting information that is necessary to faithfully represent economic reality is included.

j. _____ Accounting information has few inaccuracies.

k. _____ Accounting information that will make a difference in users' decisions.

l. _____ Accounting information about a company can be confirmed by two or more independent users to be a faithful representation.

E2.17 **(LO 3), K** Presented below are the assumptions and principles discussed in this chapter.

Identify accounting assumptions and principles.

1. Full disclosure principle
2. Going concern assumption
3. Monetary unit assumption
4. Periodicity 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.** Belief that a company will remain in business for the foreseeable future. (*Note:* Do not use the historical cost principle.)

_____ **b.** Indicates that personal and business recordkeeping should be separately maintained.

_____ **c.** Only those things that can be expressed in money are included in the accounting records.

_____ **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 sufficient details regarding circumstances and events that would make a difference to financial statement users.

E2.18 **(LO 1, 2, 3), K** The following list of terms or phrases are discussed in this chapter.

Identify accounting terminology.

1. Securities and Exchange Commission (SEC)
2. Solvency
3. Financial Accounting Standards Board (FASB)
4. Materiality
5. Cost constraint
6. Faithful representation
7. Liquidity
8. Working capital
9. Operating cycle
10. Generally accepted accounting principles (GAAP)
11. Current liabilities
12. Relevance
13. Verifiable

Instructions

Match each term or phrase to its description below.

a. _____ Whether omitting or misstating an item could influence the decision of a financial statement user.

b. _____ Constraint that 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.

c. ______ Obligations that a company expects to pay within the next year or operating cycle, whichever is longer.

d. ______ Information that is complete, neutral, and free from material error.

e. ______ The primary accounting standard-setting body in the United States.

f. ______ A set of accounting standards that has substantial authoritative support and which guide accounting professionals.

g. ______ The ability of a company to pay obligations that are expected to become due within the next year or operating cycle.

h. ______ The average time required to purchase inventory, sell it on account, and then collect cash from customers—that is, go from cash to cash.

i. ______ The information has predictive value as well as confirms or corrects prior expectations.

j. ______ The agency of the U.S. government that oversees U.S. financial markets and accounting standard-setting bodies.

k. ______ The quality of information that occurs when independent observers, using the same methods, obtain similar results.

l. ______ The difference between the amounts of current assets and current liabilities.

m. ______ The ability of a company to pay interest as it comes due and to repay the balance of a debt due at its maturity.

Identify the assumption or principle that has been violated.

E2.19 **(LO 3), C** Lopez Co. had three major business transactions during 2025.

a. Reported at its fair value of $260,000 merchandise inventory with a cost of $208,000.

b. The president of Lopez Co., Victor Lopez, purchased a truck for personal use and charged it to his expense account.

c. Lopez Co. wanted to make its 2025 income look better, so it added 2 more weeks to its income statement reporting period (a 54-week year). Previous 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.

Problems

Prepare a classified balance sheet.

P2.1 **(LO 1), AP** Suppose the following items are taken from the 2025 balance sheet of **Verizon Communications.** (All dollars are in millions.)

Goodwill	$3,927
Common stock	6,283
Equipment	1,737
Accounts payable	152
Patents	234
Stock investments (long-term)	3,247
Accounts receivable	1,061
Prepaid rent	233
Debt investments (short-term)	1,160
Retained earnings	6,108
Cash	2,292
Notes payable (long-term)	734
Unearned sales revenue	413
Accumulated depreciation—equipment	201

Tot. current assets $4,746
Tot. assets $13,690

Instructions

Prepare a classified balance sheet for Verizon Communications as of December 31, 2025.

P2.2 **(LO 1), AP** These items are taken from the financial statements of Martin Corporation for 2025.

Prepare financial statements.

Retained earnings (beginning of year)	$31,000
Utilities expense	2,000
Equipment	66,000
Accounts payable	18,300
Cash	10,100
Salaries and wages payable	3,000
Common stock	22,800
Dividends	12,000
Supplies	3,100
Debt investment (long-term)	5,700
Trademarks	2,000
Service revenue	68,000
Prepaid insurance	3,500
Maintenance and repairs expense	1,800
Depreciation expense	3,600
Accounts receivable	11,700
Insurance expense	2,200
Salaries and wages expense	37,000
Accumulated depreciation—equipment	17,600

Instructions

Prepare an income statement, a retained earnings statement, and a classified balance sheet as of December 31, 2025.

Net income	$21,400
Tot. assets	$84,500

P2.3 **(LO 1), AP** You are provided with the following information for Lazuris Enterprises, effective as of its April 30, 2025, year-end.

Prepare financial statements.

Accounts payable	$ 834
Accounts receivable	810
Accumulated depreciation—equipment	670
Cash	1,270
Common stock	16,900
Cost of goods sold	1,060
Depreciation expense	335
Dividends	325
Equipment	2,420
Goodwill	1,800
Income tax expense	165
Income taxes payable	135
Insurance expense	210
Interest expense	400
Inventory	967
Investment in land	14,200
Land	3,100
Mortgage payable (long-term)	3,500
Notes payable (short-term)	61
Prepaid insurance	60
Retained earnings (beginning)	1,600
Salaries and wages expense	700
Salaries and wages payable	222
Sales revenue	5,100
Stock investments (short-term)	1,200

Instructions

a. Prepare an income statement and a retained earnings statement for Lazuris Enterprises for the year ended April 30, 2025.

b. Prepare a classified balance sheet for Lazuris Enterprises as of April 30, 2025.

a. Net income	$2,230
b. Tot. current assets	$4,307
Tot. assets	$25,157

Compute ratios; comment on relative profitability, liquidity, and solvency.

P2.4 **(LO 2), AN** **Writing** Comparative financial statement data for Loeb Corporation and Bowsh Corporation, two competitors, appear below. All balance sheet data are as of December 31, 2025.

	Loeb Corporation	Bowsh Corporation
Net sales	$1,800,000	$620,000
Cost of goods sold	1,175,000	340,000
Operating expenses	283,000	98,000
Interest expense	9,000	3,800
Income tax expense	85,000	36,000
Current assets	407,200	190,336
Plant assets (net)	532,000	139,728
Current liabilities	66,325	33,716
Long-term liabilities	108,500	40,684
Dividends paid on common stock	36,000	15,000
Weighted-average common shares outstanding	80,000	50,000

Instructions

a. Comment on the relative profitability of the companies by computing the net income and earnings per share for each company for 2025.

b. Comment on the relative liquidity of the companies by computing working capital and the current ratio for each company for 2025.

c. Comment on the relative solvency of the companies by computing the debt to assets ratio for each company for 2025.

Compute and interpret liquidity, solvency, and profitability ratios.

P2.5 **(LO 2), AP** **Writing** The following are financial statements of Ohara Company.

Ohara Company
Income Statement
For the Year Ended December 31, 2025

Net sales	$2,218,500
Cost of goods sold	1,012,400
Selling and administrative expenses	906,000
Interest expense	78,000
Income tax expense	69,000
Net income	$ 153,100

Ohara Company
Balance Sheet
December 31, 2025

Assets	
Current assets	
Cash	$ 60,100
Debt investments	84,000
Accounts receivable (net)	169,800
Inventory	145,000
Total current assets	458,900
Plant assets (net)	575,300
Total assets	$1,034,200
Liabilities and Stockholders' Equity	
Current liabilities	
Accounts payable	$ 160,000
Income taxes payable	35,500
Total current liabilities	195,500
Bonds payable	200,000
Total liabilities	395,500
Stockholders' equity	
Common stock	350,000
Retained earnings	288,700
Total stockholders' equity	638,700
Total liabilities and stockholders' equity	$1,034,200

Additional information: The weighted-average common shares outstanding during the year was 50,000.

Instructions

a. Compute the following values and ratios for 2025. (We provide the results from 2024 for comparative purposes.)

(i) Working capital. (2024: $160,500)

(ii) Current ratio. (2024: 1.65:1)

(iii) Debt to assets ratio. (2024: 31%)

(iv) Earnings per share. (2024: $3.15)

b. Using your calculations from part (a), discuss changes from 2024 in liquidity, solvency, and profitability.

P2.6 **(LO 2), AP** **Writing** Condensed balance sheet and income statement data for Danke Corporation are presented as follows.

Compute and interpret liquidity, solvency, and profitability ratios.

Danke Corporation
Balance Sheets
December 31

	2025	2024
Assets		
Cash	$ 28,000	$ 20,000
Receivables (net)	70,000	62,000
Other current assets	90,000	73,000
Long-term investments	62,000	60,000
Property, plant, and equipment (net)	510,000	470,000
Total assets	$760,000	$685,000
Liabilities and Stockholders' Equity		
Current liabilities	$ 75,000	$ 70,000
Long-term liabilities	80,000	90,000
Common stock	330,000	300,000
Retained earnings	275,000	225,000
Total liabilities and stockholders' equity	$760,000	$685,000

Danke Corporation
Income Statements
For the Years Ended December 31

	2025	2024
Sales revenue	$750,000	$680,000
Cost of goods sold	440,000	400,000
Operating expenses (including income taxes)	240,000	220,000
Net income	$ 70,000	$ 60,000

Additional information:

	2025	2024
Dividends paid	$20,000	$15,000
Weighted-average common shares outstanding	33,000	30,000

Instructions

Compute these values and ratios for 2024 and 2025.

a. Earnings per share.

b. Working capital.

c. Current ratio.

d. Debt to assets ratio.

e. Based on the ratios calculated, discuss briefly the improvement or lack thereof in financial position and operating results from 2024 to 2025 of Danke Corporation.

Compute ratios and compare liquidity and solvency for two companies.

P2.7 **(LO 2), AP** Selected financial data of two competitors, **Target** and **Walmart**, are presented here. (All dollars are in millions.) Suppose the data were taken from the 2025 financial statements of each company.

	Target (1/31/25)	**Walmart (1/31/25)**
	Income Statement Data for Year	
Net sales	$64,948	$401,244
Cost of goods sold	44,157	306,158
Selling and administrative expenses	16,389	76,651
Interest expense	894	2,103
Other income	28	4,213
Income taxes	1,322	7,145
Net income	$ 2,214	$ 13,400
	Balance Sheet Data (End of Year)	
Current assets	$17,488	$ 48,949
Noncurrent assets	26,618	114,480
Total assets	$44,106	$163,429
Current liabilities	$10,512	$ 55,390
Long-term liabilities	19,882	42,754
Total stockholders' equity	13,712	65,285
Total liabilities and stockholders' equity	$44,106	$163,429
Weighted-average common shares outstanding (millions)	774	3,951

Instructions

For each company, compute these values and ratios.

a. Working capital.

b. Current ratio.

c. Debt to assets ratio.

d. Earnings per share.

e. Compare the liquidity and solvency of the two companies.

Comment on the objectives and qualitative characteristics of financial reporting.

P2.8 **(LO 3), E** **Writing** A friend of yours, Saira Ortiz, recently completed an undergraduate degree in science and has just started working with a biotechnology company. Saira 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. Saira said that her boss told her that the company must put together a report to present to potential investors.

Saira 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? Explain to Saira what is meant by generally accepted accounting principles.

b. Comment on how Saira'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 Saira wants to include in the information for investors will conform to financial reporting guidelines?

Continuing Case

Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapter 1.)

CC2 After investigating the different forms of business organization, Natalie Koebel decides to operate her business as a corporation, Cookie Creations Inc. She then begins the process of getting her business running.

Go to Wiley Course Resources for complete case details and instructions.

leungchopan/ Shutterstock.com

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT2.1 The financial statements of **Apple Inc.** are presented in Appendix A.

Instructions

Answer the following questions using the financial statements and the notes to the financial statements.

a. What were Apple's total current assets at September 26, 2020, and September 28, 2019?

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 26, 2020, and September 28, 2019?

Comparative Analysis Problem: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT2.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements of **Under Armour, Inc.** are presented in Appendix C. Assume Columbia's weighted-average common shares outstanding was 69,683,000, and Under Armour's was 416,103,000.

Instructions

a. For each company, calculate the following values for 2020.

1. Working capital. **3.** Debt to assets ratio.

2. Current ratio.

b. Based on your findings above, discuss the relative liquidity and solvency of the two companies.

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT2.3 **Amazon.com, Inc.**'s financial statements are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

a. For each company, calculate the following values for the most recent year provided.

1. Working capital. **3.** Debt to assets ratio.

2. Current ratio.

b. Based on your findings above, discuss the relative liquidity and solvency of the two companies.

Interpreting Financial Statements

CT2.4 Suppose the following information was reported by Gap, Inc.

	2025	2024	2023	2022	2021
Total assets (millions)	$7,065	$7,985	$7,564	$7,838	$8,544
Working capital	$1,831	$2,533	$1,847	$1,653	$2,757
Current ratio	1.87:1	2.19:1	1.86:1	1.68:1	2.21:1
Debt to assets ratio	.42:1	.39:1	.42:1	.45:1	.39:1
Earnings per share	$1.89	$1.59	$1.35	$1.05	$0.94

a. Determine the overall percentage decrease in Gap's total assets from 2021 to 2025. What was the average decrease per year? (*Note*: The period of time from December 31, 2021, to December 31, 2025, is four years. Therefore, you should divide by four years when computing the average.)

b. Comment on the change in Gap's liquidity. Does working capital or the current ratio appear to provide a better indication of Gap's liquidity? What might explain the change in Gap's liquidity during this period?

c. Comment on the change in Gap's solvency during this period.

d. Comment on the change in Gap's profitability during this period. How might this affect your prediction about Gap's future profitability?

Real-World Focus

CT2.5 You can use the Internet to identify summary liquidity, solvency, and profitability information about companies, and compare this information across companies in the same industry.

Instructions

Select a well-known company and then go to the **Yahoo! Finance** website to locate information to answer the following questions.

a. What is the company's name? What was the company's current ratio and debt to equity ratio (a variation of the debt to assets ratio)?

b. What is the company's industry?

c. What is the name of a competitor? What is the competitor's current ratio and its debt to equity ratio?

d. Based on these measures, which company is more liquid? Which company is more solvent?

CT2.6 The Feature Story described the dramatic effect that investor bulletin boards are having on the investment world. This exercise will allow you to evaluate a bulletin board discussing a company of your choice.

Instructions

Go to the **Yahoo! Finance** website. Type in a company name (or use the index to find it) and then use the Conversations tab to answer the following questions.

a. State the nature of each of these messages (e.g., offering advice, criticizing company, predicting future results, ridiculing other people who have posted messages).

b. For those messages that expressed an opinion about the company, was evidence provided to support the opinion?

c. What effect do you think it would have on bulletin board discussions if the participants provided their actual names? Do you think this would be a good policy?

Decision-Making Across the Organization

CT2.7 As a financial analyst in the planning department for Erin Industries, Inc., you must develop ratios from the comparative financial statements. This information is to be used to convince creditors that, despite a slight decline in sales, Erin Industries, Inc. is liquid, solvent, and profitable, and that it deserves their continued support. Lenders are particularly concerned about the company's ability to continue as a going concern.

Here are the data requested and the computations developed from the financial statements:

	2025	2024
Current ratio	3.1	2.1
Working capital	Up 22%	Down 7%
Debt to assets ratio	0.60	0.70
Net income	Up 32%	Down 8%
Earnings per share	$2.40	$1.15

Instructions

Erin Industries, Inc. asks you to prepare brief comments stating how each of these items supports the argument that its financial health is improving. The company wishes to use these comments to support presentation of data to its creditors. With the class divided into groups, prepare the comments as requested, giving the implications and the limitations of each item regarding Erin's financial well-being.

Communication Activity

CT2.8 B. P. Palmer is the chief executive officer of Future Products. Palmer is an expert engineer but a novice in accounting.

Instructions

Write a letter to B. P. Palmer that explains (a) the three main types of ratios; (b) examples of each, how they are calculated, and what they measure; and (c) the bases for comparison in analyzing Future Products' financial statements.

Ethics Case

CT2.9 At one time, **Boeing** closed a giant deal to acquire another manufacturer, **McDonnell Douglas**. Boeing paid for the acquisition by issuing shares of its own stock to the stockholders of McDonnell Douglas. In order for the deal not to be revoked, the value of Boeing's stock could not decline below a certain level for a number of months after the deal.

During the first half of the year, Boeing suffered significant cost overruns because of inefficiencies in its production methods. Had these problems been disclosed in the quarterly financial statements during the first and second quarters of the year, the company's stock most likely would have plummeted, and the deal would have been revoked. Company managers spent considerable time debating when the bad news should be disclosed. One public relations manager suggested that the company's problems be revealed on the date of either Princess Diana's or Mother Teresa's funeral, in the hope that it would be lost among those big stories that day. Instead, the company waited until October 22 of that year to announce a $2.6 billion write-off due to cost overruns. Within one week, the company's stock price had fallen 20%, but by this time the McDonnell Douglas deal could not be reversed.

Instructions

Answer the following questions.

a. Who are the stakeholders in this situation?

b. What are the ethical issues?

c. What assumptions or principles of accounting are relevant to this case?

d. Do you think it is ethical to try to "time" the release of a story so as to diminish its effect?

e. What would you have done if you were the chief executive officer of Boeing?

f. Boeing's top management maintains that it did not have an obligation to reveal its problems during the first half of the year. What implications does this have for investors and analysts who follow Boeing's stock?

All About You

CT2.10 Every company needs to plan in order to move forward. Its top management must consider where it wants the company to be in three to five years. Like a company, you need to think about where you want to be three to five years from now, and you need to start taking steps now in order to get there.

Instructions

Provide responses to each of the following items.

a. Where would you like to be working in three to five years? Describe your plan for getting there by identifying between five and 10 specific steps that you need to take in order to get there.

b. In order to get the job you want, you will need a résumé. Your résumé is the equivalent of a company's annual report. It needs to provide relevant information that is a faithful representation about your past accomplishments so that employers can decide whether to "invest" in you. Do a search on the Internet to find a good résumé format. What are the basic elements of a résumé?

c. A company's annual report provides information about a company's accomplishments. In order for investors to use the annual report, the information must provide a faithful representation. How can you assure that the information on your résumé provides a faithful representation about you and your accomplishments?

d. Prepare a résumé assuming that you have accomplished the five to 10 specific steps you identified in part (a). Also, provide evidence that would give assurance that the information is a faithful representation.

FASB Codification Activity

CT2.11 If your school has a subscription to the FASB Codification, log in and prepare responses to the following.

Instructions

a. Access the glossary ("Master Glossary") at the FASB Codification website to answer the following.

   1. What is the definition of current assets?

   2. What is the definition of current liabilities?

b. A company wants to offset its accounts payable against its cash account and show a cash amount net of accounts payable on its balance sheet. Identify the criteria (found in the FASB Codification) under which a company has the right of set off. Does the company have the right to offset accounts payable against the cash account?

Considering People, Planet, and Profit

CT2.12 Auditors provide a type of certification of corporate financial statements. Certification is used in many other aspects of business as well. For example, it plays a critical role in the sustainability movement. An article by Angus Chen, entitled "Do Sustainable Certifications for Coffee Really Help the Coffee Growers," discusses the role of certification in the coffee business.

Instructions

Search and read the article online, and then answer the following questions.

a. The article mentions different certification types that coffee growers can obtain from different certification bodies. Using financial reporting as an example, what potential problems might the existence of multiple certification types present to coffee purchasers?

b. What social and environmental benefits are coffee certifications trying to achieve? Are there also potential financial benefits to the parties involved?

Answers to Insight and Accounting Across the Organization Questions

I Heard it Through the Grapevine Q: How much reliance should you place on information posted to investor bulletin boards when you are considering investing money? A: Investor bulletin boards can provide some interesting ideas, but you should place very little weight on what you read there. You don't know the background of the people that post information, nor do you know what motives they might have for posting the information. As can be seen in this example, it is not hard to find conflicting views on any position you might take on an investment. If you have an interest in investing, we encourage you to work hard in this course and subsequent courses in accounting and finance so that you are equipped to make informed decisions.

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.

When Debt Is Good Q: Discuss the difference in the debt to assets ratio of Google and Tesla. A: Google has a lower debt to assets ratio than Tesla. Google is in a rapidly changing industry and thus should try to minimize the risk associated with increased debt. Also, because Google generates significant amounts of cash and has relatively less need for large investments in plant assets, it does not need to borrow a lot of cash. On the other hand, Tesla needs to make huge investments in plant assets. Thus, it has large borrowing needs.

The Korean Discount Q: What is meant by the phrase "make the country's business 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 would be more willing to supply the financial capital that businesses need in order to grow, which would spur the country's economic growth.

What Do These Companies Have in Common? Q: What problems might Best Buy's year-end create for analysts? A: First, if Best Buy's competitors use a different year-end, when you compare their financial results you are not comparing performance over the same period of time or financial position at the same point in time. Also, by not picking a specific date, the number of weeks in Best Buy's fiscal year will change. Some fiscal years will have 52 weeks; others will have 53 weeks.

CHAPTER **3**

The Accounting Information System

Chapter Preview

As indicated in the Feature Story, a reliable information system is a necessity for any company. The purpose of this chapter is to explain and illustrate the features of an accounting information system.

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 cash machine receipts that you've been declared a walking fire hazard?
- Do you wait until your debit card is denied before checking the status of your funds?
- Do you verify the accuracy of your bank account about as often as you clean the space behind your refrigerator?

If you think it is hard to keep track of the many transactions that make up *your* life, imagine how difficult it is for a big corporation to do so. Not only that, but now consider how important it is for a big company to have good accounting records, especially if it has control of *your* life savings. MF **Global Holdings Ltd** was such a company. As a large investment broker, it held billions of dollars of investments for clients. If you had your life savings invested at MF Global, you might be slightly displeased if you heard this from one of its representatives: "You know, I kind of remember an account for someone with a name like yours—now what did we do with that?"

Unfortunately, that is almost exactly what happened to MF Global's clients shortly before it filed for bankruptcy. During the days immediately following the bankruptcy filing, regulators and auditors struggled to piece things together. In the words of one regulator, "Their books are a disaster . . . we're trying to figure out what numbers are real numbers." One company that considered buying an interest in MF Global walked away from the deal because it "couldn't get a sense of what was on the balance sheet." That company said the information that should have been instantly available instead took days to produce.

It now appears that MF Global did not properly segregate customer accounts from company accounts. And, because of its sloppy recordkeeping, customers were not protected when the company had financial troubles. Total customer losses were approximately $1 billion. As you can see, accounting matters!

Source: Based on S. Patterson and A. Lucchetti, "Inside the Hunt for MF Global Cash," *Wall Street Journal Online* (November 11, 2011).

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Analyze the effect of business transactions on the basic accounting equation.	• Accounting transactions • Analyzing transactions • Summary of transactions	**DO IT! 1** Transaction Analysis
LO 2 Explain how accounts, debits, and credits are used to record business transactions.	• Debits and credits • Debit and credit procedures • Stockholders' equity relationships • Summary of debit/credit rules	**DO IT! 2** Accounts, Debits, and Credits
LO 3 Indicate how a journal is used in the recording process.	• The recording process • The journal	**DO IT! 3** Journal Entries
LO 4 Explain how a ledger and posting help in the recording process.	• The ledger • Chart of accounts • Posting • The recording process illustrated • Summary illustration	**DO IT! 4** Posting
LO 5 Prepare a trial balance.	• Limitations of a trial balance	**DO IT! 5** Trial Balance

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.
Visit Wiley Course Resources for additional tutorials and practice opportunities.

3.1 Using the Accounting Equation to Analyze Transactions

LEARNING OBJECTIVE 1

Analyze the effect of business transactions on the basic accounting equation.

The system of collecting and processing transaction data and communicating financial information to decision-makers is known as the **accounting information system**. Factors that shape an accounting information system include the nature of the company's business, the types of transactions, the size of the company, the volume of data, and the information demands of management and others.

Most businesses use computerized accounting systems—sometimes referred to as electronic data processing (EDP) systems. These systems handle all the steps involved in the recording process, from initial data entry to preparation of the financial statements.

- Many companies upgraded their accounting information systems in response to the requirements of Sarbanes-Oxley.
- In addition, companies are utilizing new technologies such as cloud-based storage, which permits employees to access records from different locations, and data automation and analytics tools, which help companies interpret large volumes of data to support enhanced decision-making and automate routing processes.
- Accounting information systems are based on a process referred to as **the accounting cycle.** As you can see from the following graphic, the accounting cycle begins with the analysis of business transactions and ends with the preparation of a post-closing trial balance. We explain the first four steps in this chapter.

This **accounting cycle graphic** illustrates the steps companies follow each period to record transactions and eventually prepare financial statements.

In order to emphasize the underlying concepts and principles, we focus on a manual accounting system. The accounting concepts and principles do not change whether a system is computerized or manual.

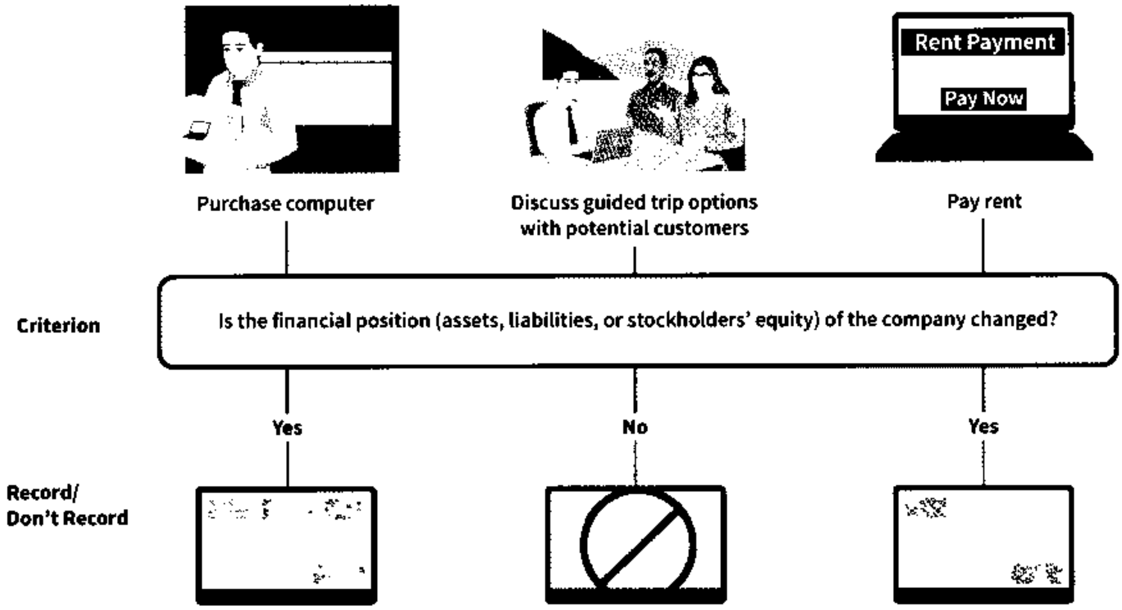
Accounting Transactions

To use an accounting information system, you need to know which economic events to recognize (record). Not all events are recorded and reported in the financial statements. For example, suppose **Zoom Video Communications** hired a new employee and purchased a new computer. Are these two events entered in its accounting records? The first event would not be recorded, but the second event would.

- We call economic events that require recording in the financial statements **accounting transactions**.
- An accounting transaction occurs when assets, liabilities, or stockholders' equity items change as a result of some economic event.
- When Zoom hires a new employee, its assets, liabilities, and stockholders' equity are not affected. But when it purchases a computer, Zoom records the change in the company's assets.

Illustration 3.1 summarizes the decision process companies use to decide whether or not to record economic events.

ILLUSTRATION 3.1 **Transaction identification process**



Analyzing Transactions

Recall the basic accounting equation:

Assets = Liabilities + Stockholders' Equity

In this chapter, you will learn how to analyze transactions in terms of their effect on assets, liabilities, and stockholders' equity. **Transaction analysis** is the process of identifying the specific effects of economic events on the accounting equation (see Decision Tools).

> **Decision Tools**
>
> The accounting equation is used to determine if an accounting transaction has occurred.

The accounting equation must always balance. Each transaction has a dual (double-sided) effect on the equation. For example, if an individual asset is increased, there must be a corresponding:

- Decrease in another asset, *or*
- Increase in a specific liability, *or*
- Increase in stockholders' equity.

Two or more items could be affected when an asset is increased. For example, if a company purchases a computer for $10,000 by paying $6,000 in cash and signing a note for $4,000, one asset (equipment) increases $10,000, another asset (cash) decreases $6,000, and a liability (notes payable) increases $4,000. The result is that the accounting equation remains in balance—assets increased by a net $4,000 and liabilities increased by $4,000, as shown below.

Assets			=	Liabilities	+	Stockholders' Equity
Cash	+	Equipment	=	Notes Payable		
−$6,000		+$10,000		+$4,000		
+$4,000						

Illustration 1.10 presented the financial statements for Sierra Corporation for its first month. You should review those financial statements at this time. To illustrate how economic events affect the accounting equation, we will examine the events affecting Sierra during its first month.

In order to analyze the transactions for Sierra, we will expand the basic accounting equation. This allows us to better illustrate the impact of transactions on stockholders' equity.

- Recall that stockholders' equity is comprised of two parts: common stock and retained earnings.
- Common stock is affected when the company issues new shares of stock in exchange for cash.
- Retained earnings is increased when the company recognizes revenue, and decreased when the company incurs expenses or pays dividends.

Illustration 3.2 shows the expanded equation.

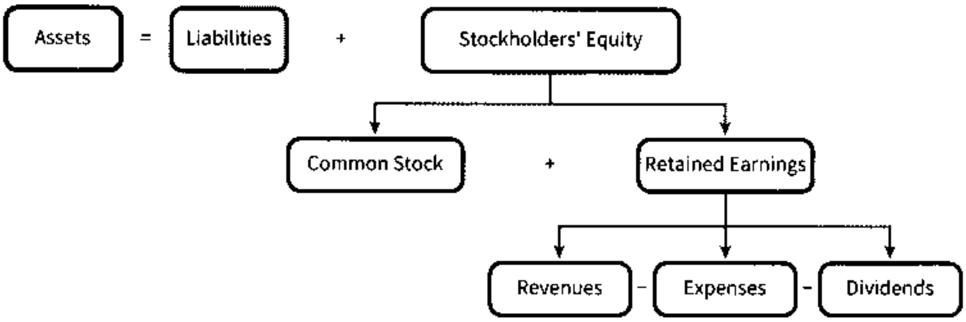


ILLUSTRATION 3.2
Expanded accounting equation

To demonstrate the effect that each transaction has on particular financial statements, we analyze each of Sierra's transactions using the tabular analysis shown in Illustration 3.3.

- Amounts that are reported on the balance sheet are shaded in yellow, income statement items in blue, and dividends (shown on the statement of retained earnings) in gray.
- Explanations for income statement items are reported in the blue section on the right-hand side.
- The green section on the left-hand side indicates whether cash flows increased, decreased, or were not affected.

ILLUSTRATION 3.3 **Tabular analysis of transactions**

CASH FLOW	**BALANCE SHEET**											**INCOME STATEMENT**
	Assets	=	**Liabilities**	+	**Stockholders' Equity**							
							Retained Earnings					
					Common Stock	+	Rev.	−	Exp.	−	Div.	

Event (1). Investment of Cash by Stockholders On October 1, cash of $10,000 is invested in the business by investors in exchange for $10,000 of common stock. This event is an accounting transaction that results in an increase in both assets and stockholders' equity.

Basic Analysis: The asset Cash is increased $10,000; stockholders' equity (specifically Common Stock) is increased $10,000.

CASH FLOW		**BALANCE SHEET**											**INCOME STATEMENT**
		Assets	=	**Liabilities**	+	**Stockholders' Equity**							
								Retained Earnings					
		Cash	=			Common Stock	+	Rev.	−	Exp.	−	Div.	
↑ $10,000	(1)	+$10,000	=			+$10,000							No effect

The equation is in balance after the issuance of common stock. Keeping track of the source of each change in stockholders' equity is essential for later accounting activities. In particular, items recorded in the revenue and expense columns are used for the calculation of net income.

Event (2). Note Issued in Exchange for Cash On October 1, Sierra borrowed $5,000 from Castle Bank by signing a 3-month, 12%, $5,000 note payable. This transaction results in an equal increase in assets and liabilities. The specific effect of this transaction and the cumulative effect of the first two transactions are as follows.

Basic Analysis: The asset Cash is increased $5,000; the liability Notes Payable is increased $5,000.

CASH FLOW		BALANCE SHEET											INCOME STATEMENT
		Assets	=	Liabilities	+	Stockholders' Equity							
								Retained Earnings					
		Cash	=	Notes Payable	+	Common Stock	+	Rev.	−	Exp.	−	Div.	
		$10,000	=			$10,000							
↑ $5,000	(2)	+5,000		+$5,000									No effect
		$15,000	=	$5,000	+	$10,000							
				$15,000									

Total assets are now $15,000, and liabilities plus stockholders' equity also total $15,000.

Event (3). Purchase of Equipment for Cash On October 2, Sierra purchased equipment by paying $5,000 cash to Superior Equipment Sales Co. This transaction results in an equal increase and decrease in Sierra's assets.

Basic Analysis: The asset Equipment is increased $5,000; the asset Cash is decreased $5,000.

CASH FLOW		BALANCE SHEET													INCOME STATEMENT
		Assets			=	Liabilities	+	Stockholders' Equity							
										Retained Earnings					
		Cash	+	Equipment	=	Notes Payable	+	Common Stock	+	Rev.	−	Exp.	−	Div.	
		$15,000			=	$5,000	+	$10,000							
↓ $5,000	(3)	−5,000		+$5,000											No effect
		$10,000	+	$5,000	=	$5,000	+	$10,000							
		$15,000				$15,000									

The balance in total assets did not change; one asset account decreased by the same amount that another increased. The total assets are still $15,000, and liabilities plus stockholders' equity also still total $15,000.

Event (4). Receipt of Cash in Advance from Customer On October 2, Sierra received a $1,200 cash advance from R. Knox, a client. Sierra received cash (an asset) for guide services for multi-day trips that it expects to complete in the future.

- Although Sierra received cash, **it does not record revenue until it has performed the work**.
- In some industries, such as the magazine and airline industries, customers are expected to prepay. These companies have a liability to the customer until they deliver the magazines or provide the flight.
- When the company eventually provides the product or service, it records the revenue.

Since Sierra received cash prior to performance of the service, Sierra has a liability for the work due.

Basic Analysis: The asset Cash is increased $1,200; the liability Unearned Service Revenue is increased $1,200 because the service has not been performed yet. That is, when an advance payment is received, unearned revenue (a liability) should be recorded in order to recognize the obligation that exists.

CASH FLOW		BALANCE SHEET															INCOME STATEMENT
		Assets			=	**Liabilities**			+	**Stockholders' Equity**							
												Retained Earnings					
		Cash	+	Equipment	=	Notes Pay.	+	Unearned Serv. Rev.	+	Common Stock	+	Rev.	−	Exp.	−	Div.	
		$10,000	+	$5,000	=	$5,000			+	$10,000							
↑ $1,200	(4)	+1,200						+$1,200									No effect
		$11,200	+	$5,000	=	$5,000	+	$1,200	+	$10,000							
		$16,200				$16,200											

Event (5). Services Performed for Cash

On October 3, Sierra received $10,000 in cash (an asset) from Copa Company for guide services performed for a corporate event. Guide service is the principal revenue-producing activity of Sierra. **Revenue increases stockholders' equity.** This transaction, then, increases both assets and stockholders' equity.

Basic Analysis: The asset Cash is increased $10,000; the revenue account Service Revenue is increased $10,000.

CASH FLOW		BALANCE SHEET															INCOME STATEMENT
		Assets			=	**Liabilities**			+	**Stockholders' Equity**							
												Retained Earnings					
		Cash	+	Equipment	=	Notes Pay.	+	Unearned Serv. Rev.	+	Common Stock	+	Rev.	−	Exp.	−	Div.	
		$11,200	+	$5,000	=	$5,000	+	$1,200	+	$10,000							
↑ $10,000	(5)	+10,000										+$10,000					Service Revenue
		$21,200	+	$5,000	=	$5,000	+	$1,200	+	$10,000	+	$10,000					
		$26,200				$26,200											

Often companies perform services "on account." That is, they perform services for which they are paid at a later date.

- Revenue, however, is recorded when services are performed.
- Therefore, revenues would increase when services are performed, even though cash has not been received.
- Instead of receiving cash, the company receives a different type of asset, an **account receivable**. Accounts receivable represent the right to receive payment at a later date.

Suppose that Sierra had performed these services on account rather than for cash. This event would be reported using the accounting equation as follows.

Assets	=	**Liabilities**	+	**Stockholders' Equity**	
Accounts Receivable	=			Revenues	
+$10,000				+$10,000	**Service Revenue**

Later, when Sierra collects the $10,000 from the customer, Accounts Receivable decreases by $10,000, and Cash increases by $10,000.

Assets			=	**Liabilities**	+	**Stockholders' Equity**
Cash	+	Accounts Receivable				
+$10,000		−$10,000				

Note that in this case, revenues are not affected by the collection of cash. Instead Sierra records an exchange of one asset (Accounts Receivable) for a different asset (Cash).

HELPFUL HINT

Note that a minus sign is placed in front of the $900 expense in the following analysis. Since expenses reduce stockholders' equity, we must enter expenses as negatives. This keeps the basic accounting equation in balance.

Event (6). Payment of Rent On October 3, Sierra paid its office rent for the month of October in cash, $900 (see **Helpful Hint**). This rent payment is a transaction that results in a decrease in an asset, cash, as well as a decrease in stockholders' equity.

- Rent is a cost incurred by Sierra in its effort to generate revenues.
- Rent is treated as an expense because it pertains only to the current month.
- **Expenses decrease stockholders' equity.**

Note that although Rent Expense increases, it is shown as a negative number in the accounting equation because expenses decrease retained earnings, which in turn decreases stockholders' equity. Overall, assets (cash) decrease by $900 and stockholders' equity decreases by $900, thereby keeping the accounting equation in balance.

Basic Analysis: The expense account Rent Expense is increased $900 because the payment pertains only to the current month; the asset Cash is decreased $900.

CASH FLOW		BALANCE SHEET								INCOME STATEMENT
		Assets		= Liabilities		+ Stockholders' Equity				
							Retained Earnings			
		Cash	+ Equipment	= Notes Pay.	+ Unearned Serv. Rev.	+ Common Stock	+ Rev.	− Exp.	− Div.	
		$21,200	+ $5,000	= $5,000	+ $1,200	+ $10,000	+ $10,000			
↓ $900	(6)	−900						−$900		Rent Expense
		$20,300	+ $5,000	= $5,000	+ $1,200	+ $10,000	+ $10,000	− $900		
		$25,300		$25,300						

Event (7). Purchase of Insurance Policy for Cash On October 4, Sierra paid $600 for a one-year insurance policy that will expire next year on September 30. Payments of expenses that will benefit more than one accounting period are identified as assets called prepaid expenses or prepayments.

Basic Analysis: The asset Cash is decreased $600; the asset Prepaid Insurance is increased $600.

CASH FLOW		BALANCE SHEET									INCOME STATEMENT
		Assets			= Liabilities		+ Stockholders' Equity				
								Retained Earnings			
		Cash	+ Prepaid Insurance	+ Equipment	= Notes Pay.	+ Unearned Serv. Rev.	+ Common Stock	+ Rev.	− Exp.	− Div.	
		$20,300		+ $5,000	= $5,000	+ $1,200	+ $10,000	+ $10,000	− $900		
↓ $600	(7)	−600	+$600								No effect
		$19,700	+ $600	+ $5,000	= $5,000	+ $1,200	+ $10,000	+ $10,000	− $900		
		$25,300			$25,300						

The balance in total assets did not change; one asset account decreased by the same amount that another increased.

Event (8). Purchase of Supplies on Account On October 5, Sierra purchased an estimated three months of supplies on account from Aero Supply for $2,500. In this case, "on account" means that the company receives goods or services that it will pay for at a later date. This transaction increases both an asset (supplies) and a liability (accounts payable).

Basic Analysis: The asset Supplies is increased $2,500; the liability Accounts Payable is increased $2,500.

CASH FLOW		BALANCE SHEET												INCOME STATEMENT
		Assets				= Liabilities			+ Stockholders' Equity					
										Retained Earnings				
		Cash	+ Supplies	+ Prepd. Insur.	+ Equipment	= Notes Pay.	+ Accounts Payable	+ Unearned Serv. Rev.	+ Common Stock	+ Rev.	− Exp.	− Div.		
		$19,700		+ $600	+ $5,000	= $5,000		+ $1,200	+ $10,000	+ $10,000	− $900			
No effect	(8)		+$2,500				+$2,500							No effect
		$19,700	+ $2,500	+ $600	+ $5,000	= $5,000	+ $2,500	+ $1,200	+ $10,000	+ $10,000	− $900			
		$27,800				$27,800								

Event (9). Hiring of New Employees On October 9, Sierra hired four new employees to begin work on October 15. Each employee will receive a weekly salary of $500 for a five-day work week, payable every two weeks. Employees will receive their first paychecks on October 26. On the date Sierra hires the employees, there is no effect on the accounting equation because the assets, liabilities, and stockholders' equity of the company have not changed.

Basic Analysis: An accounting transaction has not occurred. There is only an agreement that the employees will begin work on October 15. (See Event (11) for the first payment.)

Event (10). Payment of Dividend On October 20, Sierra paid a $500 cash dividend (see Helpful Hint). **Dividends are a reduction of stockholders' equity but not an expense.** Dividends are not included in the calculation of net income. Instead, a dividend is a distribution of the company's assets to its stockholders, which is presented in the retained earnings statement.

HELPFUL HINT

Since dividends reduce stockholders' equity, we place a minus sign in front of the $500 dividend, as shown in the analysis below.

Basic Analysis: The Dividends account is increased $500; the asset Cash is decreased $500.

CASH FLOW		BALANCE SHEET																								INCOME STATEMENT
		Assets							=	Liabilities					+	Stockholders' Equity										
																		Retained Earnings								
		Cash	+	Supplies	+	Prepd. Insur.	+	Equipment	=	Notes Pay.	+	Accts. Pay.	+	Unearned Serv. Rev.	+	Common Stock	+	Rev.	−	Exp.	−	Div.				
		$19,700	+	$2,500	+	$600	+	$5,000	=	$5,000	+	$2,500	+	$1,200	+	$10,000	+	$10,000	−	$900						
↓ $500	(10)	−500																				−$500				No effect
		$19,200	+	$2,500	+	$600	+	$5,000	=	$5,000	+	$2,500	+	$1,200	+	$10,000	+	$10,000	−	$900	−	$500				
		$27,300								$27,300																

Event (11). Payment of Cash for Employee Salaries Employees have worked two weeks, earning $4,000 in salaries, which were paid on October 26. Salaries and Wages Expense is an expense that reduces stockholders' equity. In this transaction, both assets and stockholders' equity are reduced.

Basic Analysis: The asset Cash is decreased $4,000; the expense account Salaries and Wages Expense is increased $4,000.

CASH FLOW		BALANCE SHEET																						INCOME STATEMENT
		Assets							=	Liabilities					+	Stockholders' Equity								
																		Retained Earnings						
		Cash	+	Supplies	+	Prepd. Insur.	+	Equipment	=	Notes Pay.	+	Accts. Pay.	+	Unearned Serv. Rev.	+	Common Stock	+	Rev.	−	Exp.	−	Div.		
		$19,200	+	$2,500	+	$600	+	$5,000	=	$5,000	+	$2,500	+	$1,200	+	$10,000	+	$10,000	−	$900	−	$500		
↓ $4,000	(11)	−4,000																		−4,000				Sal./Wages Expense
		$15,200	+	$2,500	+	$600	+	$5,000	=	$5,000	+	$2,500	+	$1,200	+	$10,000	+	$10,000	−	$4,900	−	$500		
		$23,300								$23,300														

Investor Insight

enviromantic/Getty Images

Why Accuracy Matters

While most companies record transactions very carefully, the reality is that mistakes still happen. For example, bank regulators fined **Bank One Corporation** (now **JPMorgan Chase**) $1.8 million because they felt that the unreliability of the bank's accounting system caused it to violate regulatory requirements.

Also, in recent years **Fannie Mae**, the government-chartered mortgage association, announced a series of large accounting errors. These announcements caused alarm among investors, regulators, and politicians because they feared that the errors might suggest larger, undetected problems. This was important because the home-mortgage market depends on Fannie Mae to buy hundreds of billions of dollars of mortgages each year from banks, thus enabling the banks to issue new mortgages.

Finally, before a major overhaul of its accounting system, the financial records of **Waste Management Company** were in such disarray that of the company's 57,000 employees, 10,000 were receiving pay slips that were in error.

The Sarbanes-Oxley Act was created to minimize the occurrence of errors like these by increasing every employee's responsibility for accurate financial reporting.

In order for these companies to prepare and issue financial statements, their accounting equations must have been in balance at year-end. How could these errors or misstatements have occurred? (Answer is available at the end of the chapter.)

Summary of Transactions

Illustration 3.4 summarizes the transactions of Sierra Corporation to show their cumulative effect on the basic accounting equation. It includes the transaction number in the first column on the left. The right-most column shows the specific effect of any transaction that affects revenues or expenses. Remember that Event (9) did not result in a transaction, so nothing is recorded for that event. The illustration demonstrates three important points:

1. Each transaction is analyzed in terms of its effect on assets, liabilities, and stockholders' equity.
2. The two sides of the equation must always be equal.
3. The cause of each change in revenues or expenses must be indicated.

ILLUSTRATION 3.4 **Summary of transactions**

	BALANCE SHEET											INCOME STATEMENT
	Assets				= Liabilities			+ Stockholders' Equity				
									Retained Earnings			
	Cash	+ Supplies	+ Prepd. Insur.	+ Equipment	= Notes Pay.	+ Accts. Pay.	+ Unearned Serv. Rev.	+ Common Stock	+ Rev.	− Exp.	− Div.	
(1)	+$10,000							+$10,000				
(2)	+5,000				+$5,000							
(3)	−5,000			+$5,000								
(4)	+1,200						+$1,200					
(5)	+10,000								+$10,000			Service Revenue
(6)	−900									−$900		Rent Expense
(7)	−600		+$600									
(8)		+$2,500				+$2,500						
(9)												
(10)	−500										−$500	
(11)	−4,000									−4,000		Sal./Wages Expense
	$15,200	+ $2,500	+ $600	+ $5,000	= $5,000	+ $2,500	+ $1,200	+ $10,000	+ $10,000	− $4,900	− $500	
	$23,300				$23,300							

> **ACTION PLAN**
> - **Use the tabular analysis to determine the nature and effect of each transaction.**
> - **Keep the accounting equation in balance.**
> - **Remember that a change in an asset will require a change in another asset, a liability, or in stockholders' equity.**

DO IT! 1 Transaction Analysis

A tabular analysis of the transactions made by Roberta Mendez & Co., a certified public accounting firm, for the month of August is shown below. Each increase and decrease in stockholders' equity is explained.

	Assets		= Liabilities	+ Stockholders' Equity			
					Retained Earnings		
	Cash	+ Equipment	= Accounts Payable	+ Common Stock	+ Revenue	− Expenses	
1.	+$25,000			+$25,000			
2.		+$7,000	+$7,000				
3.	+8,000				+$8,000		Service Revenue
4.	−850					−$850	Rent Expense
	$32,150	+ $7,000	= $7,000	+ $25,000	+ $8,000	− $850	
	$39,150		$39,150				

Describe each transaction that occurred for the month.

Solution

1. The company issued shares of stock to stockholders for $25,000 cash.
2. The company purchased $7,000 of equipment on account.
3. The company received $8,000 of cash in exchange for services performed.
4. The company paid $850 for this month's rent.

Related exercise material: BE3.1, BE3.2, BE3.3, DO IT! 3.1, E3.1, E3.2, E3.3, and E3.4.

3.2 Accounts, Debits, and Credits

LEARNING OBJECTIVE 2

Explain how accounts, debits, and credits are used to record business transactions.

Rather than using a tabular summary like the one in Illustration 3.4 for Sierra Corporation, an accounting information system uses accounts. An **account** is an individual accounting record of increases and decreases in a specific asset, liability, stockholders' equity, revenue, or expense item. For example, Sierra Corporation has 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.
3. A right or credit side.

Because the alignment of these parts of an account resembles the letter T, it is referred to as a **T-account**. The basic form of an account is shown in **Illustration 3.5**.

Title of Account	
Left or debit side (Dr.)	Right or credit side (Cr.)

ILLUSTRATION 3.5

Basic form of account

We use this form of account often throughout this text to explain basic accounting relationships.

Debits and Credits

The term **debit** indicates the left side of an account, and **credit** indicates the right side.

- Sometimes abbreviations are used: **Dr.** for debit and **Cr.** for credit (see **Helpful Hint**). 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.

HELPFUL HINT

Why does the abbreviation for debit include an "r"? One theory says the abbreviation comes from the latin word "debere," while credit comes from "credere." Another theory says the abbreviation comes from "debitor" and "creditor."

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 3.5.

The procedure of recording debits and credits in an account is shown in **Illustration 3.6** for the transactions affecting the Cash account of Sierra Corporation. The data are taken from the Cash column of the tabular summary in Illustration 3.4.

ILLUSTRATION 3.6

Tabular summary and account form for Sierra Corporation's Cash account

Tabular Summary

Cash
$10,000
5,000
–5,000
1,200
10,000
–900
–600
–500
–4,000
$15,200

Account Form

Cash			
(Debits)	10,000	**(Credits)**	5,000
	5,000		900
	1,200		600
	10,000		500
			4,000
Balance **(Debit)**	15,200		

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 $10,000 receipt of cash (in blue) is debited to Cash, and the –$5,000 payment of cash (in red) is credited to Cash.

There are two main benefits from using the T-account form:

1. Having increases on one side and decreases on the other reduces recording errors.
2. The T-account form 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 $15,200, indicates that Sierra had $15,200 more increases than decreases in cash. That is, since it started with a balance of zero, it has $15,200 in its Cash account.

Debit and Credit Procedures

Each transaction must affect two or more accounts to keep the basic accounting equation in balance.

- **Debits must equal credits.**
- The equality of debits and credits provides the basis for the double-entry accounting system (see **International Note**).
- Under the **double-entry system**, the two-sided effect of each transaction is recorded in appropriate accounts. This system provides a logical method for recording transactions.

> **International Note**
>
> Rules for accounting for specific events sometimes differ across countries. For example, European 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.

The double-entry system also helps to ensure the accuracy of the recorded amounts and helps to detect errors such as those at **MF Global** as discussed in the Feature Story. If every transaction is recorded with equal debits and credits, then 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 earlier. The following discussion illustrates debit and credit procedures in the double-entry system.

Dr./Cr. Procedures for Assets and Liabilities

In Illustration 3.6 for Sierra Corporation, increases in Cash—an asset—are entered on the left side, and decreases in Cash are entered on the right side.

- We know that both sides of the basic equation (Assets = Liabilities + Stockholders' Equity) must be equal.
- It therefore follows that increases and decreases in liabilities have to be recorded **opposite from** increases and decreases in assets.
- Thus, increases in liabilities are entered on the right or credit side, and decreases in liabilities are entered on the left or debit side.

The effects that debits and credits have on assets and liabilities are summarized in **Illustration 3.7**.

Debits	**Credits**
Increase assets	Decrease assets
Decrease liabilities	Increase liabilities

ILLUSTRATION 3.7

Debit and credit effects–asset 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 balances** may be diagrammed as in **Illustration 3.8**.

Assets

Debit for increase ↑	Credit for decrease ↓
Normal balance	

Liabilities

↓ Debit for decrease	Credit for increase ↑
	Normal balance

ILLUSTRATION 3.8

Normal balances–assets and liabilities

Knowing which is the normal balance in an account may help when you are trying to identify errors (see **Helpful Hint**). 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 errors in recording. Occasionally, however, an abnormal balance may be correct. The Cash account, for example, will have a credit balance when a company has overdrawn its bank balance by spending more than it has in its account. In automated accounting systems, the computer is programmed to flag violations of the normal balance and to print out error or exception reports. In manual systems, careful visual inspection of the accounts is required to detect normal balance problems.

HELPFUL HINT

The normal balance is the side where increases in the account are recorded.

Dr./Cr. Procedures for Stockholders' Equity

Recall that stockholders' equity is comprised of two parts: common stock and retained earnings. In the transaction events earlier in this chapter, you saw that revenues, expenses, and the payment of dividends affect retained earnings. Therefore, the subdivisions of stockholders' equity are common stock, retained earnings, dividends, revenues, and expenses.

Common Stock Common stock is issued to investors in exchange for the stockholders' investment.

- The Common Stock account is increased by credits and decreased by debits.
- When cash is invested in the business, Cash is debited and Common Stock is credited.

The effects of debits and credits on the Common Stock account are shown in **Illustration 3.9**.

Debits	**Credits**
Decrease Common Stock	Increase Common Stock

ILLUSTRATION 3.9

Debit and credit effects–common stock

The normal balance in the Common Stock account may be diagrammed as in Illustration 3.10.

ILLUSTRATION 3.10
Normal balance–common stock

Common Stock	
↓ Debit for decrease	Credit for increase ↑
	Normal balance

Retained Earnings Retained earnings is net income that is retained in the business.

- Retained Earnings represents the portion of stockholders' equity that has been accumulated through the profitable operation of the company.
- Retained Earnings is increased by credits (for example, by net income) and decreased by debits (for example, by a net loss), as shown in Illustration 3.11.

ILLUSTRATION 3.11
Debit and credit effects–retained earnings

Debits	Credits
Decrease Retained Earnings	Increase Retained Earnings

The normal balance for the Retained Earnings account may be diagrammed as in Illustration 3.12.

ILLUSTRATION 3.12
Normal balance–retained earnings

Retained Earnings	
↓ Debit for decrease	Credit for increase ↑
	Normal balance

Dividends A dividend is a distribution by a corporation to its stockholders. The most common form of distribution is a cash dividend.

- Dividends result in a reduction of the stockholders' claims on retained earnings.
- Because dividends reduce stockholders' equity, increases in the Dividends account are recorded with debits.

As shown in Illustration 3.13, the Dividends account normally has a debit balance.

ILLUSTRATION 3.13
Normal balance–dividends

Dividends	
↑ Debit for increase	Credit for decrease ↓
Normal balance	

Revenues and Expenses When a company recognizes revenues, stockholders' equity is increased. Revenue accounts are increased by credits and decreased by debits.

- **Expenses decrease stockholders' equity.**
- Thus, expense accounts are increased by debits and decreased by credits.

The effects of debits and credits on revenues and expenses are shown in **Illustration 3.14**.

ILLUSTRATION 3.14
Debit and credit effects–revenues and expenses

Debits	Credits
Decrease revenues	Increase revenues
Increase expenses	Decrease 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.** The normal balances may be diagrammed as in **Illustration 3.15**.

ILLUSTRATION 3.15
Normal balances–revenues and expenses

Revenues	
↓ Debit for decrease	Credit for increase ↑
	Normal balance

Expenses	
↑ Debit for increase	Credit for decrease ↓
Normal balance	

Investor Insight Chicago Cubs

Jonathan Daniel/Getty Images Sport/Getty Images

Keeping Score

The Chicago Cubs baseball team has these major revenue and expense accounts:

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

Do you think that the Chicago Bears football team would be likely to have the same major revenue and expense accounts as the Cubs? (Answer is available at the end of the chapter.)

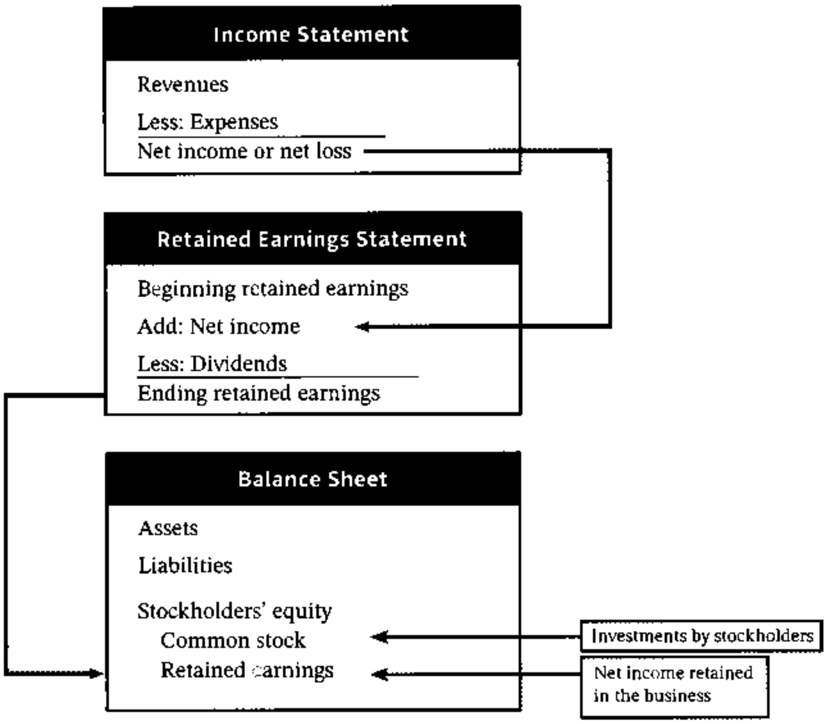
Stockholders' Equity Relationships

Companies report the subdivisions of stockholders' equity in various places in the financial statements:

- Common stock and retained earnings: in the stockholders' equity section of the balance sheet.
- Dividends: on the retained earnings statement.
- 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 stockholders' equity. **Illustration 3.16** shows the relationships of the accounts affecting stockholders' equity.

ILLUSTRATION 3.16
Stockholders' equity relationships



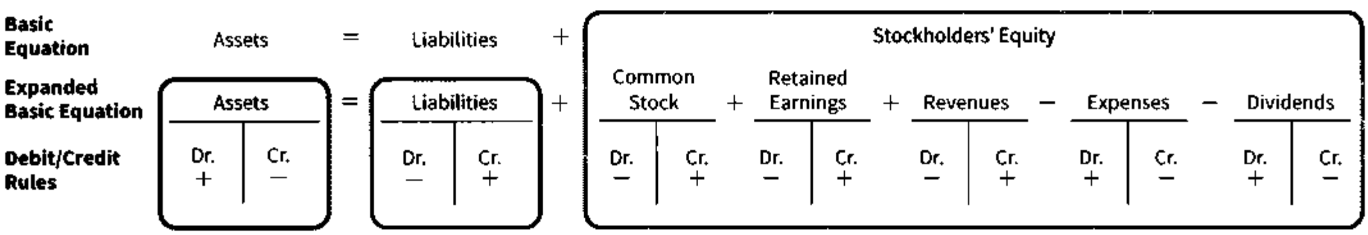
Summary of Debit/Credit Rules

Illustration 3.17 summarizes the debit/credit rules and effects on each type of account.

> HELPFUL HINT
> **You may want to bookmark Illustration 3.17. You probably will refer to it often.**

- **Study this diagram carefully.** It will help you understand the fundamentals of the double-entry system (see **Helpful Hint**).
- No matter what the transaction, total debits must equal total credits accounting equation in balance.

ILLUSTRATION 3.17 **Summary of debit/credit rules**



> ACTION PLAN
> - **Classify each account into its place in the accounting equation.**

DO IT! 2 Accounts, Debits, and Credits

Lin Corp. has the following selected accounts:

1. Service Revenue.
2. Income Tax Expense.
3. Equipment.
4. Accounts Receivable.
5. Accumulated Depreciation.

Indicate whether each of the above accounts is in an asset, liability, or stockholders' equity account, and identify the normal balance. Also, indicate whether a debit would increase or decrease each account.

Solution

Account	Classification	Normal Balance	Debit Effect
1. Service Revenue	Stockholders' equity	Credit	Decrease
2. Income Tax Expense	Stockholders' equity	Debit	Increase
3. Equipment	Asset	Debit	Increase
4. Accounts Receivable	Asset	Debit	Increase
5. Accumulated Depreciation	Asset (contra asset)	Credit	Decrease

Related exercise material: BE3.4, BE3.5, BE3.6, DO IT! 3.2, E3.6, E3.7, E3.8, and E3.9.

- **Remember that the normal balance of an account is on its increase side. (Even though they are assets, contra asset accounts like Accumulated Depreciation move in the opposite direction from assets; their normal balance is a credit.)**
- **Apply the debit and credit rules. Remember that assets are increased by debits, and liabilities are increased by credits. The individual components of stockholders' equity do not all move in the same direction.**

3.3 Using a Journal

LEARNING OBJECTIVE 3

Indicate how a journal is used in the recording process.

ANALYZE | **Journalize the transactions** | POST | TRIAL BALANCE | ADJUSTING ENTRIES | ADJUSTED TRIAL BALANCE | FINANCIAL STATEMENTS | CLOSING ENTRIES | POST-CLOSING TRIAL BALANCE

The Recording Process

Although it is possible to enter transaction information directly into the accounts, few businesses do so. Practically every business uses these basic steps in the recording process (an integral part of the accounting cycle):

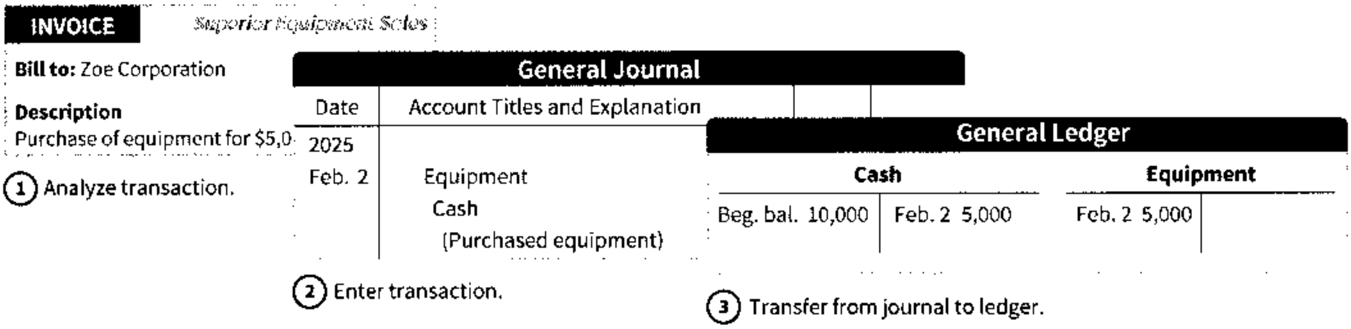
1. Analyze each transaction in terms of its effect on the accounts.
2. Enter the transaction information in a journal.
3. Transfer the journal information to the appropriate accounts in the ledger.

The actual sequence of events begins with the transaction. Evidence of the transaction comes in the form of a **source document**, such as a sales slip, a check, a bill, or a cash register document (see **Ethics Note**). This evidence is analyzed to determine the effect of the transaction on specific accounts. The transaction is then entered in the **journal**. Finally, the journal entry is transferred to the designated accounts in the **ledger**. The sequence of events in the recording process is shown in **Illustration 3.15**.

ETHICS NOTE

International Outsourcing Services, LLC was accused of submitting fraudulent documents (store coupons) to companies such as Kraft Foods and PepsiCo for reimbursement of as much as $250 million. Use of proper business documents reduces the likelihood of fraudulent activity.

ILLUSTRATION 3.18 **The recording process**



The Journal

> **HELPFUL HINT**
> **In a computerized system, journals are kept as files, and accounts are recorded in electronic databases.**

Transactions are initially recorded in chronological order in a **journal** before they are transferred to the accounts. For each transaction, the journal shows the debit and credit effects on specific accounts (see **Helpful Hint**).

Companies may use various kinds of journals, but every company has at least the most basic form of journal, a **general journal**. **The journal makes three significant contributions to the recording process:**

1. It discloses in one place the **complete effect 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 readily compared.

Entering transaction data in the journal is known as **journalizing**. To illustrate the technique of journalizing, let's look at the first three transactions of Sierra Corporation in equation form.

1. On October 1, Sierra issued common stock in exchange for $10,000 cash:

Assets	=	**Liabilities**	+	**Stockholders' Equity**	
Cash	=			Common Stock	
+$10,000				+$10,000	Issued stock

2. On October 1, Sierra borrowed $5,000 by signing a note:

Assets	=	**Liabilities**	+	**Stockholders' Equity**
Cash	=	Notes Payable		
+$5,000		+$5,000		

3. On October 2, Sierra purchased equipment for $5,000:

Assets			=	**Liabilities**	+	**Stockholders' Equity**
Cash	+	Equipment				
−$5,000		+$5,000				

Sierra makes 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. These transactions are journalized in **Illustration 3.19**.

General Journal			
Date	Account Titles and Explanation	Debit	Credit
2025			
Oct. 1	Cash	10,000	
	Common Stock		10,000
	(Issued stock for cash)		
1	Cash	5,000	
	Notes Payable		5,000
	(Issued 3-month, 12% note payable for cash)		
2	Equipment	5,000	
	Cash		5,000
	(Purchased equipment for cash)		

ILLUSTRATION 3.19

Recording transactions in journal form

Note the following features of the journal entries.

1. The date of the transaction is entered in the Date column.
2. The account to be debited is entered first at the left. The account to be credited is then entered on the next line, indented under the line above. The indentation differentiates debits from credits and decreases the possibility of switching the debit and credit amounts.
3. The amounts for the debits are recorded in the Debit (left) column, and the amounts for the credits are recorded in the Credit (right) column.
4. A brief explanation of the transaction is given (see **Helpful Hint**).

HELPFUL HINT

Note that journal entries do not use dollar signs or negative numbers.

It is important to use correct and specific account titles in journalizing. Erroneous account titles lead to incorrect financial statements. Some flexibility exists initially in selecting account titles. The main criterion is that each title must appropriately describe the content of the account. For example, a company could use any of these account titles for recording the cost of delivery trucks: Equipment, Delivery Equipment, Delivery Trucks, or Trucks. Once the company chooses the specific title to use, however, it should record under that account title all subsequent transactions involving the account.

Accounting Across the Organization Hain Celestial Group

Keith Homan/ Shutterstock.com

It Starts with the Transaction

Recording financial transactions in a company's records should be straightforward. If a company determines that a transaction involves revenue, it records revenue. If it has an expense, then it records an expense. However, sometimes this is difficult to do. For example, for more than a year, **Hain Celestial Group** (an organic food company) did not provide income information to investors and regulators. The reason was that the company discovered revenue irregularities and said it could not release financial results until it determined when and how to record revenue for certain transactions. When Hain missed four deadlines for reporting earnings information, the food company suffered a 34% drop in its stock price. As one analyst noted, it was hard to fathom why a seemingly simple revenue recognition issue took one year to resolve.

In other situations, outright fraud may occur. For example, regulators charged **Obsidian Energy** for fraudulently moving millions of dollars in expenses from operating expenses to capital expenditure accounts. By understating reported operating expenses, Obsidian made it appear that it was efficiently managing its costs as well as increasing its income.

These examples demonstrate that "getting the basic transaction right" is the foundation for relevant and reliable financial statements. Starting with an incorrect or inappropriate transaction leads to distortions in the financial statements.

Sources: Shawn Tully, "The Mystery of Hain Celestial's Accounting," *Fortune.com* (August 20, 2016); and Kelly Cryderman, "U.S. Charges Obsidian, Formerly Penn West, with Accounting Fraud," *The Globe and Mail* (June 28, 2017).

Why is it important for companies to record financial transactions completely and accurately? (Answer is available at the end of the chapter.)

ACTION PLAN

- **Make sure to provide a complete and accurate representation of the transactions' effects on the assets, liabilities, and stockholders' equity of the business.**

DO IT! 3 | Journal Entries

The following events occurred during the first month of business of Hair It Is Inc., Kate Browne's beauty salon:

1. Issued common stock to stockholders in exchange for $20,000 cash.
2. Purchased $4,800 of equipment on account (to be paid in 30 days).
3. Interviewed three people for the position of stylist.

Prepare the entries to record the transactions.

Solution

The three activities are recorded as follows.

1. Cash	20,000	
Common Stock		20,000
(Issued stock for cash)		
2. Equipment	4,800	
Accounts Payable		4,800
(Purchased equipment on account)		

3. No entry because no transaction occurred.

Related exercise material: BE3.7, BE3.8, BE3.11, DO IT! 3.3, E3.10, E3.12, E3.13, E3.14, E3.15, and E3.16.

3.4 The Ledger and Posting

LEARNING OBJECTIVE 4

Explain how a ledger and posting help in the recording process.

ANALYZE → JOURNALIZE → **Post to ledger accounts** → TRIAL BALANCE → ADJUSTING ENTRIES → ADJUSTED TRIAL BALANCE → FINANCIAL STATEMENTS → CLOSING ENTRIES → POST-CLOSING TRIAL BALANCE

The Ledger

The record of all accounts maintained by a company and their amounts is referred to collectively as the **ledger**.

- The ledger provides the balance in each of the accounts as well as keeps track of changes in these balances.
- Companies may use various kinds of ledgers, but every company has a general ledger.
- A **general ledger** contains all the asset, liability, stockholders' equity, revenue, and expense accounts, as shown in **Illustration** 3.20.

*Whenever we use the term **ledger** in this text without additional specification, it will mean the general ledger.*

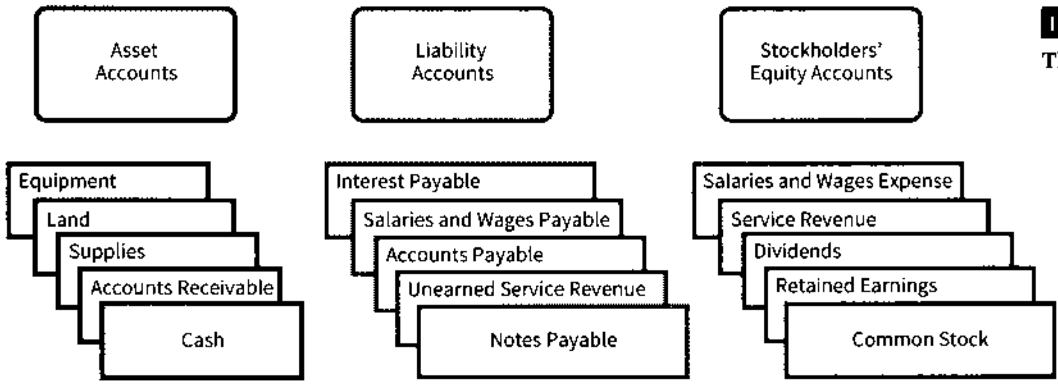


ILLUSTRATION 3.20 **The general ledger**

Chart of Accounts

The number and type of accounts used differ for each company, depending on the size, complexity, and type of business. For example, the number of accounts depends on the amount of detail desired by management. The management of one company may want one single account for all types of utility expense. Another may keep separate expense accounts for each type of utility expenditure, such as gas, electricity, and water.

- A small corporation like Sierra Corporation will not have many accounts compared with a corporate giant like **Ford Motor Company.**
- Sierra may be able to manage and report its activities in 20 to 30 accounts, whereas Ford requires thousands of accounts to keep track of its worldwide activities.

Most companies list the names of the accounts in a **chart of accounts**. They may create new accounts as needed during the life of the business. **Illustration 3.21** shows the chart of accounts for Sierra in the order that they are typically listed (assets, liabilities, stockholders' equity, revenues, and expenses). **Accounts shown in red are used in this chapter;** accounts shown in black are explained in later chapters.

ILLUSTRATION 3.21 **Chart of accounts for Sierra Corporation**

Sierra Corporation
Chart of Accounts

Assets	Liabilities	Stockholders' Equity	Revenues	Expenses
Cash	**Notes Payable**	**Common Stock**	**Service Revenue**	**Salaries and Wages Expense**
Accounts Receivable	**Accounts Payable**	**Retained Earnings**		Supplies Expense
Supplies	Interest Payable	**Dividends**		**Rent Expense**
Prepaid Insurance	**Unearned Service Revenue**	Income Summary		Insurance Expense
Equipment	Salaries and Wages Payable			Interest Expense
Accumulated Depreciation—Equipment				Depreciation Expense

Posting

The procedure of transferring journal entry amounts to ledger accounts is called **posting**. **This phase of the recording process accumulates the effects of journalized transactions in the individual accounts.** Posting involves these steps:

1. In the ledger, enter in the appropriate columns of the debited account(s) the date and debit amount shown in the journal.
2. In the ledger, enter in the appropriate columns of the credited account(s) the date and credit amount shown in the journal.

Ethics Insight Credit Suisse Group

Nuno Silva/iStockphoto

A Convenient Overstatement

Sometimes a company's investment securities suffer a permanent decline in value below their original cost. When this occurs, the company is supposed to reduce the recorded value of the securities on its balance sheet ("write them down" in common financial lingo) and record a loss. It appears, however, that during the financial crisis, employees at some financial institutions chose to look the other way as the value of their investments skidded.

A number of Wall Street traders that worked for the investment bank **Credit Suisse Group** were charged with intentionally overstating the value of securities that had suffered declines of approximately $2.85 billion. One reason that they might have been reluctant to record the losses was out of fear that the company's stockholders and clients would panic if they saw the magnitude of the losses. However, personal self-interest might have been equally to blame—the bonuses of the traders were tied to the value of the investment securities.

Source: Based on S. Pulliam, J. Eaglesham, and M. Siconolfi, "U.S. Plans Changes on Bond Fraud," *Wall Street Journal Online* (February 1, 2012).

What incentives might employees have had to overstate the value of these investment securities on the company's financial statements? (Answer is available at the end of the chapter.)

The Recording Process Illustrated

Illustrations 3.22 through 3.32 show the basic steps in the recording process using the October transactions of Sierra Corporation. Sierra's accounting period is a month. A basic analysis and a debit-credit analysis precede the journalizing and posting of each transaction. Study these transaction analyses carefully.

- **The purpose of transaction analysis is first to identify the type of account involved and then to determine whether a debit or a credit to the account is required.**
- 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 to be described in later chapters.

ILLUSTRATION 3.22

Investment of cash by stockholders

Cash flow analyses show the impact of each transaction on cash.

Cash Flows
+10,000

Event 1 On October 1, stockholders invest $10,000 cash in an outdoor guide service company to be known as Sierra Corporation.

Basic Analysis The asset Cash is increased $10,000; stockholders' equity (specifically Common Stock) is increased $10,000.

Equation Analysis

	Assets	=	Liabilities	+	Stockholders' Equity
	Cash	=			Common Stock
(1)	+$10,000				+$10,000 Issued stock

Debit-Credit Analysis Debits increase assets: debit Cash $10,000. Credits increase stockholders' equity: credit Common Stock $10,000.

Journal Entry

General Journal

Oct. 1	Cash	10,000	
	Common Stock		10,000
	(Issued stock for cash)		

Posting to Ledger

General Ledger

Cash		Common Stock	
Oct. 1 10,000			Oct. 1 10,000

ILLUSTRATION 3.23
Issue of note payable

Event 2 On October 1, Sierra borrows cash of $5,000 by signing a 3-month, 12%, $5,000 note payable.

Basic Analysis The asset Cash is increased $5,000; the liability Notes Payable is increased $5,000.

Equation Analysis

	Assets	=	Liabilities	+	Stockholders' Equity
	Cash	=	Notes Payable		
(2)	+$5,000		+$5,000		

Cash Flows
+5,000

Debit-Credit Analysis Debits increase assets: debit Cash $5,000.
Credits increase liabilities: credit Notes Payable $5,000.

Journal Entry

General Journal

Oct. 1	Cash	5,000	
	Notes Payable		5,000
	(Issued 3-month, 12% note payable for cash)		

Posting to Ledger

General Ledger

Cash				Notes Payable			
Oct. 1	10,000					Oct. 1	5,000
1	5,000						

ILLUSTRATION 3.24
Purchase of equipment

Event 3 On October 2, Sierra used $5,000 cash to purchase equipment.

Basic Analysis The asset Equipment is increased $5,000; the asset Cash is decreased $5,000.

Equation Analysis

	Assets			=	Liabilities	+	Stockholders' Equity
	Cash	+	Equipment				
(3)	−$5,000		+$5,000				

Cash Flows
−5,000

Debit-Credit Analysis Debits increase assets: debit Equipment $5,000.
Credits decrease assets: credit Cash $5,000.

Journal Entry

General Journal

Oct. 2	Equipment	5,000	
	Cash		5,000
	(Purchased equipment for cash)		

Posting to Ledger

General Ledger

Cash				Equipment			
Oct. 1	10,000	Oct. 2	5,000	Oct. 2	5,000		
1	5,000						

ILLUSTRATION 3.25

Receipt of cash in advance from customer

Event 4

On October 2, Sierra received a $1,200 cash advance from R. Knox, a client, for guide services for multi-day trips that are expected to be completed in the future.

Basic Analysis

The asset Cash is increased $1,200; the liability Unearned Service Revenue is increased $1,200 because the service has not been performed yet. That is, when an advance payment is received, unearned revenue (a liability) should be recorded in order to recognize the obligation that exists (see Helpful Hint).

Equation Analysis

	Assets	=	Liabilities	+	Stockholders' Equity
	Cash	=	Unearned Serv. Rev.		
(4)	+$1,200		+$1,200		

Cash Flows
+1,200

Debit–Credit Analysis

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

Journal Entry

General Journal

Oct. 2	Cash	1,200	
	Unearned Service Revenue		1,200
	(Received advance from R. Knox for future services)		

Posting to Ledger

General Ledger

Cash

Oct. 1 10,000	Oct. 2 5,000
1 5,000	
2 1,200	

Unearned Service Revenue

	Oct. 2 1,200

HELPFUL HINT

Many liabilities have the word "payable" in their title. But, note that Unearned Service Revenue is considered a liability even though the word *payable* is not used.

ILLUSTRATION 3.26

Services performed for cash

Event 5

On October 3, Sierra received $10,000 in cash from Copa Company for guide services performed in October.

Basic Analysis

The asset Cash is increased $10,000; the revenue Service Revenue is increased $10,000.

Equation Analysis

	Assets	=	Liabilities	+	Stockholders' Equity
	Cash	=			Revenues
(5)	+$10,000				+$10,000 Service Revenue

Cash Flows
+10,000

Debit–Credit Analysis

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

Journal Entry

General Journal

Oct. 3	Cash	10,000	
	Service Revenue		10,000
	(Received cash for services performed)		

Posting to Ledger

General Ledger

Cash

Oct. 1 10,000	Oct. 2 5,000
1 5,000	
2 1,200	
3 10,000	

Service Revenue

	Oct. 3 10,000

ILLUSTRATION 3.27

Payment of rent with cash

Event 6

On October 3, Sierra paid office rent for October in cash, $900.

Basic Analysis

The expense account Rent Expense is increased $900 because the payment pertains only to the current month; the asset Cash is decreased $900.

Equation Analysis

	Assets	=	Liabilities	+	Stockholders' Equity
	Cash	=			Expenses
(6)	–$900				–$900 Rent Expense

Cash Flows
–900

Debit-Credit Analysis

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

Journal Entry

General Journal

Oct. 3	Rent Expense	900	
	Cash		900
	(Paid cash for October office rent)		

Posting to Ledger

General Ledger

Cash

Oct. 1 10,000		Oct. 2 5,000	
1 5,000		3 900	
2 1,200			
3 10,000			

Rent Expense

Oct. 3 900	

ILLUSTRATION 3.28

Purchase of insurance policy with cash

Event 7

On October 4, Sierra paid $600 for a 1-year insurance policy that will expire next year on September 30.

Basic Analysis

The asset Cash is decreased $600. Payments of expenses that will benefit more than one accounting period are identified as prepaid expenses or prepayments. When a payment is made, an asset account is debited in order to show the service or benefit that will be received in the future. Therefore, the asset Prepaid Insurance is increased $600.

Equation Analysis

	Assets			=	Liabilities	+	Stockholders' Equity
	Cash	+	Prepaid Insurance				
(7)	–$600		+$600				

Cash Flows
–600

Debit-Credit Analysis

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

Journal Entry

General Journal

Oct. 4	Prepaid Insurance	600	
	Cash		600
	(Paid 1-year policy, effective date October 1)		

Posting to Ledger

General Ledger

Cash

Oct. 1 10,000	Oct. 2 5,000
1 5,000	3 900
2 1,200	4 600
3 10,000	

Prepaid Insurance

Oct. 4 600	

ILLUSTRATION 3.29

Purchase of supplies on account

Event 8

On October 5, Sierra purchased an estimated 3 months of supplies on account from Aero Supply for $2,500.

Basic Analysis

The asset Supplies is increased $2,500; the liability Accounts Payable is increased $2,500.

Equation Analysis

	Assets	=	Liabilities	+	Stockholders' Equity
	Supplies	=	Accounts Payable		
(8)	+$2,500		+$2,500		

Cash Flows
no effect

Debit-Credit Analysis

Debits increase assets: debit Supplies $2,500.
Credits increase liabilities: credit Accounts Payable $2,500.

Journal Entry

General Journal

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

Posting to Ledger

General Ledger

Supplies		Accounts Payable	
Oct. 5 2,500			Oct. 5 2,500

ILLUSTRATION 3.30

Hiring of new employees

Event 9

On October 9, Sierra hired four employees to begin work on October 15. Each employee will receive a weekly salary of $500 for a 5-day work week, payable every 2 weeks—first payment made on October 26.

Basic Analysis

An accounting transaction has not occurred. There is only an agreement that the employees will begin work on October 15. Thus, a debit-credit analysis is not needed because there is no accounting entry. (See transaction of October 26 (Event 11) for first payment.)

ILLUSTRATION 3.31

Payment of dividend

Event 10 On October 20, Sierra paid a $500 cash dividend to stockholders.

Basic Analysis The Dividends account is increased $500; the asset Cash is decreased $500.

Equation Analysis

	Assets	=	Liabilities	+	Stockholders' Equity
	Cash	=			Dividends
(10)	−$500				−$500

Cash Flows
−500

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

Journal Entry

General Journal

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

Posting to Ledger

General Ledger

Cash

Oct. 1	10,000	Oct. 2	5,000
1	5,000	3	900
2	1,200	4	600
3	10,000	20	500

Dividends

Oct. 20	500	

ILLUSTRATION 3.32

Payment of cash for employee salaries

Event 11 On October 26, Sierra paid employee salaries of $4,000 in cash. (See October 9 event.)

Basic Analysis The expense account Salaries and Wages Expense is increased $4,000; the asset Cash is decreased $4,000.

Equation Analysis

	Assets	=	Liabilities	+	Stockholders' Equity
	Cash	=			Expenses
(11)	−$4,000				−$4,000 Salaries and Wages Expense

Cash Flows
−4,000

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

Journal Entry

General Journal

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

Posting to Ledger

General Ledger

Cash

Oct. 1	10,000	Oct. 2	5,000
1	5,000	3	900
2	1,200	4	600
3	10,000	20	500
		26	4,000

Salaries and Wages Expense

Oct. 26	4,000	

Summary Illustration of Journalizing and Posting

The journal for Sierra Corporation for the month of October is summarized in **Illustration 3.33**. The ledger is shown in **Illustration 3.34** with all balances highlighted in red.

ILLUSTRATION 3.33

General journal for Sierra Corporation

General Journal

Date	Account Titles and Explanation	Debit	Credit
2025			
Oct. 1	Cash	10,000	
	Common Stock		10,000
	(Issued stock for cash)		
1	Cash	5,000	
	Notes Payable		5,000
	(Issued 3-month, 12% note payable for cash)		
2	Equipment	5,000	
	Cash		5,000
	(Purchased equipment for cash)		
2	Cash	1,200	
	Unearned Service Revenue		1,200
	(Received advance from R. Knox for future service)		
3	Cash	10,000	
	Service Revenue		10,000
	(Received cash for services performed)		
3	Rent Expense	900	
	Cash		900
	(Paid cash for October office rent)		
4	Prepaid Insurance	600	
	Cash		600
	(Paid 1-year policy; effective date October 1)		
5	Supplies	2,500	
	Accounts Payable		2,500
	(Purchased supplies on account from Aero Supply)		
20	Dividends	500	
	Cash		500
	(Declared and paid a cash dividend)		
26	Salaries and Wages Expense	4,000	
	Cash		4,000
	(Paid salaries to date)		

ILLUSTRATION 3.34
General ledger for Sierra Corporation

General Ledger

Cash

Oct. 1	10,000	Oct. 2	5,000
1	5,000	3	900
2	1,200	4	600
3	10,000	20	500
		26	4,000
Oct. 31	Bal. 15,200		

Unearned Service Revenue

		Oct. 2	1,200
		Oct. 31	Bal. 1,200

Supplies

Oct. 5	2,500		
Oct. 31	Bal. 2,500		

Common Stock

		Oct. 1	10,000
		Oct. 31	Bal. 10,000

Prepaid Insurance

Oct. 4	600		
Oct. 31	Bal. 600		

Dividends

Oct. 20	500		
Oct. 31	Bal. 500		

Equipment

Oct. 2	5,000		
Oct. 31	Bal. 5,000		

Service Revenue

		Oct. 3	10,000
		Oct. 31	Bal. 10,000

Notes Payable

		Oct. 1	5,000
		Oct. 31	Bal. 5,000

Salaries and Wages Expense

Oct. 26	4,000		
Oct. 31	Bal. 4,000		

Accounts Payable

		Oct. 5	2,500
		Oct. 31	Bal. 2,500

Rent Expense

Oct. 3	900		
Oct. 31	Bal. 900		

DO IT! 4 Posting

Selected transactions from the journal of Faital Inc. during its first month of operations are presented below. Post these transactions to T-accounts.

Date	Account Titles	Debit	Credit
July 1	Cash	30,000	
	Common Stock		30,000
9	Accounts Receivable	6,000	
	Service Revenue		6,000
24	Cash	4,000	
	Accounts Receivable		4,000

ACTION PLAN

- **Journalize transactions to keep track of financial activities (receipts, payments, receivables, payables, etc.).**
- **To make entries useful, classify and summarize them by posting the entries to specific ledger accounts.**

Solution

Cash

July 1	30,000		
24	4,000		

Accounts Receivable

July 9	6,000	July 24	4,000

Common Stock

		July 1	30,000

Service Revenue

		July 9	6,000

Related exercise material: BE3.12, DO IT! 3.4, and E3.19.

3.5 The Trial Balance

LEARNING OBJECTIVE 5

Prepare a trial balance.

ANALYZE | JOURNALIZE | POST | **Prepare a trial balance** | ADJUSTING ENTRIES | ADJUSTED TRIAL BALANCE | FINANCIAL STATEMENTS | CLOSING ENTRIES | POST-CLOSING TRIAL BALANCE

A **trial balance** lists accounts and their balances at a given time.

> **Decision Tools**
> A trial balance proves that debits equal credits.

- A company usually prepares a trial balance at the end of an accounting period.
- The accounts are listed in the order in which they appear in the ledger.
- Debit balances are listed in the left column and credit balances in the right column. The totals of the two columns must be equal (see **Decision Tools**).

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 MF Global discussed in the Feature Story. **In addition, a trial balance is useful in the preparation of financial statements.**

These are the procedures for preparing a trial balance:

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

Illustration 3.35 presents the trial balance prepared from the ledger of Sierra Corporation (see **Helpful Hint**). Note that the total debits, $28,700, equal the total credits, $28,700.

ILLUSTRATION 3.35
Sierra Corporation trial balance

> **HELPFUL HINT**
> **Note that the order of presentation in the trial balance is:**
> **Assets**
> **Liabilities**
> **Stockholders' equity**
> **Revenues**
> **Expenses**

Sierra Corporation
Trial Balance
October 31, 2025

	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
Common Stock		10,000
Dividends	500	
Service Revenue		10,000
Salaries and Wages Expense	4,000	
Rent Expense	900	
	$28,700	$28,700

Limitations of a Trial Balance

A trial balance does not prove that all transactions have been recorded or that the ledger is correct. Numerous errors may exist even though the trial balance column totals agree (see **Ethics Note**). For example, the trial balance may balance even when any of the following occurs:

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.
5. Offsetting errors are made in recording the amount of a transaction.

In other words, 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. Nevertheless, despite these limitations, the trial balance is a useful screen for finding errors and is frequently used in practice.

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.

Keeping an Eye on Cash

The Cash account shown below reflects all of the inflows and outflows of cash that occurred during October for Sierra Corporation (see Illustrations 3.22 to 3.32). We have also provided a description of each transaction that affected the Cash account.

1. Oct. 1 Issued stock for $10,000 cash.
2. Oct. 1 Issued note payable for $5,000 cash.
3. Oct. 2 Purchased equipment for $5,000 cash.
4. Oct. 2 Received $1,200 cash in advance from customer.
5. Oct. 3 Received $10,000 cash for services performed.
6. Oct. 3 Paid $900 cash for October rent.
7. Oct. 4 Paid $600 cash for one-year insurance policy.
8. Oct. 20 Paid $500 cash dividend to stockholders.
9. Oct. 26 Paid $4,000 cash salaries.

The Cash account and the related cash transactions indicate why cash changed during October. However, to make this information useful for analysis, it is summarized in a statement of cash flows.

The statement of cash flows classifies each transaction as an operating activity, an investing activity, or a financing activity. A user of this statement can then determine the amount of net cash provided by operating activities, the amount of cash used for investing purposes, and the amount of cash provided by financing activities.

Cash

Oct. 1	10,000	Oct. 2	5,000
1	5,000	3	900
2	1,200	4	600
3	10,000	20	500
		26	4,000
Oct. 31 Bal.	15,200		

- **Operating activities** are the types of activities the company performs to generate profits. Sierra is an outdoor guide business, so its operating activities involve providing guide services. Activities 4, 5, 6, 7, and 9 relate to cash received or spent to directly support its guide services.
- **Investing activities** include the purchase or sale of long-lived assets used in operating the business, or the purchase or sale of investment securities (stocks and bonds of companies other than Sierra). Activity 3, the purchase of equipment, is an investing activity.
- **Financing activities** include borrowing money and repaying amounts borrowed, issuing shares of stock, and paying dividends. The financing activities of Sierra are Activities 1, 2, and 8.

DO IT! 5 Trial Balance

The following accounts come from the ledger of SnowGo Corporation at December 31, 2025.

Equipment	$88,000	Common Stock	$20,000
Dividends	8,000	Salaries and Wages Payable	2,000
Accounts Payable	22,000	Notes Payable (due in 3 months)	19,000
Salaries and Wages Expense	42,000	Utilities Expense	3,000
Accounts Receivable	4,000	Prepaid Insurance	6,000
Service Revenue	95,000	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 Corporation
Trial Balance
December 31, 2025

	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
Common Stock		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: BE3.13, BE3.14, DO IT! 3.5, E3.18, E3.20, E3.21, E3.22, E3.23, E3.24, and E3.25.

USING THE DECISION TOOLS | Kansas Farmers' Vertically Integrated Cooperative, Inc.

The **Kansas Farmers' Vertically Integrated Cooperative, Inc.** (K-VIC) was formed by over 200 northeast Kansas farmers in the late 1980s. Its purpose is to process raw materials, primarily grain and meat products grown by K-VIC's members, into end-user food products and then to distribute the products nationally. Profits not needed for expansion or investment are returned to the members annually, on a pro rata basis, according to the fair value of the grain and meat products received from each farmer.

Assume that the following trial balance was prepared for K-VIC.

Kansas Farmers' Vertically Integrated Cooperative, Inc.
Trial Balance
December 31, 2025
(in thousands)

	Debit	Credit
Accounts Receivable	$ 712,000	
Accounts Payable		$ 673,000
Buildings	365,000	
Cash	32,000	
Cost of Goods Sold	2,384,000	
Notes Payable (due in 2026)		12,000
Inventory	1,291,000	
Land	110,000	
Mortgage Payable		873,000
Equipment	63,000	
Retained Earnings		822,000
Sales Revenue		3,741,000
Salaries and Wages Payable		62,000
Salaries and Wages Expense	651,000	
Maintenance and Repairs Expense	500,000	
	$6,108,000	$6,183,000

Because the trial balance is not in balance, you have checked with various people responsible for entering accounting data and have discovered the following.

1. The purchase of 35 new trucks, costing $7 million and paid for with cash, was not recorded.
2. A data entry clerk accidentally deleted the account name for an account with a credit balance of $472 million, so the amount was added to the Mortgage Payable account in the trial balance.
3. December cash sales revenue of $75 million was credited to the Sales Revenue account, but the other half of the entry was not made.
4. $50 million of salaries expense were mistakenly charged to Maintenance and Repairs Expense.

Instructions

Answer these questions.

a. Which mistake(s) have caused the trial balance to be out of balance?
b. Should all of the items be corrected? Explain.
c. What is the name of the account the data entry clerk deleted?
d. Make the necessary corrections and prepare a correct trial balance with accounts listed in proper order.
e. On your trial balance, write BAL beside the accounts that go on the balance sheet and INC beside those that go on the income statement.

Solution

a. Only mistake #3 has caused the trial balance to be out of balance.
b. All of the items should be corrected. The misclassification error (mistake #4) on the salaries expense would not affect bottom-line net income, but it does affect the amounts reported in the two expense accounts.
c. There is no Common Stock account, so that must be the account that was deleted by the data entry clerk.
d. and e.

Kansas Farmers' Vertically Integrated Cooperative, Inc.
Trial Balance
December 31, 2025
(in thousands)

	Debit	Credit	
Cash ($32,000 − $7,000 + $75,000)	$ 100,000		BAL
Accounts Receivable	712,000		BAL
Inventory	1,291,000		BAL
Land	110,000		BAL
Buildings	365,000		BAL
Equipment ($63,000 + $7,000)	70,000		BAL
Accounts Payable		$ 673,000	BAL
Salaries and Wages Payable		62,000	BAL
Notes Payable (due in 2023)		12,000	BAL
Mortgage Payable ($873,000 − $472,000)		401,000	BAL
Common Stock		472,000	BAL
Retained Earnings		822,000	BAL
Sales Revenue		3,741,000	INC
Cost of Goods Sold	2,384,000		INC
Salaries and Wages Expense ($651,000 + $50,000)	701,000		INC
Maintenance and Repairs Expense ($500,000 − $50,000)	450,000		INC
	$6,183,000	$6,183,000	

Review and Practice

Learning Objective Review

1 Analyze the effect of business transactions on the basic accounting equation.

Each business transaction must have a dual effect on the accounting equation. For example, if an individual asset is increased, there must be a corresponding (a) decrease in another asset, or (b) increase in a specific liability, or (c) increase in stockholders' equity.

2 Explain how accounts, debits, and credits are used to record business transactions.

An account is an individual accounting record of increases and decreases in specific asset, liability, and stockholders' equity, revenue, or expense items.

The terms debit and credit are synonymous with left and right. Assets, dividends, and expenses are increased by debits and decreased by credits. Liabilities, common stock, retained earnings, and revenues are increased by credits and decreased by debits.

3 Indicate how a journal is used in the recording process.

The basic steps in the recording process are (a) analyze each transaction in terms of its effect on the accounts, (b) enter the transaction information in a journal, and (c) transfer the journal information to the appropriate accounts in the ledger.

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 effect 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 readily compared.

4 Explain how a ledger and posting help in the recording process.

The entire group of accounts maintained by a company is referred to collectively as a ledger. The ledger provides the balance in each of the accounts as well as keeps track of changes in these balances.

Posting is the procedure of transferring journal entries to the ledger accounts. This phase of the recording process accumulates the effects of journalized transactions in the individual accounts.

5 Prepare a trial balance.

A trial balance is a list of accounts and their balances at a given time. The primary purpose of the trial balance is to prove the mathematical equality of debits and credits after posting. A trial balance also uncovers errors in journalizing and posting and is useful in preparing financial statements.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Has an accounting transaction occurred?	Details of the event	Accounting equation	If the event affected assets, liabilities, or stockholders' equity, then record as a transaction.
How do you determine that debits equal credits?	All account balances	Trial balance	List the account titles and their balances; total the debit and credit columns; verify equality.

Glossary Review

Account An individual accounting record of increases and decreases in specific asset, liability, stockholders' equity, revenue, or expense items. (p. 3-11).

Accounting information system The system of collecting and processing transaction data and communicating financial information to decision-makers. (p. 3-3).

Accounting transactions Events that require recording in the financial statements because they affect assets, liabilities, or stockholders' equity. (p. 3-3).

Chart of accounts A list of the names of a company's accounts. (p. 3-21).

Credit The right side of an account. (p. 3-11).

Debit The left side of an account. (p. 3-11).

Double-entry system A system that records the two-sided effect of each transaction in appropriate accounts. (p. 3-12).

General journal The most basic form of journal. (p. 3-18).

General ledger A ledger that contains all asset, liability, stockholders' equity, revenue, and expense accounts. (p. 3-20).

Journal An accounting record in which transactions are initially recorded in chronological order. (p. 3-18).

Journalizing The procedure of entering transaction data in the journal. (p. 3-18).

Ledger A record of all accounts maintained by a company and their amounts. (p. 3-20).

Posting The procedure of transferring journal entry amounts to the ledger accounts. (p. 3-21).

T-account The basic form of an account. (p. 3-11).

Trial balance A list of accounts and their balances at a given time. (p. 3-30).

Practice Multiple-Choice Questions

1. **(LO 1)** The effects on the basic accounting equation of performing services for cash are to:
   - **a.** increase assets and decrease stockholders' equity.
   - **b.** increase assets and increase stockholders' equity.
   - **c.** increase assets and increase liabilities.
   - **d.** increase liabilities and increase stockholders' equity.
2. **(LO 1)** Genesis Company buys a $900 machine on credit. This transaction will affect the:
   - **a.** income statement only.
   - **b.** balance sheet only.
   - **c.** income statement and retained earnings statement only.
   - **d.** income statement, retained earnings statement, and balance sheet.
3. **(LO 1)** Which of the following events is **not** recorded in the accounting records?
   - **a.** Equipment is purchased on account.
   - **b.** An employee is terminated.
   - **c.** A cash investment is made into the business.
   - **d.** Company pays dividend to stockholders.
4. **(LO 1)** During 2025, Gibson Company assets decreased $50,000 and its liabilities decreased $90,000. Its stockholders' equity therefore:
   - **a.** increased $40,000.
   - **b.** decreased $140,000.
   - **c.** decreased $40,000.
   - **d.** increased $140,000.
5. **(LO 2)** Which statement about an account is **true**?
   - **a.** An account consists of a title, a debit side, and a ledger side.
   - **b.** An account is an individual accounting record of increases and decreases in specific asset, liability, and stockholders' equity items.
   - **c.** There are separate accounts for specific assets and liabilities but only one account for stockholders' equity items.
   - **d.** The left side of an account is the credit, or decrease, side.
6. **(LO 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.
7. **(LO 2)** 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.
8. **(LO 2)** Which accounts normally have debit balances?
   - **a.** Assets, expenses, and revenues.
   - **b.** Assets, expenses, and retained earnings.
   - **c.** Assets, liabilities, and dividends.
   - **d.** Assets, dividends, and expenses.
9. **(LO 2)** Paying an account payable with cash affects the components of the accounting equation in the following way:
   - **a.** Decreases stockholders' equity and decreases liabilities.
   - **b.** Increases assets and decreases liabilities.
   - **c.** Decreases assets and increases stockholders' equity.
   - **d.** Decreases assets and decreases liabilities.
10. **(LO 3)** Which is **not** part of the recording process?
    - **a.** Analyzing transactions.
    - **b.** Preparing an income statement.
    - **c.** Entering transactions in a journal.
    - **d.** Posting journal entries.
11. **(LO 3)** Which of these statements about a journal is **false**?
    - **a.** It contains only revenue and expense accounts.
    - **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.
12. **(LO 4)** A ledger:
    - **a.** contains only asset and liability accounts.
    - **b.** should show accounts in alphabetical order.
    - **c.** is a record of all accounts maintained by a company and their amounts.
    - **d.** provides a chronological record of transactions.
13. **(LO 4)** Posting:
    - **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.

14. **(LO 5)** A trial balance:
    - **a.** is a list of accounts with their balances at a given time.
    - **b.** proves that proper account titles were used.
    - **c.** will not balance if a correct journal entry is posted twice.
    - **d.** proves that all transactions have been recorded.

15. **(LO 5)** 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.

Solutions

1. **b.** When services are performed for cash, assets are increased and stockholders' equity is increased. The other choices are therefore incorrect.

2. **b.** When equipment is purchased on credit, assets are increased and liabilities are increased. These are both balance sheet accounts. The other choices are incorrect because neither the income statement nor the retained earnings statement is affected.

3. **b.** Termination of an employee is not a recordable event in the accounting records. The other choices all represent events that are recorded.

4. **a.** Since assets decreased by $50,000 and liabilities decreased by $90,000, stockholders' equity has to increase by $40,000 to keep the accounting equation balanced. The other choices are therefore incorrect.

5. **b.** An account is an individual accounting record of increases and decreases in specific asset, liability, and stockholders' equity items. The other choices are incorrect because (a) in its simplest form, an account consists of three parts: a title and debit and credit side; (c) there are specific accounts for different types of stockholders' equity, such as Common Stock, Retained Earnings, and Dividends; and (d) the left side of an account is the debit side.

6. **c.** Debits increase assets and decrease liabilities. The other choices are therefore incorrect.

7. **d.** Revenues are increased by credits. Revenues have a normal credit balance. The other choices are therefore incorrect.

8. **d.** Assets, dividends, and expenses have normal debit balances. The other choices are incorrect because (a) revenues have a normal credit balance, (b) retained earnings has a normal credit balance, and (c) liabilities have a normal credit balance.

9. **d.** When paying an account payable with cash, the asset cash decreases. Accounts payable, a liability, decreases as well. The other choices are therefore incorrect.

10. **b.** Preparing an income statement is not part of the recording process. Choices (a) analyzing transactions, (c) entering transactions in a journal, and (d) posting transactions are all steps in the recording process.

11. **a.** A journal contains entries affecting all accounts, not just revenue and expense accounts. The other choices are true statements.

12. **c.** A ledger is a record of all accounts maintained by a company and their amounts. The other choices are incorrect because (a) it contains all types of accounts, not just assets and liabilities; (b) they are not listed in alphabetical order but instead in the order of asset, liability, and stockholders' equity accounts and then revenues and expenses; and (d) the journal provides a chronological record.

13. **d.** Posting transfers journal entries to ledger accounts. The other choices are incorrect because posting (a) occurs after journalizing, (b) transfers the information contained in journal entries to the ledger, and (c) is a required step in the recording process. If posting is not done, the ledger accounts will not reflect changes in the accounts resulting from transactions.

14. **a.** A trial balance is a list of accounts with their balances at a given time. The other choices are incorrect because (b) it does not confirm that proper account titles were used; (c) if a journal entry is posted twice, the trial balance will still balance; and (d) a trial balance does not prove that all transactions have been recorded.

15. **c.** The entry will cause the trial balance to be out of balance. The other choices are incorrect because although these entries are incorrect, they will still allow the trial balance to balance.

Practice Brief Exercises

1. **(LO 1)** During 2025, Rain Corp. entered into the following transactions.

    1. Purchased equipment for $31,000 by issuing a note.
    2. Received $960 from tenant for rent.
    3. Paid $520 for supplies previously purchased on account.
    4. Performed services on account for $12,500.

Using the following tabular analysis, show the effect of each transaction on the accounting equation. Put explanations for changes to revenues or expenses in the right-hand margin. For retained earnings, use separate columns for revenues, expenses, and dividends if necessary. Use Illustration 3.4 as a model.

Assets				=	Liabilities		+	Stockholders' Equity			
Cash	+ Accts. Receivable	+ Supplies	+ Equip.	=	Accts. Pay.	+ Notes Pay.	+	Common Stock	+ Retained Earnings Rev.	− Exp.	− Div.

Solution

1.

	Assets				=	Liabilities		+	Stockholders' Equity				
	Cash	+ Accts. Receivable	+ Supplies	+ Equip.	=	Accts. Pay.	+ Notes Pay.	+	Common Stock	+ Retained Earnings Rev.	− Exp.	− Div.	
1.				+$31,000			+$31,000						
2.	+$960									+$960			Rent Revenue
3.	−520					−$520							
4.		+$12,500								+12,500			Service Revenue

2. (LO 2) Transactions for Warren Potter Inc. for the month of May are presented below. Identify the accounts to be debited and credited for each transaction.

Identify accounts to be debited and credited.

May 1 Stockholders invested $22,000 in the business.
6 Paid office rent of $900.
12 Performed consulting services and billed client $4,400.
18 Purchased equipment on account for $1,200.

Solution

2.

	Account Debited	Account Credited
May 1	Cash	Common Stock
6	Rent Expense	Cash
12	Accounts Receivable	Service Revenue
18	Equipment	Accounts Payable

3. (LO 3) Using the data from **Practice Brief Exercise 2**, journalize the transactions (omit explanations).

Journalize transactions.

Solution

3.

May 1	Cash	22,000	
	Common Stock		22,000
6	Rent Expense	900	
	Cash		900
12	Accounts Receivable	4,400	
	Service Revenue		4,400
18	Equipment	1,200	
	Accounts Payable		1,200

4. (LO 4) Selected transactions for Carlos Santana Company are presented in journal form below. Post the transactions to T-accounts. Make one T-account for each account and determine each account's ending balance.

Post journal entries to T-accounts.

J1

Date	Account Titles and Explanation	Ref.	Debit	Credit
June 6	Cash		22,000	
	Common Stock			22,000
	(Stockholders' investment of cash in business)			
13	Accounts Receivable		8,200	
	Service Revenue			8,200
	(Billed for services performed)			
14	Cash		3,700	
	Accounts Receivable			3,700
	(Received cash in payment of account)			

Solution

4.

Cash

6/6	22,000		
6/14	3,700		
Bal.	25,700		

Accounts Receivable

6/13	8,200	6/14	3,700
Bal.	4,500		

Service Revenue

		6/13	8,200
		Bal.	8,200

Common Stock

		6/6	22,000
		Bal.	22,000

Prepare a trial balance.

5. **(LO 5)** From the ledger accounts below, prepare a trial balance for Bundy Corporation at December 31, 2025. List the accounts in the order shown in the text. All account balances are normal.

Accounts Receivable	$10,000	Salaries and Wages Expense	$ 2,300
Supplies	4,100	Rent Expense	1,200
Accounts Payable	3,500	Common Stock	10,200
Dividends	1,100	Cash	6,000
Service Revenue	11,000		

Solution

5.

Bundy Corporation
Trial Balance
December 31, 2025

	Debit	Credit
Cash	$ 6,000	
Accounts Receivable	10,000	
Supplies	4,100	
Accounts Payable		$ 3,500
Common Stock		10,200
Dividends	1,100	
Service Revenue		11,000
Salaries and Wages Expense	2,300	
Rent Expense	1,200	
	$24,700	$24,700

Practice Exercises

Prepare a tabular presentation.

1. **(LO 1)** Legal Services Inc. was incorporated on July 1, 2025. During the first month of operations, the following transactions occurred.

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

Instructions

Prepare a tabular summary of the transactions.

Solution

1.

Trans-action	Cash	+	Accounts Receivable	+	Equipment	=	Notes Payable	+	Accounts Payable	+	Common Stock	+	Rev.	−	Exp.	−	Div.	
	Assets					=	**Liabilities**			+	**Stockholders' Equity**		Retained Earnings					
(1)	+$10,000					=					+$10,000							
(2)	−800														−$800			**Rent Expense**
(3)					+$3,000	=			+$3,000									
(4)	+1,500												+$1,500					**Service Revenue**
(5)	+700						+$700											
(6)			+$2,000										+ 2,000					**Service Revenue**
(7)	−500														−500			**Sal./Wages Exp.**
	−300														−300			**Utilities Expense**
	−100														−100			**Advertising Expense**
	$10,500	+	$2,000	+	$3,000	=	$700	+	$3,000	+	$10,000	+	$3,500	−	$1,700			
	$15,500						$15,500											

2. (LO 3) Presented below is information related to Conan Real Estate Agency. *Journalize transactions.*

Oct. 1 Arnold Conan begins business as a real estate agent with a cash investment of $18,000 in exchange for common stock.
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

2.

General Journal

Date	Account Titles and Explanation	Debit	Credit
Oct. 1	Cash	18,000	
	Common Stock		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

Practice Problem

Journalize transactions, post, and prepare a trial balance.

(LO 3, 4, 5) Bob Sample and other student-investors opened Campus Carpet Cleaning, Inc. on September 1, 2025. During the first month of operations, the following transactions occurred.

Sept.	1	Stockholders invested $20,000 cash in the business.
	2	Paid $1,000 cash for store rent for the month of September.
	3	Purchased industrial carpet-cleaning equipment for $25,000, paying $10,000 in cash and signing a $15,000 6-month, 12% note payable.
	4	Paid $1,200 for 1-year accident insurance policy.
	10	Received bill from the *Daily News* for advertising the opening of the cleaning service, $200.
	15	Performed services on account for $6,200.
	20	Paid a $700 cash dividend to stockholders.
	30	Received $5,000 from customers billed on September 15.

The chart of accounts for the company is the same as for Sierra Corporation except for the following additional account: Advertising Expense.

Instructions

a. Journalize the September transactions.

b. Open ledger accounts and post the September transactions.

c. Prepare a trial balance at September 30, 2025.

Solution

a.

General Journal

Date	Account Titles and Explanation	Debit	Credit
2025			
Sept. 1	Cash	20,000	
	Common Stock		20,000
	(Issued stock for cash)		
2	Rent Expense	1,000	
	Cash		1,000
	(Paid September rent)		
3	Equipment	25,000	
	Cash		10,000
	Notes Payable		15,000
	(Purchased cleaning equipment for cash and 6-month, 12% note payable)		
4	Prepaid Insurance	1,200	
	Cash		1,200
	(Paid 1-year insurance policy)		
10	Advertising Expense	200	
	Accounts Payable		200
	(Received bill from *Daily News* for advertising)		
15	Accounts Receivable	6,200	
	Service Revenue		6,200
	(Services performed on account)		
20	Dividends	700	
	Cash		700
	(Declared and paid a cash dividend)		
30	Cash	5,000	
	Accounts Receivable		5,000
	(Collection of accounts receivable)		

b.

General Ledger

Cash

Sept. 1	20,000	Sept. 2	1,000
30	5,000	3	10,000
		4	1,200
		20	700
Sept. 30	Bal. 12,100		

Common Stock

		Sept. 1	20,000
		Sept. 30	Bal. 20,000

Accounts Receivable

Sept. 15	6,200	Sept. 30	5,000
Sept. 30	Bal. 1,200		

Dividends

Sept. 20	700		
Sept. 30	Bal. 700		

Prepaid Insurance

Sept. 4	1,200		
Sept. 30	Bal. 1,200		

Service Revenue

		Sept. 15	6,200
		Sept. 30	Bal. 6,200

Equipment

Sept. 3	25,000		
Sept. 30	Bal. 25,000		

Advertising Expense

Sept. 10	200		
Sept. 30	Bal. 200		

Notes Payable

		Sept. 3	15,000
		Sept. 30	Bal. 15,000

Rent Expense

Sept. 2	1,000		
Sept. 30	Bal. 1,000		

Accounts Payable

		Sept. 10	200
		Sept. 30	Bal. 200

c.

Campus Carpet Cleaning, Inc.
Trial Balance
September 30, 2025

	Debit	Credit
Cash	$12,100	
Accounts Receivable	1,200	
Prepaid Insurance	1,200	
Equipment	25,000	
Notes Payable		$15,000
Accounts Payable		200
Common Stock		20,000
Dividends	700	
Service Revenue		6,200
Advertising Expense	200	
Rent Expense	1,000	
	$41,400	$41,400

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Questions

1. Describe the accounting information system.

2. Can a business enter into a transaction that affects only the left side of the basic accounting equation? If so, give an example.

3. Are the following events recorded in the accounting records? Explain your answer in each case.
   - **a.** A major stockholder of the company dies.
   - **b.** Supplies are purchased on account.
   - **c.** An employee is fired.
   - **d.** The company pays a cash dividend to its stockholders.

4. Indicate how each business transaction affects the basic accounting equation.
   - **a.** Paid cash for janitorial services.
   - **b.** Purchased equipment for cash.
   - **c.** Issued common stock to investors in exchange for cash.
   - **d.** Paid an account payable in full.

5. Why is an account referred to as a T-account?

6. The terms debit and credit mean "increase" and "decrease," respectively. Do you agree? Explain.

7. Barry Barack, a fellow student, contends that the double-entry system means each transaction must be recorded twice. Is Barry correct? Explain.

8. Misty Reno, a beginning accounting student, believes debit balances are favorable and credit balances are unfavorable. Is Misty correct? Discuss.

9. State the rules of debit and credit as applied to (a) asset accounts, (b) liability accounts, and (c) the Common Stock account.

10. What is the normal balance for each of these accounts?
    - **a.** Accounts Receivable.
    - **b.** Cash.
    - **c.** Dividends.
    - **d.** Accounts Payable.
    - **e.** Service Revenue.
    - **f.** Salaries and Wages Expense.
    - **g.** Common Stock.

11. Indicate whether each account is an asset, a liability, or a stockholders' equity account, and whether it would have a normal debit or credit balance.
    - **a.** Accounts Receivable.
    - **b.** Accounts Payable.
    - **c.** Equipment.
    - **d.** Dividends.
    - **e.** Supplies.

12. 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.

13. For each account listed here, indicate whether it generally will have debit entries only, credit entries only, or both debit and credit entries.
    - **a.** Cash.
    - **b.** Accounts Receivable.
    - **c.** Dividends.
    - **d.** Accounts Payable.
    - **e.** Salaries and Wages Expense.
    - **f.** Service Revenue.

14. What are the normal balances for the following accounts of Apple? (a) Accounts Receivable, (b) Accounts Payable, (c) Sales, and (d) Selling, General, and Administrative Expenses.

15. What are the basic steps in the recording process?

16. **a.** When entering a transaction in the journal, should the debit or credit be written first?
    b. Which should be indented, the debit or the credit?

17. **a.** Should accounting 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?

18. Journalize these accounting transactions.
    - **a.** Stockholders invested $12,000 in the business in exchange for common stock.
    - **b.** Insurance of $800 is paid for the year.
    - **c.** Supplies of $1,800 are purchased on account.
    - **d.** Cash of $7,500 is received for services rendered.

19. **a.** What is a ledger?
    b. Why is a chart of accounts important?

20. What is a trial balance and what are its purposes?

21. Brad Tyler is confused about how accounting information flows through the accounting system. He believes information flows in this order:
    - **a.** Debits and credits are posted to the ledger.
    - **b.** Accounting transaction occurs.
    - **c.** Information is entered in the journal.
    - **d.** Adjusting entries are entered, adjusted trial balance is prepared, and financial statements are prepared.
    - **e.** Trial balance is prepared.

    Indicate to Brad the proper flow of the information.

22. 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 $800, and Service Revenue was credited for $80.

Brief Exercises

BE3.1 **(LO 1), C** Presented below are three economic events. On a sheet of paper, list the letters (a), (b), and (c) with columns for assets, liabilities, and stockholders' equity. In each column, indicate whether the event increased (+), decreased (−), or had no effect (NE) on assets, liabilities, and stockholders' equity.

Determine effect of transactions on basic accounting equation.

a. Purchased supplies on account.

b. Received cash for performing a service.

c. Expenses paid in cash.

BE3.2 **(LO 1), AP** During 2025, Manion Corp. entered into the following transactions.

Determine effect of transactions on basic accounting equation.

1. Borrowed $60,000 by issuing bonds.
2. Paid $9,000 cash dividend to stockholders.
3. Received $13,000 cash from a previously billed customer for services performed.
4. Purchased supplies on account for $3,100.

Using the following tabular analysis, show the effect of each transaction on the accounting equation. Put explanations for changes to revenues or expenses in the right-hand margin. For Retained Earnings, use separate columns for Revenues, Expenses, and Dividends if necessary. Use Illustration 3.4 as a model.

Assets					=	Liabilities			+	Stockholders' Equity		
		Accounts				Accounts		Bonds		Common		Retained
Cash	+	Receivable	+	Supplies	=	Payable	+	Payable	+	Stock	+	Earnings

BE3.3 **(LO 1), AP** During 2025, Rostock Company entered into the following transactions.

Determine effect of transactions on basic accounting equation.

1. Purchased equipment for $286,176 cash.
2. Issued common stock to investors for $137,590 cash.
3. Purchased inventory of $68,480 on account.

Using the following tabular analysis, show the effect of each transaction on the accounting equation. Put explanations for changes to revenues or expenses in the right-hand margin. For Retained Earnings, use separate columns for Revenues, Expenses, and Dividends if necessary. Use Illustration 3.4 as a model.

Assets					=	Liabilities	+	Stockholders' Equity		
						Accounts		Common		Retained
Cash	+	Inventory	+	Equipment	=	Payable	+	Stock	+	Earnings

BE3.4 **(LO 2), K** For each of the following accounts, indicate the effect of a debit or a credit on the account and the normal balance.

Indicate debit and credit effects.

a. Accounts Payable.

b. Advertising Expense.

c. Service Revenue.

d. Accounts Receivable.

e. Retained Earnings.

f. Dividends.

BE3.5 **(LO 2), K** For each of the following accounts, indicate the effect of a debit or credit on the account and the normal balance.

Indicate debit and credit effects.

a. Bonds Payable.

b. Unearned Service Revenue.

c. Depreciation Expense.

d. Common Stock.

e. Buildings.

f. Rent Revenue.

BE3.6 **(LO 2), C** Transactions for Jayne Company for the month of June are presented below. Identify the accounts to be debited and credited for each transaction.

Identify accounts to be debited and credited.

June	1	Issues common stock to investors in exchange for $5,000 cash.
	2	Buys equipment on account for $1,100.
	3	Pays $740 to landlord for June rent.
	12	Sends Wil Wheaton a bill for $700 after completing welding work.

BE3.7 **(LO 3), AP** Use the data in BE3.6 and journalize the transactions. (You may omit explanations.)

Journalize transactions.

Journalize transactions.

BE3.8 (LO 3), AP Journalize the following transactions for Matt's Carpentry, Inc. (You may omit explanations.)

Sept.	1	Purchased supplies for $910 cash.
	5	Paid $300 cash dividend to stockholders.
	7	Received $4,600 down payment from customer for services to be provided in the future.
	16	Received $675 cash from a previously billed customer for payment of services provided in the prior month.
	22	Purchased equipment for $1,900 by paying $600 cash and issued a note payable for the balance.

Identify steps in the recording process.

BE3.9 (LO 3), C Rae Mohlee, 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 debit–credit analysis.

BE3.10 (LO 3), C Tilton Corporation has the following transactions during August of the current year. Indicate (a) the basic analysis and (b) the debit–credit analysis as shown in Illustrations 3.22 to 3.32.

Aug.	1	Issues shares of common stock to investors in exchange for $10,000.
	4	Pays insurance in advance for 3 months, $1,500.
	16	Receives $900 from clients for services rendered.
	27	Pays the secretary $620 salary.

Journalize transactions.

BE3.11 (LO 3), AP Use the data in BE3.10 and journalize the transactions. (You may omit explanations.)

Post journal entries to T-accounts.

BE3.12 (LO 4), AP Selected transactions for Montes Company are presented below in journal form (without explanations). Post the transactions to T-accounts.

Date	Account Title	Debit	Credit
May 5	Accounts Receivable	3,800	
	Service Revenue		3,800
12	Cash	1,600	
	Accounts Receivable		1,600
15	Cash	2,000	
	Service Revenue		2,000

Prepare a trial balance.

BE3.13 (LO 5), AP From the ledger balances below, prepare a trial balance for Peete Company at June 30, 2025. All account balances are normal.

Accounts Payable	$ 1,000	Service Revenue	$8,600
Cash	5,400	Accounts Receivable	3,000
Common Stock	18,000	Salaries and Wages Expense	4,000
Dividends	1,200	Rent Expense	1,000
Equipment	13,000		

Prepare a corrected trial balance.

BE3.14 (LO 5), AN An inexperienced bookkeeper prepared the following trial balance that does not balance. Prepare a correct trial balance, assuming all account balances are normal.

Birellie Company
Trial Balance
December 31, 2025

	Debit	Credit
Cash	$20,800	
Prepaid Insurance		$ 3,500
Accounts Payable		2,500
Unearned Service Revenue	1,800	
Common Stock		10,000
Retained Earnings		6,600
Dividends		5,000
Service Revenue		25,600
Salaries and Wages Expense	14,600	
Rent Expense		2,600
	$37,200	$55,800

DO IT! Exercises

DO IT! 3.1 (LO 1), AP Transactions made by Mickelson Co. for the month of March are shown below. Prepare a tabular analysis that shows the effects of these transactions on the expanded accounting equation, similar to that shown in Illustration 3.4.

Prepare tabular analysis.

1. The company performed $20,000 of services for customers on account.
2. The company received $20,000 in cash from customers who had been billed for services [in transaction (1)].
3. The company received a bill for $1,800 of advertising but will not pay it until a later date.
4. Mickelson Co. paid a cash dividend of $3,000.

DO IT! 3.2 (LO 2), C Tracy has the following selected accounts.

Identify account type, normal balance, and debit effect.

1. Unearned Service Revenue.
2. Accounts Payable.
3. Common Stock.
4. Salaries and Wages Expense.
5. Dividends.

Indicate whether each of the above accounts is an asset, liability, or stockholders' equity account, and identify the normal balance. Also, indicate whether a debit would increase or decrease each account.

DO IT! 3.3 (LO 3), AP Boyd Docker engaged in the following activities in establishing his photography studio, SnapShot!:

Record business activities.

1. Opened a bank account in the name of SnapShot! and deposited $8,000 of his own money into this account in exchange for common stock.
2. Purchased photography supplies at a total cost of $950. 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.

Prepare the journal entries to record the transactions.

DO IT! 3.4 (LO 4), AP Boyd Docker recorded the following transactions during the month of April.

Post transactions.

Apr. 3	Cash	3,400	
	Service Revenue		3,400
16	Rent Expense	500	
	Cash		500
20	Salaries and Wages Expense	300	
	Cash		300

Post these entries to the Cash account of the general ledger to determine the ending balance in cash. The beginning balance in cash on April 1 was $1,900.

DO IT! 3.5 (LO 5), AP The following accounts are taken from the ledger of Chillin' Company at December 31, 2025.

Prepare a trial balance.

Notes Payable	$20,000	Cash	$6,000
Common Stock	25,000	Supplies	5,000
Equipment	76,000	Rent Expense	2,000
Dividends	8,000	Salaries and Wages Payable	3,000
Salaries and Wages Expense	38,000	Accounts Payable	9,000
Service Revenue	86,000	Accounts Receivable	8,000

Prepare a trial balance in good form.

Exercises

Analyze the effect of transactions.

E3.1 **(LO 1), C** Selected transactions for Thyme Advertising Company, Inc. are listed here.

1. Issued common stock to investors in exchange for cash received from investors.
2. Paid monthly rent.
3. Received cash from customers when service was performed.
4. Billed customers for services performed.
5. Paid dividend to stockholders.
6. Incurred advertising expense on account.
7. Received cash from customers billed in (4).
8. Purchased additional equipment for cash.
9. Purchased equipment on account.

Instructions

Describe the effect of each transaction on assets, liabilities, and stockholders' equity. For example, the first answer is (1) Increase in assets and increase in stockholders' equity.

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

E3.2 **(LO 1), AP** Brady Company entered into these transactions during May 2025, its first month of operations.

1. Stockholders invested $40,000 in the business in exchange for common stock of the company.
2. Purchased computers for office use for $30,000 from Ladd on account.
3. Paid $4,000 cash for May rent on storage space.
4. Performed computer services worth $19,000 on account.
5. Performed computer services for Wharton Construction Company for $5,000 cash.
6. Paid Western States Power Co. $8,000 cash for energy usage in May.
7. Paid Ladd for the computers purchased in (2).
8. Incurred advertising expense for May of $1,300 on account.
9. Received $12,000 cash from customers for contracts billed in (4).

Instructions

Using the following tabular analysis, show the effect of each transaction on the accounting equation. Put explanations for changes to revenues or expenses in the right-hand margin. Use Illustration 3.4 as a model.

Assets					=	**Liabilities**	+	**Stockholders' Equity**						
		Accounts				Accounts		Common		Retained Earnings				
Cash	+	Receivable	+	Equipment	=	Payable	+	Stock	+	Revenues	−	Expenses	−	Dividends

Determine effect of transactions on basic accounting equation.

E3.3 **(LO 1), AP** During 2025, its first year of operations as a delivery service, Persimmon Corp. entered into the following transactions.

1. Issued shares of common stock to investors in exchange for $100,000 in cash.
2. Borrowed $45,000 by issuing bonds.
3. Purchased delivery trucks for $60,000 cash.
4. Received $16,000 from customers for services performed.
5. Purchased supplies for $4,700 on account.
6. Paid rent of $5,200.
7. Performed services on account for $10,000.
8. Paid salaries of $28,000.
9. Paid a dividend of $11,000 to stockholders.

Instructions

Using the following tabular analysis, show the effect of each transaction on the accounting equation. Put explanations for changes to Stockholders' Equity in the right-hand margin. Use Illustration 3.4 as a model.

Assets				=	Liabilities		+	Stockholders' Equity		
									Retained Earnings	
Cash +	Accounts Receivable +	Supplies +	Equipment	=	Accounts Payable +	Bonds Payable	+	Common Stock +	Revenues − Expenses	− Dividends

E3.4 (LO 1), AP A tabular analysis of the transactions made during August 2025 by Wolfe Company during its first month of operations is shown as follows. Each increase and decrease in stockholders' equity is explained.

Analyze transactions and compute net income.

	Assets				=	Liabilities	+	Stockholders' Equity				
									Retained Earnings			
	Cash	+ A/R	+ Supp.	+ Equip.	=	Accounts Payable	+	Common Stock	+ Rev.	− Exp.	− Div.	
1.	+$20,000							+$20,000				
2.	−1,000			+$5,000		+$4,000						
3.	−750		+$750									
4.	+4,100	+$5,400							+$9,500			Serv. Rev.
5.	−1,500					−1,500						
6.	−2,000										−$2,000	
7.	−800									−$ 800		Rent Exp.
8.	+450	−450										
9.	−3,000									−3,000		Salar. Exp.
10.						+300				−300		Util. Exp.

Instructions

a. Describe each transaction.

b. Determine how much stockholders' equity increased for the month.

c. Compute the net income for the month.

E3.5 (LO 2), AP The tabular analysis of transactions for Wolfe Company is presented in E3.4.

Prepare an income statement, retained earnings statement, and balance sheet.

Instructions

Prepare an income statement and a retained earnings statement for August and a classified balance sheet at August 31, 2025.

E3.6 (LO 2), K The following accounts, in alphabetical order, were selected from recent financial statements of **Krispy Kreme Doughnuts, Inc.**

Identify normal account balance and corresponding financial statement.

Accounts Payable	Interest Income
Accounts Receivable	Inventories
Common Stock	Prepaid Expenses
Depreciation Expense	Property and Equipment
Interest Expense	Revenues

Instructions

For each account, indicate (a) whether the normal balance is a debit or a credit, and (b) the financial statement—balance sheet or income statement—where the account should be presented.

E3.7 (LO 2), C You are presented with the following alphabetical list of items, selected from the financial statements of **Saputo Inc.**:

Identify normal balances and statement classifications.

Accounts receivable	Income taxes payable
Bank loans payable	Income tax expense
Buildings	Interest expense
Cash	Interest revenue
Depreciation expense	Inventories
Dividends	Service revenue
Equipment	

Instructions

For each of the above accounts, identify the following.

a. The type of account (asset, liability, stockholders' equity).

b. The normal balance of the account.

c. The financial statement (income statement, retained earnings statement, or balance sheet) on which Saputo would report the account.

Indicate debit and credit effects and normal balances.

E3.8 **(LO 2), C** Wood Renew Corp. incurred the following selected transactions during the month of April.

Apr. 2 Paid monthly rent, $800.
3 Completed floor refinishing on account for $1,000.
5 Received $1,250 cash for floor sanding and polishing.
6 Purchased additional refinishing equipment for $3,000. The company paid cash of $500, and the balance was due on account in 20 days.
12 Collected amount owed by customer for April 3 transaction.
15 Declared and paid $150 of dividends to stockholders.
16 Purchased sandpaper for $500 on account. (*Hint:* Use the Supplies account.)
19 Paid $200 to repair equipment.

Instructions

For each transaction, indicate (1) the basic type of account debited or credited (asset, liability, or stockholders' equity), (2) the specific account debited or credited, and (3) whether the specific account is increased or decreased to record this transaction. Use the following format.

	Account Debited			Account Credited		
	(1)	(2)	(3)	(1)	(2)	(3)
Transaction	**Basic Type**	**Specific Account**	**Effect**	**Basic Type**	**Specific Account**	**Effect**
Apr. 2	Stockholders' equity	Rent Expense	Increase	Asset	Cash	Decrease

Analyze transactions and determine their effect on accounts.

E3.9 **(LO 2), C** This information relates to McCall Real Estate Agency.

Oct. 1 Stockholders invest $30,000 in exchange for common stock of the corporation.
2 Hires an administrative assistant at an annual salary of $36,000.
3 Buys office furniture for $3,800, on account.
6 Sells a house and lot for E. C. Roads; commissions due from Roads, $10,800 (not paid by Roads at this time).
10 Receives cash of $140 as commission for acting as rental agent renting an apartment.
27 Pays $700 on account for the office furniture purchased on October 3.
30 Pays the administrative assistant $3,000 in salary for October.

Instructions

Prepare the debit-credit analysis for each transaction, as shown in Illustrations 3.22 to 3.32.

Identify debits, credits, and normal balances and journalize transactions.

E3.10 **(LO 2, 3), AP** Selected transactions for Front Room, an interior decorator corporation, in its first month of business, are as follows.

1. Issued stock to investors for $15,000 in cash.
2. Purchased used car for $10,000 cash for use in business.
3. Purchased supplies on account for $300.
4. Billed customers $3,700 for services performed.
5. Paid $200 cash for advertising at the start of the business.
6. Received $1,100 cash from customers billed in transaction (4).
7. Paid creditor $300 cash on account.
8. Paid dividends of $400 cash to stockholders.

Instructions

a. For each transaction indicate (a) the basic type of account debited and credited (asset, liability, stockholders' equity); (b) the specific account debited and credited (Cash, Rent Expense, Service Revenue, etc.); (c) whether the specific account is increased or decreased; and (d) the normal balance of the specific account. Use the following format, in which transaction (1) is given as an example.

	Account Debited				Account Credited			
Trans-action	(a) Basic Type	(b) Specific Account	(c) Effect	(d) Normal Balance	(a) Basic Type	(b) Specific Account	(c) Effect	(d) Normal Balance
1	Asset	Cash	Increase	Debit	Stock-holders' equity	Common Stock	Increase	Credit

b. Journalize the transactions. Do not provide explanations.

E3.11 **(LO 3), AP** Transaction data for McCall Real Estate Agency are presented in E3.9. *Journalize transactions.*

Instructions

Journalize the transactions. Do not provide explanations.

E3.12 **(LO 3), AP** Selected transactions for Decorators Mill during its first month of operations are as follows. *Journalize selected transactions.*

Mar.	2	Issued common stock for $11,000 cash.
	4	Purchased used car for $1,000 cash and $9,000 on account, for use in the business.
	10	Billed customers $2,300 for services performed.
	13	Paid $225 cash to advertise business opening.
	25	Received $1,000 cash from customers billed on March 10.
	27	Paid amount owed for used car purchased on March 4.
	30	Received $700 cash from a customer for services to be performed in April.
	31	Declared and paid $300 of dividends to stockholders.

Instructions

Journalize each transaction. Do not provide explanation.

E3.13 **(LO 3), AP** Wong Computer had the following transactions during the month of May. *Analyze effects of transactions.*

1. Purchased equipment on account for $8,000.
2. Paid $1,600 for rent for the month of May.
3. Performed computer services for $3,800 on account.
4. Paid Buffalo Hydro $300 cash for utilities used in May.
5. Borrowed $20,000 from the bank.
6. Paid supplier for equipment purchased in transaction (1).
7. Purchased a one-year insurance policy for $500 cash.
8. Received $3,000 cash in partial payment of the account owed in transaction (3).
9. Declared and paid $500 of dividends to stockholders.
10. Paid incomes taxes of $250 for the month.

Instructions

Journalize the above transactions. Do not provide explanations.

E3.14 **(LO 3), AP** The May transactions of Chulak Corporation were as follows. *Journalize a series of transactions.*

May	4	Paid $700 due for supplies previously purchased on account.
	7	Performed advisory services on account for $6,800.
	8	Purchased supplies for $850 on account.
	9	Purchased equipment for $1,000 in cash.
	17	Paid employees $530 in cash.
	22	Received bill for equipment repairs of $900.
	29	Paid $1,200 for 12 months of insurance policy. Coverage begins June 1.

Instructions

Journalize the transactions. Do not provide explanations.

Journalize a series of transactions.

E3.15 **(LO 3), AP** Selected transactions for Sophie's Dog Care are as follows during the month of March.

March	1	Paid monthly rent of $1,200.
	3	Performed services for $140 on account.
	5	Performed services for cash of $75.
	8	Purchased equipment for $600. The company paid cash of $80 and the balance was on account.
	12	Received cash from customers billed on March 3.
	14	Paid wages to employees of $525.
	22	Paid utilities of $72.
	24	Borrowed $1,500 from Grafton State Bank by signing a note.
	27	Paid $220 to repair service for plumbing repairs.
	28	Paid balance amount owed from equipment purchase on March 8.
	30	Paid $1,800 for six months of insurance.

Instructions

Journalize the transactions. Do not provide explanations.

Record journal entries.

E3.16 **(LO 3), AP** On April 1, Adventures Travel Agency, Inc. began operations. The following transactions were completed during the month.

1. Issued common stock for $24,000 cash.
2. Obtained a bank loan for $7,000 by issuing a note payable.
3. Paid $11,000 cash to buy equipment.
4. Paid $1,200 cash for April office rent.
5. Paid $1,450 for supplies.
6. Purchased $600 of advertising in the *Daily Herald*, on account.
7. Performed services for $18,000: cash of $2,000 was received from customers, and the balance of $16,000 was billed to customers on account.
8. Paid $400 cash dividend to stockholders.
9. Paid the utility bill for the month, $2,000.
10. Paid *Daily Herald* the amount due in transaction (6).
11. Paid $40 of interest on the bank loan obtained in transaction (2).
12. Paid employees' salaries, $6,400.
13. Received $12,000 cash from customers billed in transaction (7).
14. Paid income tax, $1,500.

Instructions

Journalize the transactions. Do not provide explanations.

Identify key terms.

E3.17 **(LO 1, 2, 3, 4, 5), K** The following is a list of terms or phrases discussed in the chapter.

1. Credit
2. Journal
3. Ledger
4. Chart of accounts
5. Posting
6. Account
7. Trial balance
8. Accounting transactions
9. Debit

Instructions

Match each term or phrase to its description below.

a. ______ A list of accounts and their balances at a given time.

b. ______ An accounting record in which transactions are initially recorded in chronological order.

c. ______ A record of all accounts maintained by a company and their amounts.

d. ______ An individual accounting record of increases and decreases in specific asset, liability, stockholders' equity, revenue, or expense items.

e. ______ A list of the names of a company's accounts.

f. ______ The right side of an account.

g. ______ The procedure of transferring journal entry amounts to the ledger accounts.

h. ______ The left side of an account.

i. ______ Events that require recording in the financial statements because they affect assets, liabilities, or stockholders' equity.

Post journal entries and prepare a trial balance.

E3.18 **(LO 4, 5), AP** Transaction data and journal entries for McCall Real Estate Agency are presented in E3.9 and E3.11.

Instructions

a. Post the transactions to T-accounts.

b. Prepare a trial balance at October 31, 2025.

Analyze transactions, prepare journal entries, and post transactions to T-accounts.

E3.19 **(LO 1, 3, 4), AP** Selected transactions for Therow Corporation during its first month in business are presented below.

Sept.	1	Issued common stock in exchange for $20,000 cash received from investors.
	5	Purchased equipment for $9,000, paying $3,000 in cash and the balance on account.
	8	Performed services on account for $18,000.
	14	Paid salaries of $1,200.
	25	Paid $4,000 cash on balance owed for equipment.
	30	Paid $500 cash dividend.

Therow's chart of accounts shows Cash, Accounts Receivable, Equipment, Accounts Payable, Common Stock, Dividends, Service Revenue, and Salaries and Wages Expense.

Instructions

a. Prepare a tabular analysis of the September transactions. The column headings should be Cash + Accounts Receivable + Equipment = Accounts Payable + Common Stock + Revenues − Expenses − Dividends. For transactions affecting stockholders' equity, provide explanations in the right margin, as shown on Illustration 3.4.

b. Journalize the transactions. Do not provide explanations.

c. Post the transactions to T-accounts.

Journalize transactions from T-accounts and prepare a trial balance.

E3.20 **(LO 3, 5), AN** The T-accounts below summarize the ledger of Salvador's Gardening Company, Inc. at the end of the first month of operations.

Cash

Apr. 1	15,000	Apr. 15	800
12	700	25	3,500
29	800		
30	900		

Unearned Service Revenue

		Apr. 30	900

Accounts Receivable

Apr. 7	3,400	Apr. 29	800

Common Stock

		Apr. 1	15,000

Supplies

Apr. 4	5,200		

Service Revenue

		Apr. 7	3,400
		12	700

Accounts Payable

Apr. 25	3,500	Apr. 4	5,200

Salaries and Wages Expense

Apr. 15	800		

Instructions

a. Prepare the journal entries (including explanations) that resulted in the amounts posted to the accounts. Present them in the order they occurred.

b. Prepare a trial balance at April 30, 2025. (*Hint:* Compute ending balances of T-accounts first.)

Post journal entries and prepare a trial balance.

E3.21 **(LO 4, 5), AP** Selected transactions from the journal of Baylee Inc. during its first month of operations are presented here.

Date	Account Titles	Debit	Credit
Aug. 1	Cash	8,000	
	Common Stock		8,000
10	Cash	1,700	
	Service Revenue		1,700
12	Equipment	6,200	
	Cash		1,200
	Notes Payable		5,000

Date	Account Titles	Debit	Credit
25	Accounts Receivable	3,400	
	Service Revenue		3,400
31	Cash	600	
	Accounts Receivable		600

Instructions

a. Post the transactions to T-accounts.

b. Prepare a trial balance at August 31, 2025.

Journalize transactions from T-accounts and prepare a trial balance.

E3.22 **(LO 3, 5), AN** Here is the ledger for Kriscoe Co.

Cash

Oct. 1	7,000	Oct. 4	400
10	980	12	1,500
10	8,000	15	250
20	700	30	300
25	2,000	31	500

Accounts Receivable

Oct. 6	800	Oct. 20	700
20	920		

Supplies

Oct. 4	400	Oct. 31	180

Equipment

Oct. 3	3,000		

Notes Payable

		Oct. 10	8,000

Accounts Payable

Oct. 12	1,500	Oct. 3	3,000

Common Stock

		Oct. 1	7,000
		25	2,000

Dividends

Oct. 30	300		

Service Revenue

		Oct. 6	800
		10	980
		20	920

Salaries and Wages Expense

Oct. 31	500		

Supplies Expense

Oct. 31	180		

Rent Expense

Oct. 15	250		

Instructions

a. Reproduce the journal entries for only the transactions that **occurred on October 1, 10, and 20,** and provide explanations for each.

b. Prepare a trial balance at October 31, 2025. (*Hint:* Compute ending balances of T-accounts first.)

Journalize transactions, post transactions to T-accounts, and prepare trial balance.

E3.23 **(LO 3, 4, 5), AP** Beyers Corporation provides security services. Selected transactions for Beyers are presented below.

Oct.	1	Issued common stock in exchange for $66,000 cash from investors.
	2	Hired part-time security consultant. Salary will be $2,000 per month. First day of work will be October 15.
	4	Paid 1 month of rent for building for $2,000.
	7	Purchased equipment for $18,000, paying $4,000 cash and the balance on account.
	8	Paid $500 for advertising.
	10	Received bill for equipment repair cost of $390.
	12	Provided security services for event for $3,200 on account.
	16	Purchased supplies for $410 on account.
	21	Paid balance due from October 7 purchase of equipment.
	24	Received and paid utility bill for $148.
	27	Received payment from customer for October 12 services performed.
	31	Paid employee salaries and wages of $5,100.

Instructions

a. Journalize the transactions. Do not provide explanations.

b. Post the transactions to T-accounts.

c. Prepare a trial balance at October 31, 2025. (*Hint:* Compute ending balances of T-accounts first.)

Analyze errors and their effects on trial balance.

E3.24 **(LO 5), AN** The bookkeeper for Birmingham Corporation made these errors in journalizing and posting.

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 on account of $100 was journalized and posted as a debit to Cash $100 and a credit to Accounts Payable $100.
4. A credit posting of $300 to Income Taxes Payable was made twice.
5. A cash purchase of supplies for $250 was journalized and posted as a debit to Supplies $25 and a credit to Cash $25.
6. A debit of $395 to Advertising Expense was posted as $359.

Instructions

For each error, indicate (a) whether the trial balance will balance; if the trial balance will not balance, indicate (b) the amount of the difference and (c) 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.

	(a)	(b)	(c)
Error	**In Balance**	**Difference**	**Larger Column**
1	No	$400	Debit

E3.25 (LO 5), AP The accounts in the ledger of Rapid Delivery Service contain the following balances on July 31, 2025.

Prepare a trial balance and financial statements.

Accounts Receivable	$13,400	Prepaid Insurance	$ 2,200
Accounts Payable	8,400	Service Revenue	15,500
Cash	?	Dividends	700
Equipment	59,360	Common Stock	40,000
Maintenance and Repairs Expense	1,958	Salaries and Wages Expense	7,428
Insurance Expense	900	Salaries and Wages Payable	820
Notes Payable (due 2028)	28,450	Retained Earnings (July 1, 2025)	5,200

Instructions

a. Prepare a trial balance with the accounts arranged as illustrated in the chapter, and fill in the missing amount for Cash.

b. Prepare an income statement, a retained earnings statement, and a classified balance sheet for the month of July 2025.

E3.26 (LO 5), AP Review the transactions listed in E3.1 for Thyme Advertising Company. Classify each transaction as either an operating activity, investing activity, or financing activity, or if no cash is exchanged, as a noncash event.

Classify transactions as cash-flow activities.

E3.27 (LO 5), AP Review the transactions listed in E3.3 for Persimmon Corp. Classify each transaction as either an operating activity, investing activity, or financing activity, or if no cash is exchanged, as a noncash event.

Classify transactions as cash-flow activities.

Problems

P3.1 (LO 1), AP On April 1, Wonder Travel Agency Inc. was established. These transactions were completed during the month.

Analyze transactions and compute net income.

Excel

1. Stockholders invested $30,000 cash in the company in exchange for common stock.
2. Paid $900 cash for April office rent.
3. Purchased office equipment for $3,400 cash.
4. Purchased $200 of advertising in the *Chicago Tribune*, on account.
5. Paid $500 cash for office supplies.
6. Performed services worth $12,000. Cash of $3,000 is received from customers, and the balance of $9,000 is billed to customers on account.
7. Paid $400 cash dividend.
8. Paid *Chicago Tribune* amount due in transaction (4).
9. Paid employees' salaries $1,800.
10. Received $9,000 in cash from customers billed previously in transaction (6).

a. Cash $34,[illegible]
Total assets $38,700

Instructions

a. Prepare a tabular analysis of the transactions using these column headings: Cash, Accounts Receivable, Supplies, Equipment, Accounts Payable, Common Stock, and Retained Earnings (with separate columns for Revenues, Expenses, and Dividends). Include margin explanations for revenues and expenses.

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

Analyze transactions and prepare financial statements.

P3.2 **(LO 1, 2), AP** Nona Curry started her own consulting firm, Curry Consulting Inc., on May 1, 2025. The following transactions occurred during the month of May.

May	1	Stockholders invested $15,000 cash in the business in exchange for common stock.
	2	Paid $600 for office rent for the month.
	3	Purchased $500 of supplies on account.
	5	Paid $150 to advertise in the *County News.*
	9	Received $1,400 cash for services performed.
	12	Paid $200 cash dividend.
	15	Performed $4,200 of services on account.
	17	Paid $2,500 for employee salaries.
	20	Paid for the supplies purchased on account on May 3.
	23	Received a cash payment of $1,200 for services performed on account on May 15.
	26	Borrowed $5,000 from the bank on a note payable.
	29	Purchased office equipment for $2,000 paying $200 in cash and the balance on account.
	30	Paid $180 for utilities.

Instructions

a. Cash $18,270
Total assets $23,770

a. Show the effects of the previous transactions on the accounting equation using the following format. Assume the note payable is to be repaid within the year.

	Assets					=	Liabilities			+	Stockholders' Equity						
													Retained Earnings				
Date	Cash	+	Accounts Receivable	+ Supplies	+ Equipment	=	Notes Payable	+	Accounts Payable	+	Common Stock	+	Revenues	−	Expenses	−	Dividends

Include margin explanations for revenues and expenses.

b. Net income $2,170

b. Prepare an income statement for the month of May 2025.

c. Prepare a classified balance sheet at May 31, 2025.

Analyze transactions and prepare an income statement, retained earnings statement, and balance sheet.

Excel

P3.3 **(LO 1, 2), AP** Bindy Crawford created a corporation providing legal services, Bindy Crawford Inc., on July 1, 2025. On July 31 the balance sheet showed Cash $4,000, Accounts Receivable $2,500, Supplies $500, Equipment $5,000, Accounts Payable $4,200, Common Stock $6,200, and Retained Earnings $1,600. During August, the following transactions occurred.

Aug.	1	Collected $1,100 of accounts receivable due from customers.
	4	Paid $2,700 cash for accounts payable due.
	9	Performed services worth $5,400, of which $3,600 is collected in cash and the balance is due in September.
	15	Purchased additional office equipment for $4,000, paying $700 in cash and the balance on account.
	19	Paid salaries $1,400, rent for August $700, and advertising expenses $350.
	23	Paid a cash dividend of $700.
	26	Borrowed $5,000 from American Federal Bank; the money was borrowed on a 4-month note payable.
	31	Incurred utility expenses for the month on account $380.

Instructions

a. Cash $7,150

a. Prepare a tabular analysis of the August transactions beginning with July 31 balances. The column heading should be Cash + Accounts Receivable + Supplies + Equipment = Notes Payable + Accounts Payable + Common Stock + Retained Earnings + Revenues − Expenses − Dividends. Include margin explanations for revenues and expenses.

b. Net income $2,570
Ret. earnings $3,470

b. Prepare an income statement for August, a retained earnings statement for August, and a classified balance sheet at August 31.

Journalize a series of transactions.

P3.4 **(LO 3), AP** Bradley's Miniature Golf and Driving Range Inc. was opened on March 1 by Bob Dean. These selected events and transactions occurred during March.

Mar. 1 Stockholders invested $50,000 cash in the business in exchange for common stock of the corporation.
3 Purchased Snead's Golf Land for $38,000 cash. The price consists of land $23,000, building $9,000, and equipment $6,000. (Record this in a single entry.)
5 Advertised the opening of the driving range and miniature golf course, paying advertising expenses of $1,200 cash.
6 Paid cash $2,400 for a 1-year insurance policy.
10 Purchased golf clubs and other equipment for $5,500 from Tahoe Company, payable in 30 days.
18 Received golf fees of $1,600 in cash from customers for golf services performed.
19 Sold 100 coupon books for $25 each in cash. Each book contains 10 coupons that enable the holder to play one round of miniature golf or to hit one bucket of golf balls. (*Hint:* The revenue should not be recognized until the customers use the coupons.)
25 Paid a $500 cash dividend.
30 Paid salaries of $800.
30 Paid Tahoe Company in full for equipment purchased on March 10.
31 Received $900 in cash from customers for golf services performed.

The company uses these accounts: Cash, Prepaid Insurance, Land, Buildings, Equipment, Accounts Payable, Unearned Service Revenue, Common Stock, Retained Earnings, Dividends, Service Revenue, Advertising Expense, and Salaries and Wages Expense.

Instructions

Journalize the March transactions, including explanations. Bradley's records golf fees as service revenue.

P3.5 **(LO 3, 4, 5), AP** Ayala Architects incorporated as licensed architects on April 1, 2025. During the first month of the operation of the business, these events and transactions occurred:

Journalize transactions, post, and prepare a trial balance.

Apr. 1 Stockholders invested $18,000 cash in exchange for common stock of the corporation.
1 Hired a secretary-receptionist at a salary of $375 per week, payable monthly.
2 Paid office rent for the month $900.
3 Purchased architectural supplies on account from Burmingham Company $1,300.
10 Completed blueprints on a carport and billed client $1,900 for services.
11 Received $700 cash advance from M. Jason to design a new home.
20 Received $2,800 cash for services completed and delivered to S. Melvin.
30 Paid secretary-receptionist for the month $1,500.
30 Paid $300 to Burmingham Company for accounts payable due.

The company uses these accounts: Cash, Accounts Receivable, Supplies, Accounts Payable, Unearned Service Revenue, Common Stock, Service Revenue, Salaries and Wages Expense, and Rent Expense.

Instructions

a. Journalize the transactions, including explanations.

b. Post to the ledger T-accounts.

c. Prepare a trial balance on April 30, 2025.

c. Cash $18,800
Tot. trial balance $24,400

P3.6 **(LO 3, 4, 5), AP** This is the trial balance of Lacey Company on September 30.

Journalize transactions, post, and prepare a trial balance.

Lacey Company
Trial Balance
September 30, 2025

	Debit	**Credit**
Cash	$19,200	
Accounts Receivable	2,600	
Supplies	2,100	
Equipment	8,000	
Accounts Payable		$ 4,800
Unearned Service Revenue		1,100
Common Stock		15,000
Retained Earnings		11,000
	$31,900	$31,900

The October transactions were as follows.

Oct.	5	Received $1,300 in cash from customers for accounts receivable due.
	10	Billed customers for services performed $5,100.
	15	Paid employee salaries $1,200.
	17	Performed $600 of services in exchange for cash.
	20	Paid $1,900 to creditors for accounts payable due.
	29	Paid a $300 cash dividend.
	31	Paid utilities $400.

Instructions

a. Prepare a general ledger using T-accounts. Enter the opening balances in the ledger accounts as of October 1. (*Hint:* The October 1 beginning amounts are the September 30 balances in the trial balance above.) Provision should be made for these additional accounts: Dividends, Service Revenue, Salaries and Wages Expense, and Utilities Expense.

b. Journalize the transactions, including explanations.

c. Post to the ledger accounts.

d. Prepare a trial balance on October 31, 2025.

d. Cash $17,300
Tot. trial balance $35,700

Prepare a correct trial balance.

Excel

P3.7 **(LO 5), AN** This trial balance of Washburn Co. does not balance.

Washburn Co.
Trial Balance
June 30, 2025

	Debit	Credit
Cash		$ 3,090
Accounts Receivable	$ 3,190	
Supplies	800	
Equipment	3,000	
Accounts Payable		3,686
Unearned Service Revenue	1,200	
Common Stock		9,000
Dividends	800	
Service Revenue		3,480
Salaries and Wages Expense	3,600	
Utilities Expense	910	
	$13,500	$19,256

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 on account was debited for $780, and Accounts Receivable was credited for the same amount. The actual collection was for $870.
2. The purchase of a printer on account for $340 was recorded as a debit to Supplies for $340 and a credit to Accounts Payable for $340.
3. Services were performed on account for a client for $900. Accounts Receivable was debited for $90 and Service Revenue was credited for $900.
4. A debit posting to Salaries and Wages Expense of $700 was omitted.
5. A payment on account for $206 was credited to Cash for $206 and credited to Accounts Payable for $260.
6. Payment of a $600 cash dividend to Washburn's stockholders was debited to Salaries and Wages Expense for $600 and credited to Cash for $600.
7. The amounts for two accounts with normal balances were listed in the wrong column.

Instructions

Tot. trial balance $16,900

Prepare the correct trial balance. (*Hint:* All accounts should have normal balances. Your first step, therefore, should be to move all amounts to the column of their normal balance.)

Journalize transactions, post, and prepare a trial balance.

P3.8 **(LO 3, 4, 5), AP** The Triquel Theater Inc. was recently formed. It began operations in March 2025. The Triquel is unique in that it will show only triple features of sequential theme movies. On March 1, the ledger of The Triquel showed Cash $16,000, Land $38,000, Buildings (concession stand, projection room, ticket booth, and screen) $22,000, Equipment $16,000, Accounts Payable $12,000, and Common Stock $80,000. During the month of March, the following events and transactions occurred.

Mar. 2	Rented the first three Star Wars movies (*Star Wars**, *The Empire Strikes Back*, and *The Return of the Jedi*) to be shown for the first three weeks of March. The film rental was $10,000; $2,000 was paid in cash and $8,000 will be paid on March 10.
3	Ordered the first three *Star Trek* movies to be shown the last 10 days of March. It will cost $500 per night.
9	Received $9,900 cash from admissions.
10	Paid balance due on *Star Wars* movies' rental and $2,900 on March 1 accounts payable.
11	The Triquel Theater contracted with R. Lazlo to operate the concession stand. Lazlo agrees to pay The Triquel 15% of gross receipts, payable monthly, for the rental of the concession stand.
12	Paid advertising expenses $500.
20	Received $8,300 cash from customers for admissions.
20	Received the *Star Trek* movies and paid rental fee of $5,000.
31	Paid salaries of $3,800.
31	Received statement from R. Lazlo showing gross receipts from concessions of $10,000 and the balance due to The Triquel of $1,500 ($10,000 × .15) for March. Lazlo paid half the balance due for rental of the concession stand and will remit the remainder on April 5.
31	Received $20,000 cash from customers for admissions.

In addition to the accounts identified above, the chart of accounts includes Accounts Receivable, Service Revenue, Rent Revenue, Advertising Expense, Rent Expense, and Salaries and Wages Expense.

Instructions

a. Using T-accounts, enter the beginning balances to the ledger.

b. Journalize the March transactions, including explanations. The Triquel records admission revenue as service revenue, concession revenue as rent revenue, and film rental expense as rent expense.

c. Post the March journal entries to the ledger.

d. Prepare a trial balance on March 31, 2025.

d. Cash $32,750
Tot. trial balance $128,800

Journalize transactions, post, and prepare a trial balance.

P3.9 **(LO 3, 4, 5), AP** On July 31, 2025, the general ledger of Hills Legal Services Inc. showed the following balances: Cash $4,000, Accounts Receivable $1,500, Supplies $500, Equipment $5,000, Accounts Payable $4,100, Common Stock $3,500, and Retained Earnings $3,400. During August, the following transactions occurred.

Aug. 3	Collected $1,200 of accounts receivable due from customers.
5	Received $1,300 cash for issuing common stock to new investors.
6	Paid $2,700 cash on accounts payable.
7	Performed legal services of $6,500, of which $3,000 was collected in cash and the remainder was due on account.
12	Purchased additional equipment for $1,200, paying $400 in cash and the balance on account.
14	Paid salaries $3,500, rent $900, and advertising expenses $275 for the month of August.
18	Collected the balance for the services performed on August 7.
20	Paid cash dividend of $500 to stockholders.
24	Billed a client $1,000 for legal services performed.
26	Received $2,000 from Laurentian Bank; the money was borrowed on a bank note payable that is due in 6 months.
27	Agreed to perform legal services for a client in September for $4,500. The client will pay the amount due after the services have been performed.
28	Received the utility bill for the month of August in the amount of $275; it is not due until September 15.
31	Paid income tax for the month $500.

Instructions

a. Using T-accounts, enter the beginning balances to the ledger.

b. Journalize the August transactions.

c. Post the August journal entries to the ledger.

d. Prepare a trial balance on August 31, 2025.

d. Cash $6,225
Tot. trial balance $20,175

Journalize transactions, post, and prepare trial balance.

P3.10 **(LO 3, 4, 5), AP** Pamper Me Salon Inc.'s general ledger at April 30, 2025, included the following: Cash $5,000, Supplies $500, Equipment $24,000, Accounts Payable $2,100, Notes Payable $10,000, Unearned Service Revenue (from gift certificates) $1,000, Common Stock $5,000, and Retained Earnings $11,400. The following events and transactions occurred during May.

May	1	Paid rent for the month of May $1,000.
	4	Paid $1,100 of the account payable at April 30.
	7	Issued gift certificates for future services for $1,500 cash.
	8	Received $1,200 cash from customers for services performed.
	14	Paid $1,200 in salaries to employees.
	15	Received $800 in cash from customers for services performed.
	15	Customers receiving services worth $700 used gift certificates in payment.
	21	Paid the remaining accounts payable from April 30.
	22	Received $1,000 in cash from customers for services performed.
	22	Purchased supplies of $700 on account. All of these were used during the month.
	25	Received a bill for advertising for $500. This bill is due on June 13.
	25	Received and paid a utilities bill for $400.
	29	Received $1,700 in cash from customers for services performed.
	29	Customers receiving services worth $600 used gift certificates in payment.
	31	Interest of $50 was paid on the note payable.
	31	Paid $1,200 in salaries to employees.
	31	Paid income tax payment for the month $150.

Instructions

a. Using T-accounts, enter the beginning balances in the general ledger as of April 30, 2025.

b. Journalize the May transactions.

c. Post the May journal entries to the general ledger.

d. Prepare a trial balance on May 31, 2025.

d. Cash $5,100
Tot. trial balance $34,800

Analyze errors and their effects on the trial balance.

P3.11 **(LO 5), AN** The bookkeeper for Roger's Dance Studio made the following errors in journalizing and posting.

1. A credit to Supplies of $600 was omitted.
2. A debit posting of $300 to Accounts Payable was inadvertently debited to Accounts Receivable.
3. A purchase of supplies on account of $450 was debited to Supplies for $540 and credited to Accounts Payable for $540.
4. A credit posting of $680 to Interest Payable was posted twice.
5. A debit posting to Income Taxes Payable for $250 and a credit posting to Cash for $250 were made twice.
6. A debit posting for $1,200 of Dividends was inadvertently posted to Salaries and Wages Expense instead.
7. A credit to Service Revenue for $450 was inadvertently posted as a debit to Service Revenue.
8. A credit to Accounts Receivable of $250 was credited to Accounts Payable.

Instructions

For each error, indicate (a) whether the trial balance will balance, (b) the amount of the difference if the trial balance will not balance, and (c) 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	$600	Debit

3. a. Yes; b. None; c. N/A

Continuing Case


leungchopan/
Shutterstock.com

Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 and 2.)

CC3 In November 2025, after having incorporated Cookie Creations Inc., Natalie begins operations. She has decided not to pursue the offer to supply cookies to Biscuits. Instead, the company will focus on offering cooking classes.

Go to Wiley Course Resources for complete case details and instructions.

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT3.1 The financial statements of **Apple Inc.** in Appendix A contain the following selected accounts, all in thousands of dollars.

Common Stock	$ 50,779
Accounts Payable	42,296
Accounts Receivable	16,120
Selling, General, and Administrative Expenses	19,916
Inventories	4,061
Net Property, Plant, and Equipment	36,766
Net Sales	274,515

Instructions

a. What is the increase and decrease side for each account? 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.

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: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT3.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements of **Under Armour, Inc.** are presented in Appendix C.

Instructions

a. Based on the information contained in these financial statements, determine the normal balance for:

Columbia Sportswear	Under Armour
(1) Accounts Receivable	(1) Inventories
(2) Net Property, Plant, and Equipment	(2) Income Taxes
(3) Accounts Payable	(3) Accrued Liabilities
(4) Retained Earnings	(4) Common Stock
(5) Net Sales	(5) Interest Expense

b. Identify the other account ordinarily involved when:

1. Accounts Receivable is increased.
2. Notes Payable is decreased.
3. Equipment is increased.
4. Interest Revenue is increased.

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT3.3 **Amazon.com, Inc.**'s financial statements are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

a. Based on the information contained in the financial statements, determine the normal balance of the listed accounts for each company.

Amazon	Walmart
1. Interest Expense	1. Product Revenues
2. Cash and Cash Equivalents	2. Inventories
3. Accounts Payable	3. Cost of Sales

b. Identify the other account ordinarily involved when:
   1. Accounts Receivable is increased.
   2. Interest Expense is increased.
   3. Salaries and Wages Payable is decreased.
   4. Service Revenue is increased.

Interpreting Financial Statements

CT3.4 **Chieftain International, Inc.**, is an oil and natural gas exploration and production company. A recent balance sheet reported $208 million in assets with only $4.6 million in liabilities, all of which were short-term accounts payable.

During the year, Chieftain expanded its holdings of oil and gas rights, drilled 37 new wells, and invested in expensive 3-D seismic technology. The company generated $19 million cash from operating activities and paid no dividends. It had a cash balance of $102 million at the end of the year.

Instructions

a. Name at least two advantages to Chieftain from having no long-term debt. Can you think of disadvantages?

b. What are some of the advantages to Chieftain from having this large a cash balance? What is a disadvantage?

c. Why do you suppose Chieftain has the $4.6 million balance in accounts payable, since it appears that it could have made all its purchases for cash?

Real-World Focus

CT3.5 This activity provides information about career opportunities for CPAs.

Instructions

Search the Internet for "start here go places" to access free accounting resources for future CPAs and then answer the following questions.

a. Where do CPAs work?

b. What skills does a CPA need?

c. What is the salary range for a CPA at a large firm during the first three years? What is the salary range for chief financial officers and treasurers at large corporations?

CT3.6 *The New York Times* published an article by Richard Sandomir that discusses the fact that the **Green Bay Packers** are the only NFL team that publicly publishes its annual report.

Instructions

Search online for "NFL Finances, as Seen Through Packers' Records," read the article, and then answer the following questions.

a. Why are the Green Bay Packers the only professional football team to publish and distribute an annual report?

b. Why is the football players' labor union particularly interested in the Packers' annual report?

c. In addition to the players' labor union, what other outside party might be interested in the annual report?

d. Even though the Packers' revenue increased in recent years, the company's operating profit fell significantly. How does the article explain this decline?

Decision-Making Across the Organization

CT3.7 Saira Morrow operates Dressage Riding Academy, Inc. The academy's primary sources of revenue are riding fees and lesson fees, which are provided on a cash basis. Saira 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 these accounts: Cash, Accounts Receivable, Unearned Service Revenue, and Service Revenue.

The academy owns 10 horses, a stable, a riding ring, riding equipment, and office equipment. These assets are accounted for in the following accounts: Horses, Buildings, and Equipment.

The academy employs stable helpers and an office employee, who receive weekly salaries. At the end of each month, the mail usually brings bills for advertising, utilities, and veterinary service.

Other expenses include feed for the horses and insurance. For its expenses, the academy maintains the following accounts: Supplies, Prepaid Insurance, Accounts Payable, Salaries and Wages Expense, Advertising Expense, Utilities Expense, Maintenance and Repairs Expense, Supplies Expense, and Insurance Expense.

Saira's sole source of personal income is dividends from the academy. Thus, the corporation declares and pays periodic dividends. To account for stockholders' equity in the business and dividends, two accounts are maintained: Common Stock and Dividends.

During the first month of operations, an inexperienced bookkeeper was employed. Saira 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	15,000	
	Unearned Service Revenue		15,000
	(Issued common stock in exchange for $15,000 cash)		
5	Cash	250	
	Service Revenue		250
	(Received $250 cash for lesson fees)		
7	Cash	500	
	Service Revenue		500
	(Received $500 for boarding of horses beginning June 1)		
9	Supplies Expense	1,500	
	Cash		1,500
	(Purchased estimated 5 months' supply of feed and hay for $1,500 on account)		
14	Equipment	80	
	Cash		800
	(Purchased desk and other office equipment for $800 cash)		
15	Salaries and Wages Expense	400	
	Cash		400
	(Issued check to Saira Morrow for personal use)		
20	Cash	145	
	Service Revenue		154
	(Received $154 cash for riding fees)		
31	Maintenance and Repairs Expense	75	
	Accounts Receivable		75
	(Received bill of $75 from carpenter for repair services performed)		

Instructions

With the class divided into groups, answer the following.

a. For each journal entry that is correct, so state. 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 originally reported net income of $4,500 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?

Communication Activity

CT3.8 Klean Sweep Company offers home cleaning service. Two recurring transactions for the company are billing customers for services performed 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 memorandum 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 text under the heading "The Recording Process Illustrated."

Ethics Cases

CT3.9 Vanessa Jones is the assistant chief accountant at IBT Company, a manufacturer of computer chips and cell phones. The company presently has total sales of $20 million. It is the end of the first quarter and Vanessa is hurriedly trying to prepare a 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, Vanessa 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. Vanessa plugs the difference! She believes that the difference is quite small and 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 ethical issues are involved?

c. What are Vanessa's alternatives?

CT3.10 The August 5, 2020, issue of the *Wall Street Journal* includes an article by Tomio Geron entitled "Former Trustify CEO's Indictment Highlights Due Diligence Dilemma."

Instructions

Read the article and answer the following questions.

a. What is the crime the chief executive is accused of, and what were some of the fraudulent activities and statements intended to deceive investors?

b. Many early state companies do not have audited financial statement or a chief financial officer. What risks does this present to investors?

c. Despite the apparent lack of audited financial statements or other hard data, approximately 90 investors provided funds to the company. What explanation does the company give to explain why investors might be willing to provide funds despite the lack of hard data?

All About You

CT3.11 In their annual reports to stockholders, companies must report or disclose information about all liabilities, including potential liabilities related to environmental clean-up. There are many situations in which you will be asked to provide personal financial information about your assets, liabilities, revenues, and expenses. Sometimes you will face difficult decisions regarding what to disclose and how to disclose it.

Instructions

Suppose that you are putting together a loan application to purchase a home. Based on your income and assets, you qualify for the mortgage loan, but just barely. How would you address each of the following situations in reporting your financial position for the loan application? Provide responses for each of the following questions.

a. You signed a guarantee for a bank loan that a friend took out for $20,000. If your friend doesn't pay, you will have to pay. Your friend has made all of the payments so far, and it appears he will be able to pay in the future.

b. You were involved in an auto accident in which you were at fault. There is the possibility that you may have to pay as much as $50,000 as part of a settlement. The issue will not be resolved before the bank processes your mortgage request.

c. The company at which you work isn't doing very well, and it has recently laid off employees. You are still employed, but it is quite possible that you will lose your job in the next few months.

Answers to Insight and Accounting Across the Organization Questions

Why Accuracy Matters **Q:** In order for these companies to prepare and issue financial statements, their accounting equations (debits and credits) must have been in balance at year-end. How could these errors or misstatements have occurred? **A:** A company's accounting equation (its books) can be in balance yet its financial statements have errors or misstatements because entire transactions were not recorded, transactions were recorded at wrong amounts, transactions were recorded in the wrong accounts, and/or transactions were recorded in the wrong accounting period. Audits of financial statements uncover some but obviously not all errors or misstatements.

Keeping Score **Q:** Do you think that the Chicago Bears football team would be likely to have the same major revenue and expense accounts as the Cubs? **A:** Because their businesses are similar—professional sports—many of the revenue and expense accounts for the baseball and football teams might be similar.

It Starts with the Transaction **Q:** Why is it important for companies to record financial transactions completely and accurately? **A:** If companies fail to record transactions completely and accurately, financial statements will no longer be relevant and representationally faithful. And if investors cannot trust the resultant financial statements, a drop in the company's stock price will often occur.

A Convenient Overstatement **Q:** What incentives might employees have to overstate the value of these investment securities on the company's financial statements? **A:** One reason that they may have been reluctant to record the losses is out of fear that the company's stockholders and clients would panic if they saw the magnitude of the losses. However, personal self-interest might have been equally to blame—the bonuses of the traders were tied to the value of the investment securities.

CHAPTER 4

Rudy Archuleta/Redux Pictures

Accrual Accounting Concepts

Chapter Preview

As indicated in the Feature Story, making adjustments is necessary to avoid misstatement of revenues and expenses such as those at **Groupon**. In this chapter, we introduce you to the accrual accounting concepts that make such adjustments possible.

Feature Story

Keeping Track of Groupons

Who doesn't like buying things at a discount? That's why it's not surprising that three years after it started as a company, **Groupon, Inc.** was estimated to be worth $16 billion. This translates into an average increase in value of almost $15 million per day.

Now consider that Groupon had previously been estimated to be worth even more than that. What happened? Well, accounting regulators and investors began to question the way that Groupon had accounted for some of its transactions. Groupon sells coupons ("Groupons"). How hard can it be to account for coupons? It turns out that it is not as easy as you might think.

First, consider what happens when Groupon makes a sale. Suppose it sells a Groupon for $30 for Highrise Hamburgers. When it receives the $30 from the customer, it must turn over half of that amount ($15) to Highrise Hamburgers. So should Groupon record revenue for the full $30 or just $15? At one time, Groupon recorded the full $30. But, in response to an SEC ruling on the issue, Groupon now records revenue of $15 instead. This caused Groupon to restate its previous financial statements. This restatement reduced annual revenue by $312.9 million.

A second issue is a matter of timing. When should Groupon record this $15 revenue? Should it record the revenue when it sells the Groupon, or must it wait until the customer uses the Groupon at Highrise Hamburgers? The accounting becomes even more complicated when you consider the company's loyalty programs. Groupon offers free or discounted Groupons to its subscribers for doing things such as referring new customers or participating in promotions. These Groupons are to be used for future purchases, yet the company must record the expense at the time the customer receives the Groupon.

Finally, Groupon, like all other companies, relies on many estimates in its financial reporting. It notes that "actual results could differ materially from those estimates." Maybe accounting for coupons is not so easy.

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Explain the accrual basis of accounting and the reasons for adjusting entries.	• Revenue recognition principle • Expense recognition principle • Accrual vs. cash basis • Need for adjusting entries • Types of adjusting entries	**DO IT! 1** Timing Concepts
LO 2 Prepare adjusting entries for deferrals.	• Prepaid expenses • Unearned revenues	**DO IT! 2** Adjusting Entries for Deferrals
LO 3 Prepare adjusting entries for accruals.	• Accrued revenues • Accrued expenses • Summary of basic relationships	**DO IT! 3** Adjusting Entries for Accruals
LO 4 Prepare an adjusted trial balance and closing entries.	• Preparing the adjusted trial balance • Preparing financial statements • Quality of earnings • Closing the books • Summary of the accounting cycle	**DO IT! 4a** Trial Balance **4b** Closing Entries

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.
Visit Wiley Course Resources for additional tutorials and practice opportunities.

4.1 Accrual-Basis Accounting and Adjusting Entries

LEARNING OBJECTIVE 1

Explain the accrual basis of accounting and the reasons for adjusting entries.

Businesses need feedback about how well they performed during a period of time. For example, management usually wants monthly reports on financial results, most large corporations are required to present quarterly and annual financial statements to stockholders, and the Internal Revenue Service requires all businesses to file annual tax returns. **Accounting divides the economic life of a business into artificial time periods.** Recall that this is the periodicity assumption. **Accounting time periods are generally a month, a quarter, or a year** (see Helpful Hint). Companies often report using the calendar year (i.e., January 1 to December 31) but sometimes choose a different 12-month period (e.g., August 1 to July 31).

HELPFUL HINT

An accounting time period that is one year long is called a fiscal year.

However, many business transactions affect more than one time period. For example, a new building purchased by **Citigroup** or a new airplane purchased by **Delta Air Lines** will be used for many years.

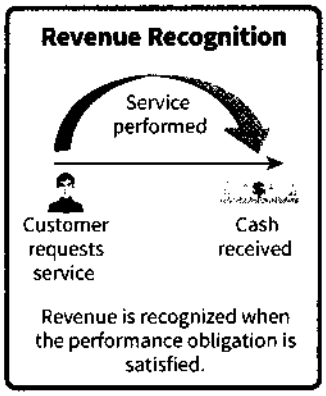
- It would not make sense to expense the full cost of the building or the airplane at the time of purchase because each will be used for many subsequent periods.
- Instead, companies allocate the cost to the periods of use.

Determining the amount of revenues and expenses to report in a given accounting period can be difficult. Proper reporting requires an understanding of the nature of the company's business. Two principles are used as guidelines: the revenue recognition principle and the expense recognition principle.

The Revenue Recognition Principle

When a company agrees to perform a service or sell a product to a customer, it has a performance obligation.

- The **revenue recognition principle** requires that companies **recognize revenue in the accounting period in which the performance obligation is satisfied.**
- A company satisfies its performance obligation by performing a service or providing a good to a customer.



To illustrate, assume Conrad Window Cleaners performs cleaning services for $100 on June 30, but customers do not pay until July 5. Under the revenue recognition principle, Conrad records revenue on June 30 when it satisfies its performance obligation, which is when it performs the service, not in July when it receives the cash. At June 30, Conrad would report a receivable on its balance sheet and revenue in its income statement for the service performed. The journal entries would be as follows.

June 30	Accounts Receivable	100	
	Service Revenue		100
July 5	Cash	100	
	Accounts Receivable		100

Five-Step Revenue Recognition Process—Sierra Corporation Example

Revenue recognition results from a five-step process. This process can best be illustrated with an example. Assume that Sierra Corporation signs a contract with the Lewis family to provide guide services for a one-week backpacking trip for $1,500. **Illustration 4.1** shows the five steps that Sierra follows to recognize revenue.

ILLUSTRATION 4.1 Five steps of revenue recognition

Step 1: Identify the contract with customers.	A contract is an agreement between two parties that creates enforceable rights or obligations. Sierra has a contract with the Lewis family to provide guide services.
Step 2: Identify the separate performance obligations in the contract.	Sierra has only one performance obligation—to provide guide services. If Sierra also agreed to sell the customer camping equipment, a separate performance obligation would exist for this promise.
Step 3: Determine the transaction price.	The transaction price is the amount of consideration that a company expects to receive from a customer in exchange for transferring a good or service. The transaction price for Sierra is $1,500.
Step 4: Allocate the transaction price to the separate performance obligations.	Sierra has only one performance obligation—to provide guide services to the Lewis family.
Step 5: Recognize revenue when each performance obligation is satisfied.	Sierra recognizes revenue of $1,500 for providing guide services to the Lewis family when it satisfies its performance obligation—the completion of the guided trip.

As indicated, Step 5 is when Sierra recognizes revenue related to providing the guide services to the Lewis family. At this point, Sierra completes the trip and satisfies its performance obligation.

The Expense Recognition Principle

Expense Recognition

Advertising Delivery Utilities

Cost Incurred

Recognize expenses in the period when the company makes efforts to generate revenue.

In recognizing expenses, a simple rule is followed: "Let the expenses follow the revenues." Thus, expense recognition is tied to revenue recognition. Applied to the Conrad Window Cleaners example, this means that the salary expense Conrad incurred in performing the cleaning service on June 30 should be reported in the same period in which it recognizes the service revenue.

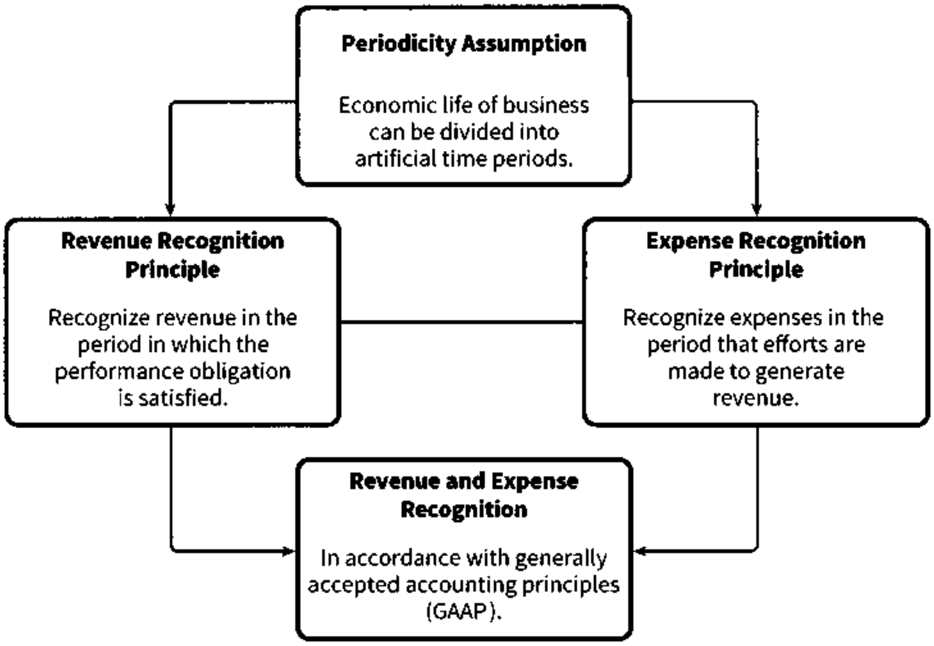
- The critical issue in expense recognition is determining when the expense makes its contribution to revenue.
- This may or may not be the same period in which the expense is paid. If Conrad does not pay the salary incurred on June 30 until July, it would report salaries and wages payable on its June 30 balance sheet.
- The practice of expense recognition is referred to as the **expense recognition principle**. It requires that companies recognize expenses in the period in which they make efforts (consume assets or incur liabilities) to generate revenue.

The term matching is sometimes used in expense recognition to indicate the relationship between the effort expended and the revenue generated.

Illustration 4.2 summarizes the revenue and expense recognition principles (see **Decision Tools**).

ILLUSTRATION 4.2

GAAP relationships in revenue and expense recognition



Decision Tools

The revenue recognition principle and the expense recognition principle help to ensure that companies report the correct amount of revenues and expenses in a given period.

Investor Insight Apple Inc.

Photo/Alto/James Hardy/ Getty Images

Reporting Revenue Accurately

At one time, **Apple** was required to spread the revenues from iPhone sales over the two-year period following the sale of the phone. Accounting standards required this because Apple was obligated to provide software updates after the phone was sold. Since Apple had service obligations after the initial date of sale, it was forced to spread the revenue over a two-year period.

As a result, the rapid growth of iPhone sales was not fully reflected in the revenue amounts reported in Apple's income statement. A change in an accounting standard now enables Apple to report much more of its iPhone revenue at the point of sale. It was estimated that under the new rule revenues would have been about 17% higher and earnings per share almost 50% higher.

In the past, why was it argued that Apple should spread the recognition of iPhone revenue over a two-year period, rather than recording it upfront? (Answer is available at the end of the chapter.)

Accrual versus Cash Basis of Accounting

Accrual-basis accounting means that transactions that change a company's financial statements are recorded **in the periods in which the events occur**, even if cash was not exchanged (see **International Note**).

- Using the accrual basis means that companies recognize revenues when they perform the services (the revenue recognition principle), even if cash was not received.
- Likewise, companies recognize expenses when incurred (the expense recognition principle), even if cash was not paid.

An alternative to the accrual basis is the cash basis.

Under **cash-basis accounting**, companies record revenue at the time they receive cash. They record an expense at the time they pay out cash. The cash basis seems appealing due to its simplicity, but it often produces misleading financial statements. For example, it fails to record revenue for a company that has performed services but has not yet received payment. As a result, the cash basis may not reflect revenue in the period that a performance obligation is satisfied. **Cash-basis accounting is not in accordance with generally accepted accounting principles (GAAP).**

Illustration 4.3 compares accrual-based numbers and cash-based numbers. Suppose that Fresh Colors paints a large building in 2024. In 2024, it incurs and pays total expenses (salaries and paint costs) of $50,000. It bills the customer $80,000 but does not receive payment until 2025.

- On an accrual basis, Fresh Colors reports $80,000 of revenue during 2024 because that is when it performed the service. The company matches expenses of $50,000 to the $80,000 of revenue. Thus, 2024 net income is $30,000 ($80,000 – $50,000). The $30,000 of net income reported for 2024 indicates the profitability of Fresh Colors' efforts during that period.
- If Fresh Colors instead used cash-basis accounting, it would report $50,000 of expenses in 2024 and $80,000 of revenues during 2025. It would therefore report a loss of $50,000 in 2024 and net income of $80,000 in 2025.

Clearly, the cash-basis net income measures are misleading because neither a loss of $50,000 or net income of $80,000 is a faithful representation of the profitability of the painting project.

International Note

Although different accounting standards are often used by companies in other countries, the accrual basis of accounting is central to all of these standards.

ILLUSTRATION 4.3 **Accrual-basis versus cash-basis accounting**

	2024		2025	
Activity	 Purchased paint, painted building, paid employees		 Received payment for work done in 2024	
Accrual basis	Revenue	$80,000	Revenue	$ 0
	Expense	50,000	Expense	0
	Net income	$30,000	Net income	$ 0
Cash basis	Revenue	$ 0	Revenue	$80,000
	Expense	50,000	Expense	0
	Net loss	$(50,000)	Net income	$80,000

The Need for Adjusting Entries

In order for revenues to be recorded in the period in which related the performance obligations are satisfied 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 because documents giving rise to an entry have not yet been received. 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 balance sheet account.**

Types of Adjusting Entries

Adjusting entries are classified as either deferrals or accruals. As **Illustration 4.4** shows, each of these classes has two subcategories.

ILLUSTRATION 4.4
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 Sierra Corporation from Illustration 3.35. It is reproduced in **Illustration 4.5**. Note that Retained Earnings has been added to this trial balance with a zero balance. We will explain its use later.

ILLUSTRATION 4.5
Unadjusted trial balance

Sierra Corporation
Trial Balance
October 31, 2025

	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
Common Stock		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 Sierra uses an accounting period of one month. Thus, monthly adjusting entries are made. The entries are dated October 31.

DO IT! 1 Timing Concepts

Below is a list of concepts 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. ______ Periodicity 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 terms identified.**
- **Study carefully the revenue recognition principle, the expense recognition principle, and the periodicity assumption.**

Solution

1. f **2.** e **3.** c **4.** b

Related exercise material: BE4.1, BE4.2, BE4.3, DO IT! 4.1, E4.1, E4.2, E4.3, E4.4, and E4.6.

4.2 Adjusting Entries for Deferrals

LEARNING OBJECTIVE 2

Prepare adjusting entries for deferrals.

ANALYZE → JOURNALIZE → POST → TRIAL BALANCE → **Journalize and post adjusting entries: deferrals/accruals** → ADJUSTED TRIAL BALANCE → FINANCIAL STATEMENTS → CLOSING ENTRIES → POST-CLOSING TRIAL BALANCE

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 deferred expenses to record the portion that was incurred during the period.
- Companies also make adjusting entries for deferred revenues to record services performed during the period.

The two types of deferrals are prepaid expenses and unearned revenues.

Prepaid Expenses

Companies record payments of expenses that will benefit more than one accounting period as assets. These **prepaid expenses** or **prepayments** are expenses paid in cash before they are used or consumed. 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.

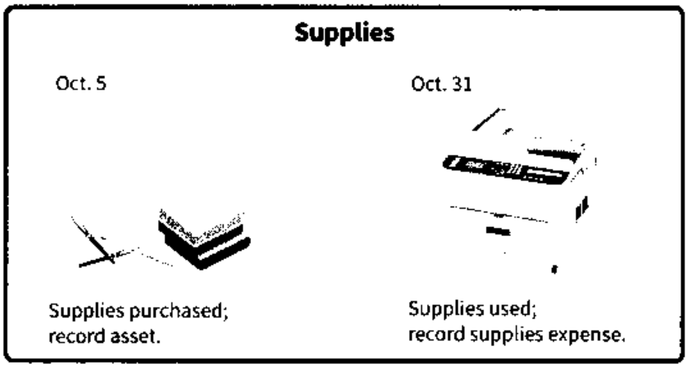
Prior to adjustment, assets are overstated and expenses are understated. Therefore, as shown in Illustration 4.6, **an adjusting entry for prepaid expenses results in an increase (a debit) to an expense account and a decrease (a credit) to an asset account.**

ILLUSTRATION 4.6
Adjusting entries for prepaid expenses

Prepaid Expenses

Asset			Expense	
Unadjusted Balance	Credit Adjusting Entry (−)	→	Debit Adjusting Entry (+)	

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 immediately as the supplies are used, companies recognize supplies expense in a single entry, 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.

Sierra Corporation purchased supplies costing $2,500 on October 5. Sierra recorded the purchase by increasing (debiting) the asset Supplies. This account shows a balance of $2,500 in the October 31 trial balance. A physical count of the inventory 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 stockholders' equity by increasing an expense account, Supplies Expense. This is shown in Illustration 4.7 (see Helpful Hint).

HELPFUL HINT
Due to their nature, adjusting entries have no effect on cash flows. As a result, we do not show the cash flow effects in these illustrations.

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 Sierra does not make the adjusting entry, October expenses will be understated and net income overstated by $1,500.
- Moreover, both assets and stockholders' equity will be overstated by $1,500 on the October 31 balance sheet.

ILLUSTRATION 4.7
Adjustment for supplies

Basic Analysis
The expense Supplies Expense is increased $1,500; the asset Supplies is decreased $1,500.

Equation Analysis

Assets	=	Liabilities	+	Stockholders' 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

General Journal

Oct. 31	Supplies Expense	1,500	
	Supplies		1,500
	(To record supplies used)		

Posting to Ledger

General Ledger

Supplies

Oct. 5 2,500	Oct. 31 Adj. 1,500
Oct. 31 Bal. 1,000	

Supplies Expense

Oct. 31 Adj. 1,500	
Oct. 31 Bal. 1,500	

Insurance

Companies purchase insurance to protect themselves from losses due to fire, theft, and unforeseen events. Insurance must be paid in advance, often for multiple months.

- 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.

Insurance

Oct. 4

Insurance purchased; record asset.

Oct. 31

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

Insurance expired; record insurance expense.

On October 4, Sierra Corporation paid $600 for a one-year fire insurance policy. Coverage began on October 1. Sierra 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 stockholders' equity by increasing an expense account, Insurance Expense.

After the adjusting entry, the asset Prepaid Insurance shows a balance of $550, which represents the unexpired cost for the remaining 11 months of coverage (see **Illustration 4.8**). At the same time, the balance in Insurance Expense equals the insurance cost that expired in October.

- If Sierra does not make this adjustment, October expenses are understated by $50 and net income is overstated by $50.
- Moreover, both assets and stockholders' equity will be overstated by $50 on the October 31 balance sheet.

ILLUSTRATION 4.8
Adjustment for insurance

Basic Analysis: The expense Insurance Expense is increased $50; the asset Prepaid Insurance is decreased $50.

Equation Analysis:

Assets	=	Liabilities	+	Stockholders' 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

General Journal

Oct. 31	Insurance Expense	50	
	Prepaid Insurance		50
	(To record insurance expired)		

Posting to Ledger

General Ledger

Prepaid Insurance

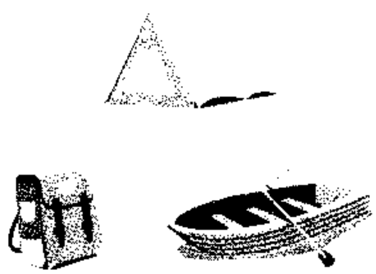
Oct. 4	600	Oct. 31	Adj. 50
Oct. 31	Bal. 550		

Insurance Expense

Oct. 31	Adj. 50		
Oct. 31	Bal. 50		

Depreciation

Oct. 2



Equipment purchased; record asset.

Oct. 31

Equipment

Oct	Nov	Dec	Jan
$40	$40	$40	$40
Feb $40	March $40	April $40	May $40
June $40	July $40	Aug $40	Sept $40

Depreciation = $480/year

Depreciation recognized; record depreciation expense.

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.

- Recall that 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 to 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.

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. It is important to understand the following.

- Depreciation is an allocation concept, not a valuation concept.
- 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.

HELPFUL HINT
All contra accounts have increases, decreases, and normal balances opposite to the account to which they relate.

For Sierra Corporation, assume that depreciation on the equipment is $480 a year, or $40 per month. As shown in Illustration 4.9, rather than decrease (credit) the asset account directly, Sierra instead credits Accumulated Depreciation—Equipment.

- Accumulated Depreciation is called a **contra asset account**.
- Such an account is offset against an asset account on the balance sheet (see **Helpful Hint**). Thus, the Accumulated Depreciation—Equipment account offsets the asset 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, Sierra decreases stockholders' equity by increasing an expense account, Depreciation Expense.

ILLUSTRATION 4.9
Adjustment for depreciation

Basic Analysis: The expense Depreciation Expense is increased $40; the contra asset Accumulated Depreciation—Equipment is increased $40.

Equation Analysis:

Assets	=	Liabilities	+	Stockholders' 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:

General Journal

Oct. 31	Depreciation Expense	40	
	Accumulated Depreciation—Equipment		40
	(To record monthly depreciation)		

Posting to Ledger:

General Ledger

Equipment

Debit	Credit
Oct. 2 5,000	
Oct. 31 Bal. 5,000	

Accumulated Depreciation—Equipment

Debit	Credit
	Oct. 31 Adj. 40
	Oct. 31 Bal. 40

Depreciation Expense

Debit	Credit
Oct. 31 Adj. 40	
Oct. 31 Bal. 40	

The balance in the Accumulated Depreciation—Equipment account will increase $40 each month, and the balance in Equipment remains $5,000.

Statement Presentation As noted above, Accumulated Depreciation—Equipment is a contra asset account. It is offset against Equipment on the balance sheet. 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 expired to date.

Thus, in the balance sheet, Sierra deducts Accumulated Depreciation—Equipment from the related asset account, as shown in **Illustration 4.10**.

ILLUSTRATION 4.10
Balance sheet presentation of accumulated depreciation

Equipment	$5,000
Less: Accumulated depreciation—equipment	40
	$4,960

> **ALTERNATIVE TERMINOLOGY**
> **Book value is also referred to as *carrying value*.**

Book value is the difference between the cost of any depreciable asset and its related accumulated depreciation (see **Alternative Terminology**). In Illustration 4.10, the book value of the equipment at the balance sheet 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**.

- Depreciation expense identifies the portion of an asset's cost that expired during the period (in this case, in October).
- Without this adjusting entry, total assets, total stockholders' equity, and net income are overstated by $40 and depreciation expense is understated by $40.

Illustration 4.11 summarizes the accounting for prepaid expenses.

ILLUSTRATION 4.11
Accounting for prepaid expenses

Accounting for Prepaid Expenses

Examples	Reason for Adjustment	Accounts Before Adjustment	Adjusting Entry
Insurance, supplies, advertising, rent, depreciation	Prepaid expenses originally recorded in asset accounts have been used.	Assets overstated. Expenses understated.	Dr. Expenses Cr. Assets or Contra Assets

Unearned Revenues

Companies record cash received before services are performed by increasing (crediting) a liability account called **unearned revenues**. In other words, the **company has a performance obligation** to provide 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 **United**, **American**, and **Delta**, for instance, treat receipts from the sale of tickets as unearned revenue until the flight service is provided.

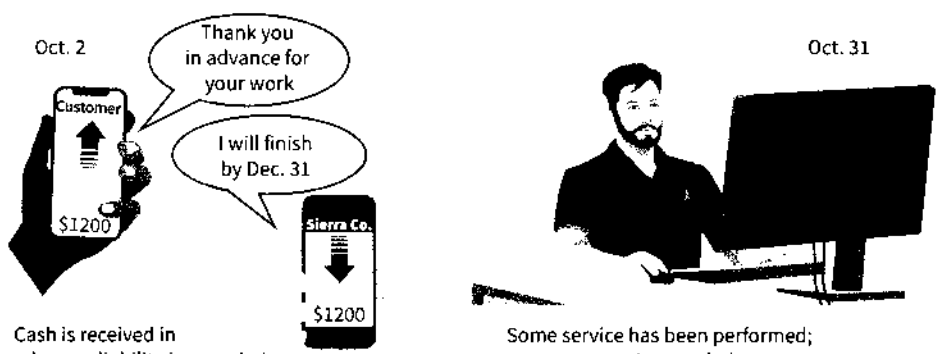
- Unearned revenues are the opposite of prepaid expenses.
- Indeed, unearned revenue on the books of one company is likely to be a prepaid expense on the books of the company that has made the advance payment.

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 account. Unearned revenue is a liability account used to recognize the obligation 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.

Unearned Revenues



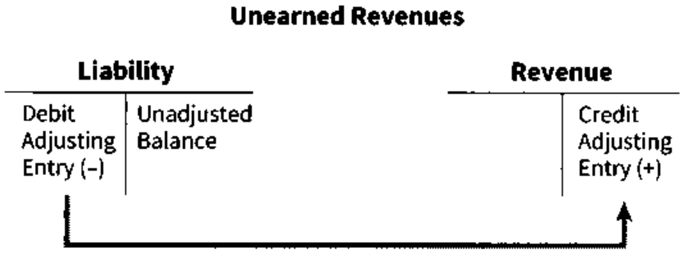
Cash is received in advance; liability is recorded.

Some service has been performed; some revenue is recorded.

- The company then 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.
- Prior to adjustment, liabilities are typically overstated and revenues are understated.

Therefore, as shown in **Illustration 4.12**, **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 4.12
Adjusting entries for unearned revenues



Sierra Corporation received $1,200 on October 2 from R. Knox for guide services for multi-day trips expected to be completed by December 31. Sierra 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 service Sierra 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 stockholders' equity (Service Revenue) is increased.

As shown in **Illustration 4.13**, the liability Unearned Service Revenue now shows a balance of $800. That amount represents the remaining guide services Sierra is obligated to perform in the future. Service Revenue shows total revenue for October of $10,400.

- Without this adjustment, revenues and net income are understated by $400 in the income statement.
- Moreover, liabilities are overstated and stockholders' equity is understated by $400 on the October 31 balance sheet.

ILLUSTRATION 4.13
Service revenue accounts after adjustment

Basic Analysis

The liability Unearned Service Revenue is decreased $400; the revenue Service Revenue is increased $400.

Equation Analysis

Assets	=	Liabilities	+	Stockholders' 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

General Journal

Oct. 31	Unearned Service Revenue	400	
	Service Revenue		400
	(To record revenue for services performed)		

Posting to Ledger

General Ledger

Unearned Service Revenue

Debit			Credit		
Oct. 31	Adj.	400	Oct. 2		1,200
			Oct. 31	Bal.	800

Service Revenue

Debit	Credit		
	Oct. 3		10,000
	31	Adj.	400
	Oct. 31	Bal.	10,400

Illustration 4.14 summarizes the accounting for unearned revenues.

ILLUSTRATION 4.14

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

Accounting Across the Organization Best Buy

skodonnell/Getty Images

Turning Gift Cards into Revenue

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 purchase gift cards and give them to someone for later use. In a recent year, gift-card sales were expected to exceed $124 billion.

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? (It has been estimated that $3.5 billion in gift cards expire unredeemed annually.) In a recent balance sheet, Best Buy reported unearned revenue related to gift cards of $427 million.

Sources: "2014 Gift Card Sales to top $124 Billion, But Growth Slowing," *PRNewswire* (December 10, 2014); and Suzanne Kapner, "Gift Cards Are the Go-To Holiday Gifts in 2020," *Wall Street Journal* (December 23, 2020).

Suppose that Robert Jones purchases a $100 gift card at Best Buy on December 24, 2024, and gives it to his wife, Mary Jones, on December 25, 2024. On January 3, 2025, Mary uses the card to purchase a $100 smart speaker. When do you think Best Buy should recognize revenue and why? (Answer is available at the end of the chapter.)

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 deferrals. Failure to adjust for deferrals leads to overstatement of the asset or liability and understatement of the related expense or revenue.**

DO IT! 2 Adjusting Entries for Deferrals

The ledger of Hammond, Inc. on March 31, 2025, includes these selected accounts before adjusting entries are prepared.

	Debit	Credit
Prepaid Insurance	$ 3,600	
Supplies	2,800	
Equipment	25,000	
Accumulated Depreciation—Equipment		$5,000
Unearned Service Revenue		9,200

An analysis of the accounts shows the following.

1. Insurance expires at the rate of $100 per month.
2. Supplies on hand total $800.
3. The equipment depreciates $200 a month.
4. During March, services were performed for $4,000 of the unearned service revenue.

Prepare the adjusting entries for the month of March.

Solution

1. Insurance Expense	100	
Prepaid Insurance		100
(To record insurance expired)		
2. Supplies Expense ($2,800 − $800)	2,000	
Supplies		2,000
(To record supplies used)		

3. Depreciation Expense	200	
Accumulated Depreciation—Equipment		200
(To record monthly depreciation)		
4. Unearned Service Revenue	4,000	
Service Revenue		4,000
(To record revenue for services performed)		

Related exercise material: BE4.5, BE4.6, BE4.7, BE4.8, BE4.9, DO IT! 4.2, and E4.19.

4.3 Adjusting Entries for Accruals

LEARNING OBJECTIVE 3

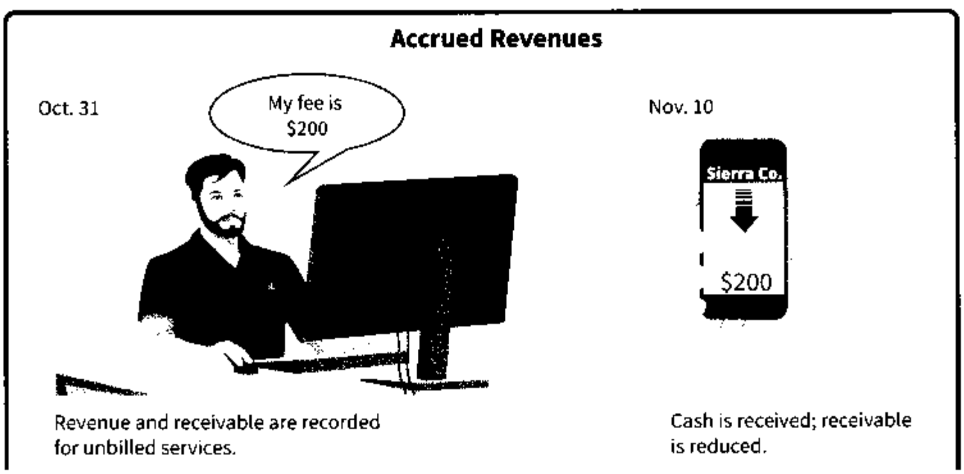
Prepare adjusting entries for accruals.

The second category of adjusting entries is **accruals.** Accruals are expenses or revenues that are recognized at a date earlier than the point when cash is exchanged.

- 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 balance sheet 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 nor 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 won't be billed until the service has been completed.

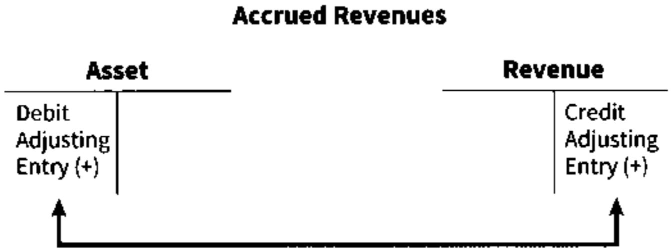
HELPFUL HINT

For accruals, there may have been no prior entry, and the accounts requiring adjustment may both have zero balances prior to adjustment.

- An adjusting entry records the receivable that exists at the balance sheet date and the revenue for the services performed during the period.
- Prior to adjustment, both assets and revenues are understated.

As shown in **Illustration 4.15**, **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** (see **Helpful Hint**).

ILLUSTRATION 4.15
Adjusting entries for accrued revenues



In October, Sierra Corporation performed guide services worth $200 that were not billed to clients on or before October 31. Because these services were not billed, they were not recorded. The accrual of unrecorded service revenue increases an asset account, Accounts Receivable. It also increases stockholders' equity by increasing a revenue account, Service Revenue, as shown in **Illustration 4.16**.

ILLUSTRATION 4.16
Adjustment for accrued revenue

Basic Analysis: The asset Accounts Receivable is increased $200; the revenue Service Revenue is increased $200.

Equation Analysis:

Assets	=	Liabilities	+	Stockholders' 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

General Journal

Oct. 31	Accounts Receivable	200	
	Service Revenue		200
	(To record revenue for services performed)		

Posting to Ledger

General Ledger

Accounts Receivable

Debit	Credit
Oct. 31 Adj. 200	
Oct. 31 Bal. 200	

Service Revenue

Debit	Credit	
	Oct. 3	10,000
	31	400
	31 Adj.	200
	Oct. 31 Bal.	10,600

The asset Accounts Receivable shows that clients owe Sierra $200 at the balance sheet date. The balance of $10,600 in Service Revenue represents the total revenue for services Sierra performed during the month ($10,000 + $400 + $200).

- Without the adjusting entry, assets and stockholders' equity on the balance sheet are understated.
- Moreover, revenues and net income on the income statement are understated.

On November 10, Sierra receives cash of $200 for the services performed in October and makes the following entry.

Nov. 10	Cash	200	
	Accounts Receivable		200
	(To record cash collected on account)		

Equation analyses summarize the effects of transactions on the three elements of the accounting equation, as well as the effect on cash flows.

A	=	L	+	SE
+200				
−200				

Cash Flows
+200

The company records the collection of the receivables by a debit (increase) to Cash and a credit (decrease) to Accounts Receivable.

Illustration 4.17 summarizes the accounting for accrued revenues.

ILLUSTRATION 4.17
Accounting for accrued revenues

Accounting for Accrued Revenues

Examples	**Reason for Adjustment**	**Accounts Before Adjustment**	**Adjusting Entry**
Interest, rent, services	Services performed but not yet received in cash or 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, utilities, and salaries are common examples of accrued expenses.

- Companies make adjustments for accrued expenses to record the obligations that exist at the balance sheet date and to recognize the expenses that apply to the current accounting period (see **Ethics Note**).
- Prior to adjustment, both liabilities and expenses are understated.

ETHICS NOTE

A report released by Fannie Mae's 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 this improper accounting apparently was the desire to meet earnings targets.

Therefore, as shown in **Illustration 4.18**, **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 4.18
Adjusting entries for accrued expenses

Accrued Expenses

Let's look in more detail at some specific types of accrued expenses, beginning with accrued interest.

Accrued Interest

Sierra Corporation signed a three-month note payable in the amount of $5,000 on October 1. The note requires Sierra to pay interest at an annual rate of 12%. The note and the interest will both be repaid at maturity.

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.
3. The length of time the note is outstanding.

HELPFUL HINT
In computing interest, we express the time period as a fraction of a year.

For Sierra, the total interest due on the $5,000 note at its maturity date three months in the future is $150 ($5,000 × 12% × $\frac{3}{12}$), or $50 for one month. **Illustration 4.19** shows the formula for computing monthly interest expense and its application to Sierra for the month of October (see **Helpful Hint**).

ILLUSTRATION 4.19
Formula for computing interest

Face Value of Note	×	Annual Interest Rate	×	Time in Terms of One Year	=	Interest Expense
$5,000	×	12%	×	$\frac{1}{12}$	=	$50

As **Illustration 4.20** shows, the accrual of interest at October 31 increases a liability account, Interest Payable. It also decreases stockholders' equity by increasing an expense account, Interest Expense.

ILLUSTRATION 4.20
Adjustment for accrued interest

Basic Analysis: The expense Interest Expense is increased $50; the liability Interest Payable is increased $50.

Equation Analysis:

Assets	=	Liabilities	+	Stockholders' Equity
		Interest Payable		Interest Expense
		+$50		−$50

Debit-Credit Analysis: Debits increase expenses: debit Interest Expense $50.
Credits increase liabilities: credit Interest Payable $50.

Journal Entry

General Journal

Oct. 31	Interest Expense	50	
	Interest Payable		50
	(To record interest on notes payable)		

Posting to Ledger

General Ledger

Interest Expense

Oct. 31 Adj. 50	
Oct. 31 Bal. 50	

Interest Payable

	Oct. 31 Adj. 50
	Oct. 31 Bal. 50

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. Sierra 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.
- Moreover, net income and stockholders' equity are overstated.

Accrued Salaries and Wages

Companies pay for some types of expenses, such as employee salaries and wages, after the services have been performed. Sierra paid salaries on October 26 for its employees' first two weeks of work (October 15–October 26). The next payment of salaries will not occur until November 9. As **Illustration 4.21** shows, three working days of unpaid salaries and wages remain in October (October 29–31).

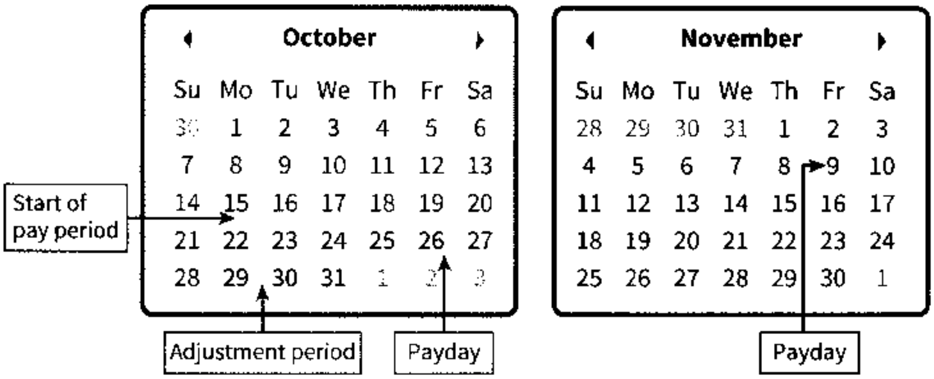


ILLUSTRATION 4.21
Calendar showing Sierra Corporation's pay periods

At October 31, the salaries for these three days represent an accrued expense and a related liability to Sierra. The employees receive total salaries of $2,000 for a five-day work week, or $400 ($2,000 ÷ 5 days) per day. Thus, accrued salaries at October 31 are $1,200 ($400 × 3). This accrual increases a liability, Salaries and Wages Payable. It also decreases stockholders' equity by increasing an expense account, Salaries and Wages Expense, as shown in **Illustration 4.22**.

ILLUSTRATION 4.22
Adjustment for accrued salaries and wages

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	+	Stockholders' Equity
		Salaries and Wages Payable		Salaries and Wages Expense
		+$1,200		−$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

General Journal

Oct. 31	Salaries and Wages Expense	1,200	
	Salaries and Wages Payable		1,200
	(To record accrued salaries)		

Posting to Ledger

General Ledger

Salaries and Wages Expenses			Salaries and Wages Payable	
Oct. 26	4,000			Oct. 31 Adj. 1,200
31	Adj. 1,200			
Oct. 31	Bal. 5,200			Oct. 31 Bal. 1,200

After this adjustment, the balance in Salaries and Wages Expense of $5,200 (13 days × $400) is the actual salary expense for October. (The employees worked 13 days in October after beginning work on October 15.) The balance in Salaries and Wages Payable of $1,200 is the amount of the liability for salaries Sierra owes as of October 31.

- Without the $1,200 adjustment for salaries and wages, Sierra's expenses are understated $1,200.
- Moreover, its liabilities are understated $1,200.

Sierra pays salaries every two weeks. Consequently, the next payday is November 9, when the company will again pay total salaries 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, Sierra makes the following entry on November 9.

A	=	L	+	SE
		−1,200		
				−2,800
−4,000				

Cash Flows
−4,000

Nov. 9	Salaries and Wages Payable	1,200	
	Salaries and Wages Expense	2,800	
	Cash		4,000
	(To record November 9 payroll)		

This entry eliminates the liability for Salaries and Wages Payable that Sierra 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 4.23 summarizes the accounting for accrued expenses.

ILLUSTRATION 4.23
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

njgphoto/Getty Images

Got Junk?

Do you have an old computer or two in your garage? How about an old TV that needs replacing? Many people do. Approximately 163,000 computers and televisions become obsolete **each day**. Yet, in a recent year, only 11% of computers were recycled.

It is estimated that 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.

What accounting issue might this cause for companies? (Answer is available at the end of the chapter.)

Summary of Basic Relationships

Illustration 4.24 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 balance sheet account and one income statement account**.

ILLUSTRATION 4.24
Summary of adjusting entries

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

Illustrations 4.25 and 4.26 show the journalizing and posting of adjusting entries for Sierra Corporation on October 31. When reviewing the general ledger in Illustration 4.26, note that for learning purposes we have highlighted the adjustments in red.

ILLUSTRATION 4.25

General journal showing adjusting entries

General Journal

Date	Account Titles and Explanation	Debit	Credit
2025	Adjusting Entries		
Oct. 31	Supplies Expense	1,500	
	Supplies		1,500
	(To record supplies used)		
31	Insurance Expense	50	
	Prepaid Insurance		50
	(To record insurance expired)		
31	Depreciation Expense	40	
	Accumulated Depreciation—Equipment		40
	(To record monthly depreciation)		
31	Unearned Service Revenue	400	
	Service Revenue		400
	(To record revenue for services performed)		
31	Accounts Receivable	200	
	Service Revenue		200
	(To record revenue for services performed)		
31	Interest Expense	50	
	Interest Payable		50
	(To record interest on notes payable)		
31	Salaries and Wages Expense	1,200	
	Salaries and Wages Payable		1,200
	(To record accrued salaries)		

ILLUSTRATION 4.26

General ledger after adjustments (adjustments shown in red)

General Ledger

Cash

Oct. 1	10,000	Oct. 2	5,000
1	5,000	3	900
2	1,200	4	600
3	10,000	20	500
		26	4,000
Oct. 31	Bal. 15,200		

Accounts Receivable

Oct. 31	200		
Oct. 31	Bal. 200		

Supplies

Oct. 5	2,500	Oct. 31	1,500
Oct. 31	Bal. 1,000		

Prepaid Insurance

Oct. 4	600	Oct. 31	50
Oct. 31	Bal. 550		

Equipment

Oct. 2	5,000		
Oct. 31	Bal. 5,000		

Accumulated Depreciation—Equipment

		Oct. 31	40
		Oct. 31	Bal. 40

Notes Payable

		Oct. 1	5,000
		Oct. 31	Bal. 5,000

Accounts Payable

		Oct. 5	2,500
		Oct. 31	Bal. 2,500

Interest Payable

		Oct. 31	50
		Oct. 31	Bal. 50

Unearned Service Revenue

Oct. 31	400	Oct. 2	1,200
		Oct. 31	Bal. 800

Salaries and Wages Payable

		Oct. 31	1,200
		Oct. 31	Bal. 1,200

(continues)

ILLUSTRATION 4.26
(continued)

General Ledger

Common Stock

		Oct. 1	10,000
		Oct. 31	Bal. 10,000

Retained Earnings

		Oct. 31	Bal. 0

Dividends

Oct. 20	500		
Oct. 31	Bal. 500		

Service Revenue

		Oct. 3	10,000
		31	400
		31	200
		Oct. 31	Bal. 10,600

Salaries and Wages Expense

Oct. 26	4,000		
31	1,200		
Oct. 31	Bal. 5,200		

Supplies Expense

Oct. 31	1,500		
Oct. 31	Bal. 1,500		

Rent Expense

Oct. 3	900		
Oct. 31	Bal. 900		

Insurance Expense

Oct. 31	50		
Oct. 31	Bal. 50		

Interest Expense

Oct. 31	50		
Oct. 31	Bal. 50		

Depreciation Expense

Oct. 31	40		
Oct. 31	Bal. 40		

DO IT! 3 Adjusting Entries for Accruals

Micro Computer Services Inc. began operations on August 1, 2025. At the end of August 2025, management attempted to prepare monthly financial statements. The following information relates to August.

1. At August 31, the company owed its employees $800 in salaries that will be paid on September 1.
2. On August 1, the company borrowed $30,000 from a local bank on a 1-year note payable. The annual interest rate is 10%. Interest will be paid with the note at maturity.
3. Revenue for services performed but unrecorded for August totaled $1,100.

Prepare the adjusting entries needed at August 31, 2025.

ACTION PLAN

- **Make adjusting entries at the end of the period to recognize revenue for services performed and for expenses incurred.**
- **Don't forget to make adjusting entries for accruals. Adjusting entries for accruals will increase both a balance sheet and an income statement account.**

Solution

1. Salaries and Wages Expense	800	
Salaries and Wages Payable		800
(To record accrued salaries)		
2. Interest Expense	250	
Interest Payable		250
(To record accrued interest: $\$30,000 \times 10\% \times \frac{1}{12} = \$250$)		
3. Accounts Receivable	1,100	
Service Revenue		1,100
(To record revenue for services performed)		

Related exercise material: BE4.10, BE4.11, DO IT! 4.3, E4.9, E4.10, E4.11, E4.12, E4.13, E4.14, E4.16, E4.17, E4.18, E4.19, and E4.20.

4.4 The Adjusted Trial Balance and Closing Entries

LEARNING OBJECTIVE 4

Prepare an adjusted trial balance and closing entries.

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**.

- The adjusted trial balance 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 now 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

ANALYZE | JOURNALIZE | POST | TRIAL BALANCE | ADJUSTING ENTRIES | **Adjusted trial balance** | PREPARE FINANCIAL STATEMENTS | JOURNALIZE AND POST CLOSING ENTRIES | PREPARE A POST-CLOSING TRIAL BALANCE

Illustration 4.27 presents the adjusted trial balance for Sierra Corporation prepared from the ledger accounts in Illustration 4.26. The amounts affected by the adjusting entries are highlighted in red.

ILLUSTRATION 4.27
Adjusted trial balance

Sierra Corporation
Adjusted Trial Balance
October 31, 2025

	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
Common Stock		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

ANALYZE | JOURNALIZE | POST | TRIAL BALANCE | ADJUSTING ENTRIES | ADJUSTED TRIAL BALANCE | **Prepare financial statements** | JOURNALIZE AND POST CLOSING ENTRIES | PREPARE A POST-CLOSING TRIAL BALANCE

Companies can prepare financial statements directly from an adjusted trial balance. Illustrations 4.28 and 4.29 present the relationships between the data in the adjusted trial balance of Sierra Corporation and the corresponding financial statements.

ILLUSTRATION 4.28 **Preparation of the income statement and retained earnings statement from the adjusted trial balance**

Sierra Corporation
Adjusted Trial Balance
October 31, 2025

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
Interest Payable		50
Unearned Service Revenue		800
Salaries and Wages Payable		1,200
Common Stock		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

Sierra Corporation
Income Statement
For the Month Ended October 31, 2025

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

Sierra Corporation
Retained Earnings Statement
For the Month Ended October 31, 2025

Retained earnings, October 1	$ 0
Add: Net income	2,860
	2,860
Less: Dividends	500
Retained earnings, October 31	$ 2,360

To balance sheet

As Illustration 4.28 shows, companies prepare the income statement from the revenue and expense accounts. Similarly, they derive the retained earnings statement from the Retained Earnings account, Dividends account, and the net income (or net loss) shown in the income statement.

As Illustration 4.29 shows, companies then prepare the balance sheet from the asset, liability, and stockholders' equity accounts. They obtain the amount reported for retained earnings on the balance sheet from the ending balance in the retained earnings statement.

Quality of Earnings

Companies and employees are continually under pressure to "make the numbers"—that is, to have earnings that are in line with investor expectations. Therefore, it is not surprising that many companies practice earnings management.

ILLUSTRATION 4.29 **Preparation of the balance sheet from the adjusted trial balance**

Sierra Corporation
Adjusted Trial Balance
October 31, 2025

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
Interest Payable		50
Unearned Service Revenue		800
Salaries and Wages Payable		1,200
Common Stock		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

Sierra Corporation
Balance Sheet
October 31, 2025

Assets		
Cash		$15,200
Accounts receivable		200
Supplies		1,000
Prepaid insurance		550
Equipment	$5,000	
Less: Accumulated depreciation—equipment	40	4,960
Total assets		$21,910
Liabilities and Stockholders' Equity		
Liabilities		
Notes payable	$ 5,000	
Accounts payable	2,500	
Salaries and wages payable	1,200	
Unearned service revenue	800	
Interest payable	50	
Total liabilities		$ 9,550
Stockholders' equity		
Common stock	10,000	
Retained earnings	2,360	
Total stockholders' equity		12,360
Total liabilities and stockholders' equity		$21,910

Balance at Oct. 31 from retained earnings statement in Illustration 4.28

- Earnings management is the planned timing of revenues, expenses, gains, and losses to reduce volatility in reported net income.
- The quality of earnings is greatly affected when a company manages earnings up or down to meet some targeted earnings number.
- A company that has a high quality of earnings provides full and transparent information that will not confuse or mislead financial statement users.
- A company with questionable quality of earnings may mislead investors and creditors, who believe they are relying on relevant information that provides a faithful representation of the company. As a result, investors and creditors lose confidence in financial reporting, and it becomes difficult for our capital markets to work efficiently.

Companies manage earnings in a variety of ways. One way is through the use of **one-time items** to prop up earnings numbers. For example, ConAgra Foods recorded a non-recurring gain from the sale of Pilgrim's Pride stock for $186 million to help meet an earnings projection for the quarter.

Another way is to **inflate revenue** numbers in the short-run to the detriment of the long-run. For example, Bristol-Myers Squibb provided sales incentives to its wholesalers to encourage them to buy products at the end of the quarter (often referred to as channel-stuffing). This practice allowed Bristol-Myers to meet its sales projections. The problem was that the wholesalers could not sell that amount of merchandise and ended up returning it to Bristol-Myers. The result was that Bristol-Myers had to restate its income numbers.

Companies also manage earnings through **improper adjusting entries**. Regulators investigated Xerox for accusations that it was booking too much revenue upfront on multi-year contract sales. Financial executives at Office Max resigned amid accusations that the company was recognizing rebates from its vendors too early and therefore overstating revenue. Finally, WorldCom's abuse of adjusting entries to meet its net income targets is unsurpassed. It used adjusting entries to increase net income by reclassifying liabilities as revenue and reclassifying expenses as assets. Investigations of the company's books after it went bankrupt

ACTION PLAN

- **In an adjusted trial balance, all asset, liability, revenue, and expense accounts are properly stated.**
- **To determine the ending balance in Retained Earnings, add net income and subtract dividends.**

DO IT! 4a | Trial Balance

Skolnick Co. was organized on April 1, 2025. The company prepares quarterly financial statements. The adjusted trial balance amounts at June 30 are shown below.

	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	Common Stock	14,000
Rent Expense	1,500	Retained Earnings	0
Depreciation Expense	850	Service Revenue	14,200
Supplies Expense	200	Rent Revenue	800
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, 2025, for Skolnick Co.

c. Determine the balance in Retained Earnings at June 30, 2025.

Solution

a. The net income is determined by adding revenues and subtracting expenses. The net income is computed as follows.

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.

Assets			Liabilities	
Cash		$ 6,700	Notes payable	$5,000
Accounts receivable		600	Accounts payable	1,510
Supplies		1,000	Unearned rent revenue	500
Prepaid rent		900	Salaries and wages payable	400
Equipment	$15,000		Interest payable	50
Less: Accumulated depreciation—equipment	850	14,150		
Total assets		$23,350	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: BE4.13, BE4.14, BE4.15, DO IT! 4.4a, and E4.26.

Closing the Books

Previously, you learned that revenue and expense accounts and the Dividends account are subdivisions of retained earnings, which is reported in the stockholders' equity section of the balance sheet.

- Because revenues, expenses, and dividends relate only to a given accounting period, they are considered **temporary accounts**.
- In contrast, all balance sheet accounts are considered **permanent accounts** because their balances are carried forward into future accounting periods (see **Alternative Terminology**).

Illustration 4.30 identifies the accounts in each category.

ALTERNATIVE TERMINOLOGY

Temporary accounts are sometimes called *nominal accounts*, and permanent accounts are sometimes called *real accounts*.

Temporary	Permanent
All revenue accounts All expense accounts Dividends	All asset accounts All liability accounts Stockholders' equity accounts

ILLUSTRATION 4.30

Temporary versus permanent accounts

Preparing Closing Entries

ANALYZE | JOURNALIZE | POST | TRIAL BALANCE | ADJUSTING ENTRIES | ADJUSTED TRIAL BALANCE | PREPARE FINANCIAL STATEMENTS | **Journalize and post closing entries** | PREPARE A POST-CLOSING TRIAL BALANCE

At the end of the accounting period, companies transfer the temporary account balances to the permanent stockholders' equity account—Retained Earnings—through the preparation of closing entries.

- **Closing entries** transfer net income (or net loss) and dividends to Retained Earnings, so the balance in Retained Earnings agrees with the retained earnings statement. For example, in the adjusted trial balance in Illustration 4.27, Retained Earnings has a balance of zero.
- Prior to the closing entries, the balance in Retained Earnings is its beginning-of-the-period balance. (For Sierra Corporation, this is zero because it is the company's first month of operations.)

In addition to updating Retained Earnings to its correct ending balance, closing entries produce a **zero balance in each temporary account**. As a result, these accounts are ready to accumulate data about revenues, expenses, and dividends that occur in the next accounting period. **Permanent accounts are not closed.**

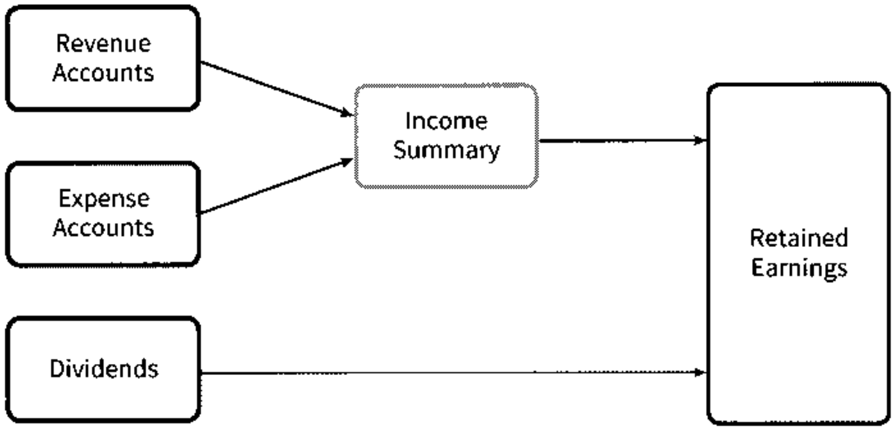
One approach to the closing process is to close each income statement account directly to Retained Earnings. However, to do so results in excessive detail in the Retained Earnings account.

- Instead, we close the revenue and expense accounts to a temporary account, **Income Summary**.
- The balance in Income Summary is the net income or loss for the accounting period.
- Income Summary is then closed, which transfers the net income or net loss from this account to Retained Earnings.

Illustration 4.31 depicts the closing process.

ILLUSTRATION 4.31

The closing process



Many companies have begun to employ **robotic process automation (RPA)** to improve their closing process. RPA involves the use of computer programs, instead of humans, to perform repetitive rules-based tasks. We will discuss other applications of RPA in later chapters.

Illustration 4.32 shows the closing entries for Sierra Corporation (see **Helpful Hint**). **Illustration 4.33** diagrams the posting process for Sierra's closing entries.

ILLUSTRATION 4.32

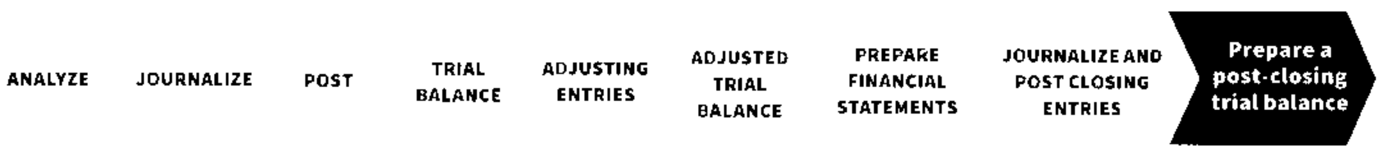
Closing entries journalized

> **HELPFUL HINT**
> **Income Summary is a very descriptive title: Companies close total revenues to Income Summary and total expenses to Income Summary. The balance in Income Summary in this case is net income of $2,860.**

General Journal

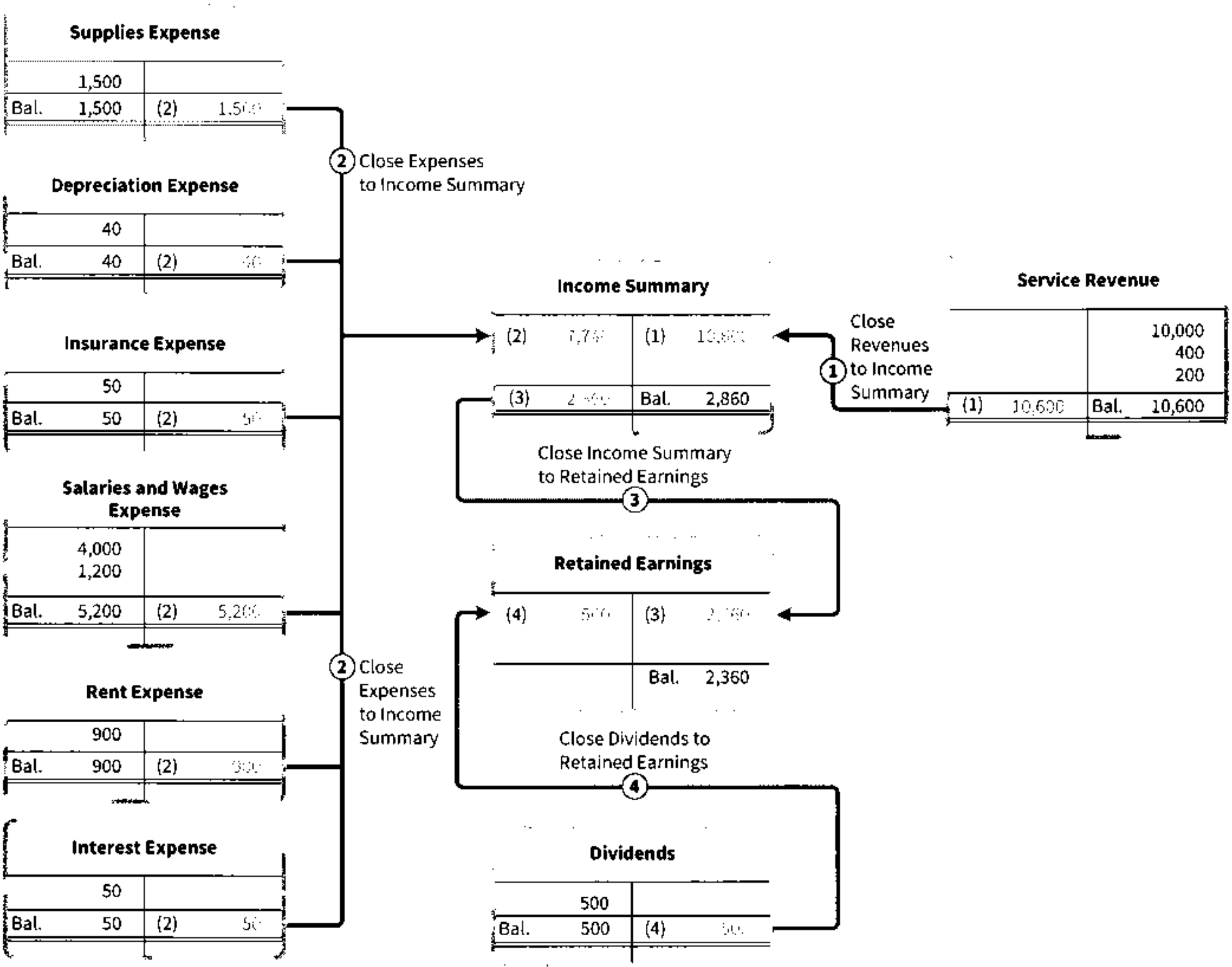
Date	Account Titles and Explanation	Debit	Credit
	Closing Entries		
2025	(1)		
Oct. 31	Service Revenue	10,600	
	Income Summary		10,600
	(To close revenue account)		
	(2)		
31	Income Summary	7,740	
	Salaries and Wages Expense		5,200
	Supplies Expense		1,500
	Rent Expense		900
	Insurance Expense		50
	Interest Expense		50
	Depreciation Expense		40
	(To close expense accounts)		
	(3)		
31	Income Summary	2,860	
	Retained Earnings		2,860
	(To close net income to retained earnings)		
	(4)		
31	Retained Earnings	500	
	Dividends		500
	(To close dividends to retained earnings)		

Preparing a Post-Closing Trial Balance



After a company journalizes and posts all closing entries, it prepares another trial balance, called a **post-closing trial balance**, from the ledger.

ILLUSTRATION 4.33 **Posting of closing entries**



- A post-closing trial balance is a list of all permanent accounts and their balances after closing entries are journalized and posted.
- The purpose of this trial balance is to prove the equality of the total debit balances and total credit balances of the permanent account balances that the company carries forward into the next accounting period.
- Since all temporary accounts will have zero balances, the post-closing trial balance will contain only permanent—balance sheet—accounts.

Illustration 4.34 shows the post-closing trial balance for Sierra Corporation.

ILLUSTRATION 4.34

Post-closing trial balance

Sierra Corporation
Post-Closing Trial Balance
October 31, 2025

	Debit	Credit
Cash	$15,200	
Accounts Receivable	200	
Supplies	1,000	
Prepaid Insurance	550	
Equipment	5,000	

ILLUSTRATION 4.34
(continued)

	Debit	Credit
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
Common Stock		10,000
Retained Earnings		2,360
	$21,950	$21,950

HELPFUL HINT

Some companies reverse certain adjusting entries at the beginning of a new accounting period. The company makes a reversing entry at the beginning of the next accounting period. This entry is the exact opposite of the adjusting entry made in the previous period.

Summary of the Accounting Cycle

Illustration 4.35 shows the required 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. Companies perform the steps in the cycle in sequence and repeat them in each accounting period.

- 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 (see Helpful Hint).
- 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.

Keeping an Eye on Cash

In this chapter, you learned that adjusting entries are used to adjust numbers that would otherwise be stated on a cash basis. Sierra Corporation's income statement (Illustration 4.28) shows net income of $2,860. The statement of cash flows reports a form of cash-basis income referred to as "Net cash provided by operating activities." For example, Illustration 1.9 which shows a statement of cash flows, reports net cash provided by operating activities of $5,700 for Sierra. Net income and net cash provided by operating activities often differ. The difference for Sierra is $2,840 ($5,700 – $2,860). The following summary shows the causes of this difference of $2,840.

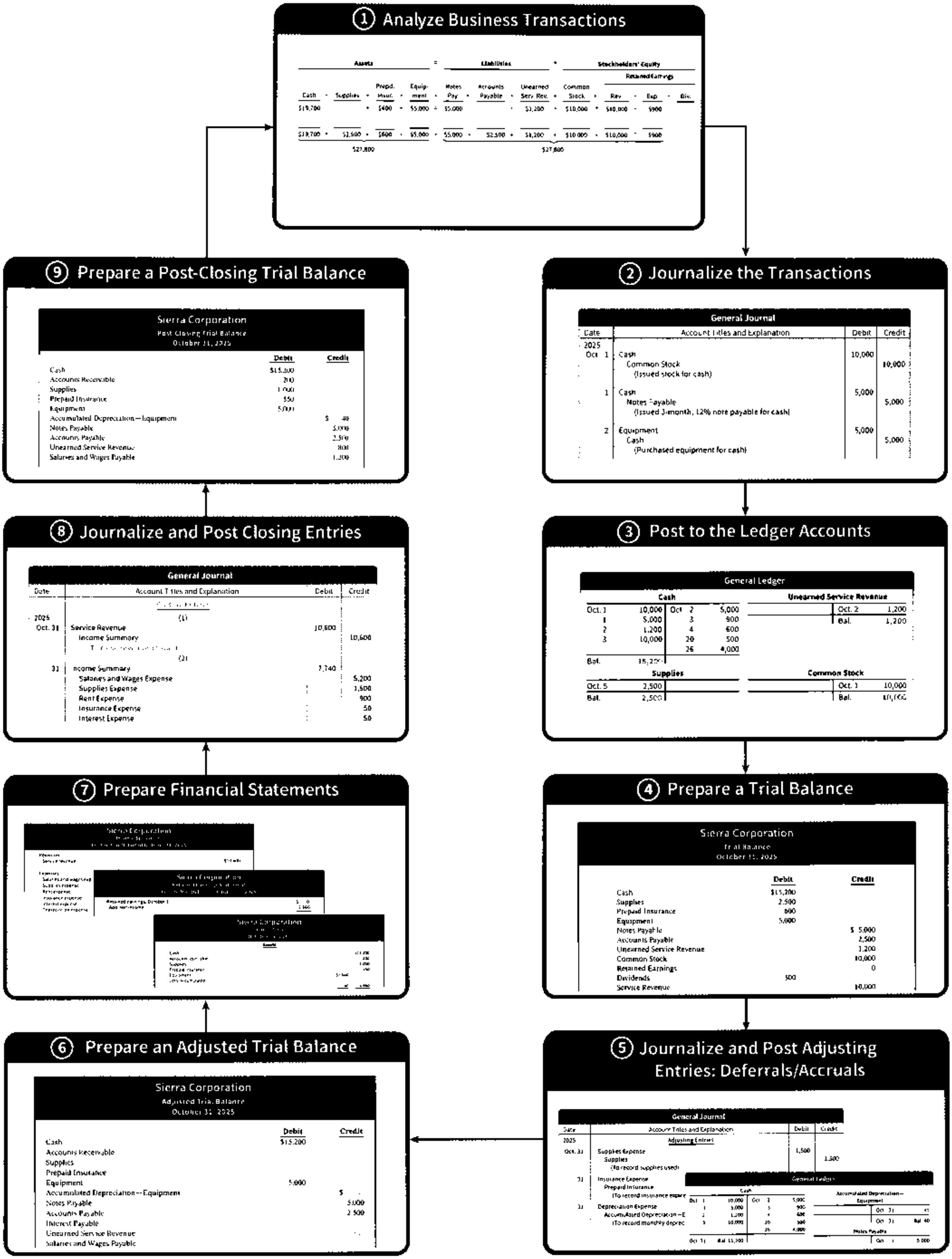
	Computation of Net Cash Provided by Operating Activities	Computation of Net Income
(1) Cash received in advance from customer	$ 1,200	$ 0
(2) Cash received from customers for services performed	10,000	10,000
(3) Services performed for cash received previously in (1)	0	400
(4) Services performed on account	0	200
(5) Payment of rent	(900)	(900)
(6) Purchase of insurance	(600)	0
(7) Payment of employee salaries	(4,000)	(4,000)
(8) Use of supplies	0	(1,500)
(9) Use of insurance	0	(50)
(10) Depreciation	0	(40)
(11) Interest cost incurred, but not paid	0	(50)
(12) Salaries incurred, but not paid	0	(1,200)
	$ 5,700	$ 2,860

For each item included in the computation of net cash provided by operating activities, confirm that cash was either received or paid. For each item in the income statement, confirm that revenue should be recorded because a performance obligation has been satisfied (even when cash was not received) or that an expense was incurred (even when cash was not paid).

The Accounting Cycle

ILLUSTRATION 4.35

Required steps in the accounting cycle



ACTION PLAN

- **Close revenue and expense accounts to Income Summary.**
- **Close Income Summary to Retained Earnings.**
- **Close Dividends to Retained Earnings.**

DO IT! 4b Closing Entries

Hancock Company has the following balances in selected accounts of its adjusted trial balance.

Accounts Payable	$27,000	Dividends	$15,000
Service Revenue	98,000	Retained Earnings	42,000
Rent Expense	22,000	Accounts Receivable	38,000
Salaries and Wages Expense	51,000	Supplies Expense	7,000

Prepare the closing entries at December 31.

Solution

Dec. 31	Service Revenue	98,000	
	Income Summary		98,000
	(To close revenue account to Income Summary)		
31	Income Summary	80,000	
	Salaries and Wages Expense		51,000
	Rent Expense		22,000
	Supplies Expense		7,000
	(To close expense accounts to Income Summary)		
31	Income Summary ($98,000 – $80,000)	18,000	
	Retained Earnings		18,000
	(To close net income to retained earnings)		
Dec. 31	Retained Earnings	15,000	
	Dividends		15,000
	(To close dividends to retained earnings)		

Related exercise material: BE4.16, BE4.17, DO IT! 4.4b, E4.22, E4.23, E4.24, and E4.27.

USING THE DECISION TOOLS Groupon, Inc.

Groupon, Inc. operates online marketplaces that provide goods and services at discounted prices worldwide. Headquartered in Chicago, Illinois, it has over 11,843 employees. Suppose that the information shown in the following trial balance was taken from Groupon's 2025 financial records.

Groupon, Inc.
Adjusted Trial Balance
December 31, 2025
(in millions)

Account	Dr.	Cr.
Cash	$1,072	
Accounts Receivable	105	
Other Current Assets	224	
Equipment	377	
Accumulated Depreciation—Equipment		$ 195
Stock Investments (noncurrent)	24	
Goodwill	619	
Accounts and Other Payables		932
Accrued Expenses Payable		230
Other Current Liabilities		163
Notes Payable (noncurrent)		137
Common Stock		1,687
Dividends	0	
Retained Earnings	849	
Revenues		3,181
Cost of Goods Sold	1,643	

Groupon, Inc.
Adjusted Trial Balance
December 31, 2025
(in millions)

Account	Dr.	Cr.
Selling and Administrative Expenses	1,294	
Marketing Expense	269	
Other Expense	33	
Income Tax Expense	16	
	$6,525	$6,525

Instructions

From the trial balance, prepare an income statement, retained earnings statement, and classified balance sheet. **Be sure to prepare them in that order since each statement depends on information determined in the preceding statement.** (*Hint:* Because Groupon has experienced losses, it has a debit balance in Retained Earnings. In its financial statements, Groupon reports an Accumulated Deficit rather than Retained Earnings. Remember that the amount of Retained Earnings reported in the trial balance represents the balance at the beginning of the year.)

Solution

Groupon, Inc.
Income Statement
For the Year Ended December 31, 2025
(in millions)

Revenues		$3,181
Cost of goods sold	$1,643	
Selling and administrative expenses	1,294	
Marketing expense	269	
Other expense	33	
Income tax expense	16	3,255
Net loss		$ (74)

Groupon, Inc.
Retained Earnings Statement
For the Year Ended December 31, 2025
(in millions)

Beginning accumulated deficit	$(849)
Less: Net loss	74
Less: Dividends	0
Ending accumulated deficit	$(923)

Groupon, Inc.
Balance Sheet
December 31, 2025
(in millions)

Assets

Current assets		
Cash	$1,072	
Accounts receivable	105	
Other current assets	224	
Total current assets		$1,401
Long-term investments		
Stock investments		24

Property, plant, and equipment		
Equipment	377	
Accumulated depreciation—equipment	195	182
Intangible assets		
Goodwill		619
Total assets		$2,226
Liabilities and Stockholders' Equity		
Liabilities		
Current liabilities		
Accounts and other payables	$ 932	
Accrued expenses payable	230	
Other current liabilities	163	
Total current liabilities		$1,325
Long-term liabilities		
Notes payable		137
Total liabilities		1,462
Stockholders' equity		
Common stock	1,687	
Accumulated deficit	(923)	
Total stockholders' equity		764
Total liabilities and stockholders' equity		$2,226

Appendix 4A Using a Worksheet

LEARNING OBJECTIVE *5

Describe the purpose and the basic form of a worksheet.

We have used T-accounts and trial balances to arrive at the amounts used to prepare financial statements. Accountants, however, frequently use a spreadsheet known as a worksheet to determine these amounts. A **worksheet** is a multiple-column spreadsheet that may be used in the adjustment process and in preparing financial statements. As its name suggests, the worksheet is a working tool for the accountant.

- **A worksheet is not a permanent accounting record**; it is neither a journal nor a part of the general ledger.
- The worksheet is merely a supplemental spreadsheet used to make it easier to prepare adjusting entries and the financial statements.

Illustration 4A.1 shows the basic form and procedures for preparing a worksheet. Note the headings. The worksheet starts with two columns for the Trial Balance. The next two columns record all Adjustments. Next is the Adjusted Trial Balance. The last two sets of columns correspond to the Income Statement and the Balance Sheet. All items listed in the Adjusted Trial Balance columns are included in either the Income Statement or the Balance Sheet columns.

ILLUSTRATION 4A.1 **Form and procedure for a worksheet**

	A	B	C	D	E	F	G	H	I	J	K
1					**Sierra Corporation** **Worksheet** **For the Month Ended October 31, 2025**						
2		**Trial Balance**		**Adjustments**		**Adjusted Trial Balance**		**Income Statement**		**Balance Sheet**	
3	**Account Titles**	**Dr.**	**Cr.**	**Dr.**	**Cr.**	**Dr.**	**Cr.**	**Dr.**	**Cr.**	**Dr.**	**Cr.**
4	Cash	15,200				15,200				15,200	
5	Supplies	2,500			(a) 1,500	1,000				1,000	
6	Prepaid Insurance	600			(b) 50	550				550	
7	Equipment	5,000				5,000				5,000	
8	Notes Payable		5,000				5,000				5,000
9	Accounts Payable		2,500				2,500				2,500
10	Unearned Service Revenue		1,200	(d) 400			800				800
11	Common Stock		10,000				10,000				10,000
12	Retained Earnings		-0-				-0-				-0-
13	Dividends	500				500				500	
14	Service Revenue		10,000		(d) 400		10,600		10,600		
15					(e) 200						
16	Salaries and Wages Expense	4,000		(g) 1,200		5,200		5,200			
17	Rent Expense	900				900		900			
18	Totals	28,700	28,700								
19											
20	Supplies Expense			(a) 1,500		1,500		1,500			
21	Insurance Expense			(b) 50		50		50			
22	Accum. Depreciation—										
23	Equipment				(c) 40		40				40
24	Depreciation Expense			(c) 40		40		40			
25	Interest Expense			(f) 50		50		50			
26	Accounts Receivable			(e) 200		200				200	
27	Interest Payable				(f) 50		50				50
28	Salaries and Wages Payable				(g) 1,200		1,200				1,200
29	Totals			3,440	3,440	30,190	30,190	7,740	10,600	22,450	19,590
30											
31	Net Income							2,860			2,860
32	Totals							10,600	10,600	22,450	22,450
33											

Sheet1

1. Prepare a trial balance on the worksheet
2. Enter adjustment data
3. Enter adjusted balances
4. Extend adjusted balances to appropriate statement columns
5. Total the statement columns, compute net income (or net loss), and complete worksheet

Review and Practice

Learning Objectives Review

1 Explain the accrual basis of accounting and the reasons for adjusting entries.

The revenue recognition principle dictates that companies recognize revenue when a performance obligation has been satisfied. The expense recognition principle dictates that companies recognize expenses in the period when the company makes efforts to generate those revenues.

Under the cash basis, companies record events only in the periods in which the company receives or pays cash. Accrual-based accounting means that companies record, in the periods in which the events occur, events that change a company's financial statements even if cash has not been exchanged.

Companies make adjusting entries at the end of an accounting period. These entries ensure that companies record revenues in the period in which the performance obligation is satisfied and that companies recognize expenses in the period in which they are incurred. The major types of adjusting entries are prepaid expenses, unearned revenues, accrued revenues, and accrued expenses.

2 Prepare adjusting entries for deferrals.

Deferrals are either prepaid expenses or unearned revenues. Companies make adjusting entries for deferrals at the statement date to record the portion of the deferred item that represents the expense incurred or the revenue for services performed in the current accounting period.

3 Prepare adjusting entries for accruals.

Accruals are either accrued revenues or accrued expenses. Adjusting entries for accruals record revenues for services performed and expenses incurred in the current accounting period that have not been recognized through daily entries.

4 Prepare an adjusted trial balance and closing entries.

An adjusted trial balance is a trial balance that shows the balances of all accounts, including those that have been adjusted, at the end of an accounting period. The purpose of an adjusted trial balance is to show the effects of all financial events that have occurred during the accounting period.

One purpose of closing entries is to transfer net income or net loss for the period to Retained Earnings. A second purpose is to "zero-out" all temporary accounts (revenue accounts, expense accounts, and Dividends) so that they start each new period with a zero balance. To accomplish this, companies "close" all temporary accounts at the end of an accounting period. They 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.

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 Describe the purpose and the basic form of a worksheet.

The worksheet is a spreadsheet to make it easier to prepare adjusting entries and the financial statements. Companies often prepare a worksheet using a computer spreadsheet. The sets of columns of the worksheet are, from left to right, the unadjusted trial balance, adjustments, adjusted trial balance, income statement, and balance sheet.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
At what point should the company record revenue?	Need to understand the nature of the company's business	Record revenue in the period in which the performance obligation is satisfied.	Recognizing revenue too early overstates current period revenue; recognizing it too late understates current period revenue.
At what point should the company record expenses?	Need to understand the nature of the company's business	Expenses should "follow" revenues—that is, match the effort (expense) with the result (revenue).	Recognizing expenses too early overstates current period expense; recognizing them too late understates current period expense.

Glossary Review

Accrual-basis accounting Accounting basis in which companies record, in the periods in which the events occur, transactions that change a company's financial statements, even if cash was not exchanged. (p. 4-5).

Accruals Expenses or revenues that are recognized at a date earlier than the point when cash is exchanged. (p. 4-15).

Accrued expenses Expenses incurred but not yet paid in cash or recorded. (p. 4-17).

Accrued revenues Revenues for services performed but not yet received in cash or recorded. (p. 4-15).

Adjusted trial balance A list of accounts and their balances after all adjustments have been made. (p. 4-23).

Adjusting entries Entries made at the end of an accounting period to ensure that the revenue recognition and expense recognition principles are followed. (p. 4-6).

Book value The difference between the cost of a depreciable asset and its related accumulated depreciation. (p. 4-12).

Cash-basis accounting Accounting basis in which a company records revenue only when it receives cash and an expense only when it pays cash. (p. 4-5).

Closing entries Entries at the end of an accounting period to transfer the balances of temporary accounts to a permanent stockholders' equity account, Retained Earnings. (p. 4-27).

Contra asset account An account that is offset against an asset account on the balance sheet. (p. 4-10).

Deferrals Expenses or revenues that are recognized at a date later than the point when cash was originally exchanged. (p. 4-7).

Depreciation The process of allocating the cost of an asset to expense over its useful life. (p. 4-10).

Earnings management The planned timing of revenues, expenses, gains, and losses to reduce volatility in reported net income. (p. 4-25).

Expense recognition principle The principle that dictates that efforts (expenses) be recognized with results (revenues) in the period when the company makes efforts to generate those revenues. (p. 4-4).

Fiscal year An accounting period that is one year long. (p. 4-2, in margin).

Income Summary A temporary account used in closing revenue and expense accounts. (p. 4-27).

Periodicity assumption An assumption that the economic life of a business can be divided into artificial time periods. (p. 4-2).

Permanent accounts Balance sheet accounts whose balances are carried forward to the next accounting period. (p. 4-27).

Post-closing trial balance A list of permanent accounts and their balances after a company has journalized and posted closing entries. (p. 4-28).

Prepaid expenses (prepayments) Expenses paid in cash before they are used or consumed. (p. 4-7).

Quality of earnings Indicates the level of full and transparent information that a company provides to users of its financial statements. (p. 4-25).

Revenue recognition principle The principle that companies recognize revenue in the accounting period in which the performance obligation is satisfied. (p. 4-3).

Reversing entry An entry made at the beginning of the next accounting period; the exact opposite of the adjusting entry made in the previous period. (p. 4-30, in margin).

Temporary accounts Revenue, expense, and dividend accounts whose balances a company transfers to Retained Earnings at the end of an accounting period. (p. 4-27).

Unearned revenues Cash received and a liability recorded before services are performed. (p. 4-12).

Useful life The length of service of a productive asset. (p. 4-10).

***Worksheet** A multiple-column form that companies may use in the adjustment process and in preparing financial statements. (p. 4-34).

Practice Multiple-Choice Questions

1. **(LO 1)** What is the periodicity assumption?
   - **a.** Companies should recognize revenue in the accounting period in which services are performed.
   - **b.** Companies should match expenses 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.

2. **(LO 1)** Which principle dictates that efforts (expenses) be recorded with accomplishments (revenues)?
   - **a.** Expense recognition principle.
   - **b.** Historical cost principle.
   - **c.** Periodicity principle.
   - **d.** Revenue recognition principle.

3. **(LO 1)** What are the first step and the final step in the revenue recognition process?
   - **a.** The first step is identify the contract with customers, and the final step is allocate the transaction price to the separate performance obligations.
   - **b.** The first step is identify the separate performance obligations in the contract, and the final step is determine the transaction price.
   - **c.** The first step is identify the contract with customers, and the final step is recognize revenue when each performance obligation is satisfied.
   - **d.** The first step is determine the transaction price, and the final step is identify the separate performance obligations in the contract.

4. **(LO 1)** Which one of these statements about the accrual basis of accounting is **false**?
   - **a.** Companies record events that change their financial statements in the period in which events occur, even if cash was not exchanged.
   - **b.** Companies recognize revenue in the period in which the performance obligation is satisfied.
   - **c.** This basis is in accordance with generally accepted accounting principles.
   - **d.** Companies record revenue only when they receive cash and record expense only when they pay out cash.

5. (LO 1) 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 the performance obligation is satisfied.

   c. balance sheet and income statement accounts have correct balances at the end of an accounting period.

   d. All of the answer choices are correct.

6. (LO 2, 3) Each of the following is a major type (or category) of adjusting entry **except**:

   a. prepaid expenses.
   b. accrued revenues.
   c. accrued expenses.
   d. unearned expenses.

7. (LO 2) The trial balance shows Supplies $1,350 and Supplies Expense $0. If $600 of supplies are on hand at the end of the period, the adjusting entry is:

a.	Supplies	600	
	Supplies Expense		600
b.	Supplies	750	
	Supplies Expense		750
c.	Supplies Expense	750	
	Supplies		750
d.	Supplies Expense	600	
	Supplies		600

8. (LO 2) Adjustments for unearned revenues:

   a. decrease liabilities and increase revenues.
   b. increase liabilities and increase revenues.
   c. increase assets and increase revenues.
   d. decrease revenues and decrease assets.

9. (LO 2) Adjustments for prepaid expenses:

   a. decrease assets and increase revenues.
   b. decrease expenses and increase assets.
   c. decrease assets and increase expenses.
   d. decrease revenues and increase assets.

10. (LO 2) Queenan Company computes depreciation on delivery equipment at $1,000 for the month of June. The adjusting entry to record this depreciation is as follows:

a.	Depreciation Expense	1,000	
	Accumulated Depreciation—Queenan Company		1,000
b.	Depreciation Expense	1,000	
	Equipment		1,000
c.	Depreciation Expense	1,000	
	Accumulated Depreciation—Equipment		1,000
d.	Equipment Expense	1,000	
	Accumulated Depreciation—Equipment		1,000

11. (LO 3) Adjustments for accrued revenues:

   a. increase assets and increase liabilities.
   b. increase assets and increase revenues.
   c. decrease assets and decrease revenues.
   d. decrease liabilities and increase revenues.

12. (LO 3) Colleen Mooney earned a salary of $400 for the last week of September. She will be paid on October 1. The adjusting entry for Colleen'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

13. (LO 4) Which statement is **incorrect** concerning the adjusted trial balance?

   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 does not list temporary accounts.

   d. The company prepares the adjusted trial balance after it has journalized and posted the adjusting entries.

14. (LO 4) Which account will have a zero balance after a company has journalized and posted closing entries?

   a. Service Revenue.
   b. Supplies.
   c. Prepaid Insurance.
   d. Accumulated Depreciation.

15. (LO 4) Which types of accounts will appear in the post-closing trial balance?

   a. Permanent accounts.
   b. Temporary accounts.
   c. Expense accounts.
   d. None of the answer choices is correct.

16. (LO 4) All of the following are required steps in the accounting cycle **except**:

   a. journalizing and posting closing entries.
   b. preparing an adjusted trial balance.
   c. preparing a post-closing trial balance.
   d. prepare financial statements from the unadjusted trial balance.

Solutions

1. **c.** The periodicity assumption states that the economic life of a business can be divided into artificial time periods. The other choices are incorrect because (a) this statement describes the revenue recognition principle, (b) this statement describes the expense recognition principle, and (d) the periodicity assumption states that the life of a business can be divided into artificial time periods, not that the fiscal year and calendar year must coincide.

2. **a.** The expense recognition principle dictates that efforts (expenses) be recorded with accomplishments (revenues). The other choices are incorrect because (b) the historical cost principle states that when assets are purchased, they should be recorded at cost; (c) the periodicity assumption states that the life of a business can be divided into artificial time periods; and (d) the revenue recognition principle states that revenue should be recorded in the period in which the performance obligation is satisfied.

3. **c.** In the revenue recognition process, the first step is identify the contract with customers, and the final step is recognize revenue when each performance obligation is satisfied. The other choices are incorrect because the five steps in the process in order are (1) Identify the contract with customers, (2) identify the separate performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the separate performance obligations, and (5) recognize revenue when each performance obligation is satisfied.

4. **d.** If companies record revenue only when they receive cash and record expense only when they pay out cash, they are using the cash basis of accounting. The other choices are true statements about accrual-basis accounting.

5. **d.** Adjusting entries are made to ensure that expenses are recognized in the period in which they are incurred, that revenues are recorded in the period in which the performance obligation is satisfied, and that balance sheet and income statement accounts have correct balances at the end of an accounting period. Although choices (a), (b), and (c) are correct, choice (d) is the better answer.

6. **d.** Unearned expenses are not a major type of adjusting entry. Choices (a) prepaid expenses, (b) accrued revenues, and (c) accrued expenses are all a major type of adjusting entry.

7. **c.** The adjusting entry is to debit Supplies Expense for $750 ($1,350 − $600) and credit Supplies for $750. The other choices are therefore incorrect.

8. **a.** Adjustments for unearned revenues decrease liabilities and increase revenues. The other choices are therefore incorrect.

9. **c.** Adjustments for prepaid expenses decrease assets and increase expenses. The other choices are therefore incorrect.

10. **c.** The adjusting entry is to debit Depreciation Expense and credit Accumulation 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 the asset; and (d) the debit should be to Depreciation Expense, not Equipment Expense.

11. **b.** When the adjustment is made for accrued revenues, an asset account (usually Accounts Receivable) is increased and a revenue account is increased. The other choices are therefore incorrect.

12. **b.** The adjusting entry should be to debit Salaries and Wages Expense $400 and credit Salaries and Wages Payable for $400. Choice (a) is incorrect because if an adjusting entry is not made, the amount of money owed (liability) that is shown on the balance sheet will be understated and the amount of salaries and wages expense will also be understated. Choices (c) and (d) are incorrect because adjusting entries never affect cash.

13. **c.** The adjusted trial balance does list temporary accounts. The other choices are true statements about the adjusted trial balance.

14. **a.** Service Revenue will have a zero balance after a company has journalized and posted closing entries. The other choices are incorrect because (b) Supplies is an asset, or permanent account, and will not be closed at the end of the year; (c) Prepaid Insurance is an asset, or permanent account, and will not be closed at the end of the year; and (d) Accumulated Depreciation is a contra asset account. Contra asset accounts are permanent accounts and are not closed at the end of the year.

15. **a.** Permanent accounts are the only type of accounts that appear in the post-closing trial balance because they are not closed at the end of the accounting period. Choices (b) and (c) are temporary accounts. Choice (d) is wrong because there is a correct answer.

16. **d.** Financial statements are prepared from the **adjusted** trial balance, not the **un**adjusted trial balance. The other choices are incorrect because (a) journalizing and posting closing entries, (b) preparing an adjusted trial balance, and (c) preparing a post-closing trial balance are all required steps in the accounting cycle.

Practice Brief Exercises

1. **(LO 1)** The ledger of Dey Company includes the following accounts. Explain why each account may need adjustment.

Indicate why adjusting entries are needed.

a. Supplies.
b. Unearned Service Revenue.
c. Salaries and Wages Payable.
d. Interest Payable.

Solution

1. **a.** Supplies: to recognize supplies used during the period.
   b. Unearned Service Revenue: to record revenue for services performed.
   c. Salaries and Wages Payable: to recognize salaries and wages accrued to employees at the end of a reporting period.
   d. Interest Payable: to recognize interest accrued but unpaid on notes payable.

2. **(LO 2)** At the end of its first year, the trial balance of Denton Company shows Equipment of $40,000 and zero balances in Accumulated Depreciation—Equipment and Depreciation Expense. Depreciation for the year is estimated to be $8,000. For Denton, (a) prepare the adjusting entry for depreciation at December 31, (b) post the adjustments to T-accounts, and (c) indicate the balance sheet presentation of the equipment at December 31.

Prepare adjusting entry for depreciation.

Solution

2. **a.** Dec. 31	Depreciation Expense	8,000	
	Accumulated Depreciation—Equipment		8,000

b.

Depreciation Expense		Accum. Depreciation—Equipment	
12/31 8,000			12/31 8,000

c.

Equipment	$40,000	
Less: Accumulated Depreciation—Equipment	8,000	$32,000

Prepare adjusting entries for accruals.

3. (LO 3) You are asked to prepare the following accrual adjusting entries at December 31.

1. Services performed but not recorded are $4,200.
2. Utility expenses incurred but not paid are $660.
3. Salaries and wages earned by employees of $3,000 are unpaid.

Use the following account titles: Accounts Payable, Accounts Receivable, Service Revenue, Salaries and Wages Expense, Salaries and Wages Payable, and Utility Expense.

Solution

3.	Dec. 31	Accounts Receivable	4,200	
		Service Revenue		4,200
	31	Utility Expense	660	
		Accounts Payable		660
	31	Salaries and Wage Expense	3,000	
		Salaries and Wages Payable		3,000

Analyze accounts in an unadjusted trial balance.

4. (LO 1, 2, 3) The trial balance for Blair Company includes the following balance sheet accounts. Identify the accounts that 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
Supplies	Unearned Service Revenue
Prepaid Insurance	

Solution

4.

Account	Type of Adjustment	Related Account
Accounts Receivable	Accrued Revenue	Service Revenue
Supplies	Prepaid Expense	Supplies Expense
Prepaid Insurance	Prepaid Expense	Insurance Expense
Interest Payable	Accrued Expense	Interest Expense
Unearned Service Revenue	Unearned Revenue	Service Revenue

Prepare an income statement from an adjusted trial balance.

5. (LO 4) The adjusted trial balance of Harmony Company includes the following accounts at December 31, 2025: Cash $12,000, Retained Earnings $22,000, Dividends $3,000, Service Revenue $41,000, Rent Expense $900, Salaries and Wages Expense $6,000, Supplies Expense $700, and Depreciation Expense $1,800. Prepare an income statement for the year.

Solution

5.

Harmony Company
Income Statement
For the Year Ended December 31, 2025

Revenues		
Service revenue		$41,000
Expenses		
Salaries and wages expense	$6,000	
Rent expense	900	
Depreciation expense	1,800	
Supplies expense	700	
Total expenses		9,400
Net income		$31,600

6. **(LO 4)** The ledger of Quintana Company contains the following balances: Retained Earnings $40,000, Dividends $3,000, Service Revenue $65,000, Salaries and Wages Expense $39,000, and Maintenance and Repairs Expense $9,000. Prepare the closing entries at December 31.

Prepare closing entries from ledger balances.

Solution

6. Dec. 31	Service Revenue	65,000	
	Income Summary		65,000
31	Income Summary	48,000	
	Salaries and Wages Expense		39,000
	Maintenance and Repairs Expense		9,000
31	Income Summary	17,000	
	Retained Earnings		17,000
31	Retained Earnings	3,000	
	Dividends		3,000

Practice Exercises

1. **(LO 2, 3)** The income statement of Bragg Co. for the month of July shows net income of $1,400 based on Service Revenue $5,500, Salaries and Wages Expense $2,300, Supplies Expense $1,200, and Utilities Expense $600. In reviewing the statement, you discover the following.

Prepare correct income statement.

1. Insurance expired during July of $450 was omitted.
2. Supplies expense includes $300 of supplies that are still on hand at July 31.
3. Depreciation on equipment of $180 was omitted.
4. Unpaid salaries and wages at July 31 of $400 were not included.
5. Services performed but unrecorded totaled $600.

Instructions

Prepare a correct income statement for July 2025.

Solution

1.

Bragg Co.
Income Statement
For the Month Ended July 31, 2025

Revenues		
Service revenue ($5,500 + $600)		$6,100
Expenses		
Salaries and wages expense ($2,300 + $400)	$2,700	
Supplies expense ($1,200 − $300)	900	
Utilities expense	600	
Insurance expense	450	
Depreciation expense	180	
Total expenses		4,830
Net income		$1,270

2. **(LO 4)** Arapaho Company ended its fiscal year on July 31, 2025. The company's adjusted trial balance as of the end of its fiscal year is as follows.

Journalize and post closing entries, and prepare a post-closing trial balance.

Arapaho Company
Adjusted Trial Balance
July 31, 2025

Account Titles	Debit	Credit
Cash	$ 15,940	
Accounts Receivable	8,580	
Equipment	16,900	

Account Titles	Debit	Credit
Accumulated Depreciation—Equipment		$ 7,500
Accounts Payable		4,420
Unearned Rent Revenue		1,600
Common Stock		20,500
Retained Earnings		25,000
Dividends	14,000	
Service Revenue		64,000
Rent Revenue		5,500
Depreciation Expense	4,500	
Salaries and Wages Expense	54,700	
Utilities Expense	13,900	
	$128,520	$128,520

Instructions

a. Prepare the closing entries.

b. Post to Retained Earnings and Income Summary T-accounts.

c. Prepare a post-closing trial balance at July 31, 2025.

Solution

2. a.

Date	Account Titles and Explanation	Debit	Credit
July 31	Service Revenue	64,000	
	Rent Revenue	5,500	
	Income Summary		69,500
	(To close revenue accounts)		
31	Income Summary	73,100	
	Depreciation Expense		4,500
	Salaries and Wages Expense		54,700
	Utilities Expense		13,900
	(To close expense accounts)		
31	Retained Earnings ($73,100 – $69,500)	3,600	
	Income Summary		3,600
	(To close net loss to retained earnings)		
31	Retained Earnings	14,000	
	Dividends		14,000
	(To close dividends to retained earnings)		

b.

Retained Earnings

Debit	Credit
	Bal. 25,000
3,600	
14,000	
	Bal. 7,400

Income Summary

Debit	Credit
	69,500
73,100	
	3,600
	Bal. 0

c.

Arapaho Company
Post-Closing Trial Balance
July 31, 2025

	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
Common Stock		20,500
Retained Earnings		7,400
	$41,420	$41,420

Practice Problem

Prepare adjusting entries from selected data.

(LO 2, 3) Terry Thomas and a group of investors incorporated the Green Thumb Lawn Care Corporation on April 1. At April 30, the trial balance shows the following balances for selected accounts.

Prepaid Insurance	$ 3,600
Equipment	28,000
Notes Payable	20,000
Unearned Service Revenue	4,200
Service Revenue	1,800

Analysis reveals the following additional data pertaining to these accounts.

1. Prepaid insurance is the cost of a 2-year insurance policy, effective April 1.
2. Depreciation on the equipment is $500 per month.
3. The note payable is dated April 1. It is a 6-month, 6% note. Interest and principal will be paid at the maturity of the note.
4. Seven customers paid for the company's 6-month lawn service package of $600 beginning in April. These customers received the first month of services in April.
5. Lawn services performed for other customers but not billed at April 30 totaled $1,500.

Instructions

Prepare the adjusting entries for the month of April. Show computations.

Solution

GENERAL JOURNAL

Date	Account Titles and Explanation	Debit	Credit
	Adjusting Entries		
Apr. 30	Insurance Expense	150	
	Prepaid Insurance		150
	(To record insurance expired:		
	$3,600 ÷ 24 = $150 per month)		
30	Depreciation Expense	500	
	Accumulated Depreciation—Equipment		500
	(To record monthly depreciation)		
30	Interest Expense	100	
	Interest Payable		100
	(To accrue interest on notes payable:		
	$\$20{,}000 \times 6\% \times \frac{1}{12} = \$100$)		
30	Unearned Service Revenue	700	
	Service Revenue		700
	(To record revenue for services performed:		
	$600 ÷ 6 = $100; $100 per month × 7 = $700)		
30	Accounts Receivable	1,500	
	Service Revenue		1,500
	(To accrue revenue for services performed)		

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Note: All asterisked Questions, Exercises, and Problems relate to material in the appendix to the chapter.

Questions

1. **a.** How does the periodicity assumption affect an accountant's analysis of accounting transactions?

   b. Explain the term fiscal year.

2. Identify and state two generally accepted accounting principles that relate to adjusting the accounts.

3. What are the five steps of the revenue recognition process?

4. Max Wilson, a lawyer, accepts a legal engagement in March, performs the work in April, and is paid in May. If Wilson's law firm prepares monthly financial statements, when should it recognize revenue from this engagement? Why?

5. In completing the engagement in Question 4, Wilson pays no costs in March, \$2,500 in April, and \$2,200 in May (incurred in April). How much expense should the firm deduct from revenues in the month when it recognizes the revenue? Why?

6. "The historical cost principle of accounting requires adjusting entries." Do you agree? Explain.

7. Why may the financial information in an unadjusted trial balance not be up-to-date and complete?

8. Distinguish between the two categories of adjusting entries, and identify the types of adjustments applicable to each category.

9. What types of accounts does a company debit and credit in a prepaid expense adjusting entry?

10. "Depreciation is a process of valuation 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. Steele Company purchased equipment for \$15,000. By the current balance sheet date, the company had depreciated \$7,000. Indicate the balance sheet presentation of the data.

13. What types of accounts are debited and credited in an unearned revenue adjusting entry?

14. Abe Technologies provides maintenance service for computers and office equipment for companies throughout the Northeast. The sales manager is elated because she closed a \$300,000, 3-year maintenance contract on December 29, 2024, two days before the company's year-end. "Now we will hit this year's net income target for sure," she crowed. The customer is required to pay \$100,000 on December 29 (the day the deal was closed). Two more payments of \$100,000 each are also required on December 29, 2025 and 2026. Discuss the effect that this event will have on the company's financial statements.

15. BeneMart, a large national retail chain, is nearing its fiscal year-end. It appears that the company is not going to hit its revenue and net income targets. The company's marketing manager, Ed Mellon, suggests running a promotion selling \$50 gift cards for \$45. He believes that this would be very popular and would enable the company to meet its targets for revenue and net income. What do you think of this idea?

16. Whistler Corp. performed services for a customer but has not received payment, nor has it recorded any entry related to the work. Which of the following types of 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.

17. A company fails to recognize an expense incurred but not paid. Indicate which of the following types of accounts is debited and which is credited in the adjusting entry: (a) asset, (b) liability, (c) revenue, or (d) expense.

18. A company makes an accrued revenue adjusting entry for \$780 and an accrued expense adjusting entry for \$510. How much was net income understated or overstated prior to these entries? Explain.

19. On January 9, a company pays \$6,200 for salaries, of which \$1,100 was reported as Salaries and Wages Payable on December 31. Give the entry to record the payment.

20. For each of the following items before adjustment, indicate the type of adjusting entry—prepaid expense, unearned revenue, accrued revenue, and 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.

21. 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.

22. "An adjusting entry may affect more than one balance sheet or income statement account." Do you agree? Why or why not?

23. Which balance sheet account provides evidence that **Apple** records sales on an accrual basis rather than a cash basis? Explain.

24. Why is it possible to prepare financial statements directly from an adjusted trial balance?

25. **a.** What information do accrual-basis financial statements provide that cash-basis statements do not?
    b. What information do cash-basis financial statements provide that accrual-basis statements do not?

26. 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?

27. Identify the account(s) debited and credited in each of the four closing entries, assuming the company has net income for the year.

28. Some companies employ technologies that allow them to do a so-called "virtual close." This enables them to close their books nearly instantaneously any time during the year. What advantages does a "virtual close" provide?

29. Describe the nature of the Income Summary account, and identify the types of summary data that may be posted to this account.

30. What items are disclosed on a post-closing trial balance? What is its purpose?

31. Which of these 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.

32. Indicate, in the sequence in which they are made, the three required steps in the accounting cycle that involve journalizing.

33. Identify, in the sequence in which they are prepared, the three trial balances that are required in the accounting cycle.

34. Explain the terms earnings management and quality of earnings.

35. Give examples of how companies manage earnings.

*36. What is the purpose of a worksheet?

*37. What is the basic form of a worksheet?

Brief Exercises

Identify the order of the five steps in the revenue recognition process.

BE4.1 **(LO 1), K** Number the following steps of the revenue recognition process (from 1–5) to place in the correct order.

a. ________ Allocate the transaction price to the separate performance obligations.

b. ________ Identify the contract with customers.

c. ________ Identify the separate performance obligations in the contract.

d. ________ Recognize revenue when each performance obligation is satisfied.

e. ________ Determine the transaction price.

Identify impact of transactions on cash and net income.

BE4.2 **(LO 1), C** Transactions that affect net income do not necessarily affect cash. Identify the effect, if any, that each of the following transactions would have upon cash and net income. The first transaction has been completed as an example.

	Cash	Net Income
a. Purchased $100 of supplies for cash.	–$100	$ 0
b. Recorded an adjusting entry to record use of $20 of the above supplies.		
c. Made sales of $1,300, all on account.		
d. Received $800 from customers in payment of their accounts.		
e. Purchased equipment for cash, $2,500.		
f. Recorded depreciation of building for period used, $600.		

Indicate why adjusting entries are needed.

BE4.3 **(LO 1), C** The ledger of Melmann Company 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.

BE4.4 **(LO 1), AN** Cortina Company accumulates the following adjustment data at December 31. Indicate (1) the type of adjustment (prepaid expense, accrued revenue, and so on) and (2) the status of the accounts before adjustment (for example, "assets understated and revenues understated").

a. Supplies of $400 are on hand. Supplies account shows $1,600 balance.

b. Services performed but unbilled total $700.

c. Interest of $300 has been incurred and unpaid on a note payable.

d. Rent collected in advance totaling $1,100 has been earned.

Prepare adjusting entry for supplies.

BE4.5 **(LO 2), AP** Lahey Advertising Company's trial balance at December 31 shows Supplies $8,800 and Supplies Expense $0. On December 31, there are $1,100 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.

BE4.6 **(LO 2), AP** At the end of its first year, the trial balance of Rayburn Company shows Equipment $22,000 and zero balances in Accumulated Depreciation—Equipment and Depreciation Expense. Depreciation for the year is estimated to be $2,750. Prepare the annual adjusting entry for depreciation at December 31, post the adjustments to T-accounts, and indicate the balance sheet presentation of the equipment at December 31.

Prepare adjusting entry for prepaid expense.

BE4.7 **(LO 2), AP** On July 1, 2025, Ling Co. pays $12,400 to Marsh Insurance Co. for a 2-year insurance contract. Both companies have fiscal years ending December 31. For Ling Co., journalize and post the entry on July 1 and the annual adjusting entry on December 31.

Prepare adjusting entry for unearned revenue.

BE4.8 **(LO 2), AP** Using the data in BE4.7, journalize and post the entry on July 1 and the adjusting entry on December 31 for Marsh Insurance Co. Marsh uses the accounts Unearned Service Revenue and Service Revenue.

Prepare adjusting entries for deferrals.

BE4.9 **(LO 2), AP** The unadjusted trial balance of Northern Exposure Inc. had these balances for the following select accounts: Supplies $3,100, Unearned Service Revenue $8,200, and Prepaid Rent

$1,200. At the end of the period, a count showed $500 of supplies on hand. Services of $2,900 had been performed related to the unearned revenue account, and one month's worth of rent, worth $400, had been consumed by Northern Exposure. Record the required adjusting entries related to these events.

Prepare adjusting entries for accruals.

BE4.10 (LO 3), AP The bookkeeper for Tran Company asks you to prepare the following accrual adjusting entries at December 31. Use these account titles: Service Revenue, Accounts Receivable, Interest Expense, Interest Payable, Salaries and Wages Expense, and Salaries and Wages Payable.

a. Interest on notes payable of $300 should be accrued.

b. Services performed but unbilled totals $1,700.

c. Salaries of $780 earned by employees have not been recorded or paid.

Prepare adjusting entries for accruals.

BE4.11 (LO 3), AP At December 31 of the current year, Cullen Corporation had a number of items that were not reflected in its accounting records. Maintenance and repair costs of $770 were incurred but not paid. Utilities costing $240 were used but not paid, and use of a warehouse space worth $1,900 was provided to a tenant who had not been billed as of the end of the month. Record the required adjusting entries related to these events.

Analyze accounts in a trial balance.

BE4.12 (LO 2, 3), AN The trial balance of Woods Company includes the following balance sheet accounts. Identify the accounts that might require adjustment. For each account that requires adjustment, indicate (1) the type of adjusting entry (prepaid expense, unearned revenue, accrued revenue, and accrued expense) and (2) the related account in the adjusting entry.

a. Accounts Receivable.

b. Prepaid Insurance.

c. Cash.

d. Accumulated Depreciation—Equipment.

e. Dividends.

f. Interest Payable.

g. Unearned Service Revenue.

Prepare an income statement from an adjusted trial balance.

BE4.13 (LO 4), AP The adjusted trial balance of Levin Corporation at December 31, 2025, includes the following accounts: Retained Earnings $17,200, Dividends $6,000, Service Revenue $32,000, Salaries and Wages Expense $14,000, Insurance Expense $1,800, Rent Expense $3,900, Supplies Expense $1,500, and Depreciation Expense $1,000. Prepare an income statement for the year.

Prepare a retained earnings statement from an adjusted trial balance.

BE4.14 (LO 4), AP Partial adjusted trial balance data for Levin Corporation are presented in BE4.13. The balance in Retained Earnings is the balance as of January 1. Prepare a retained earnings statement for the year assuming net income is $10,400.

Identify financial statement for selected accounts.

BE4.15 (LO 4), K The following selected accounts appear in the adjusted trial balance for Deane Company. Indicate the financial statement on which each account would be reported.

a. Accumulated Depreciation.

b. Depreciation Expense.

c. Retained Earnings (beginning).

d. Dividends.

e. Service Revenue.

f. Supplies.

g. Accounts Payable.

Identify post-closing trial balance accounts.

BE4.16 (LO 4), K Using the data in BE4.15, identify the accounts that would be included in a post-closing trial balance.

Prepare and post closing entries.

BE4.17 (LO 4), AP The income statement for the Bonita Pines Golf Club Inc. for the month ended July 31 shows Service Revenue $16,000, Salaries and Wages Expense $8,400, Maintenance and Repairs Expense $2,500, and Income Tax Expense $1,000. The retained earnings statement shows an opening balance for Retained Earnings of $20,000 and Dividends $1,300.

a. Prepare closing journal entries.

b. What is the ending balance in Retained Earnings?

List required steps in the accounting cycle sequence.

BE4.18 (LO4), K The required steps in the accounting cycle are listed in random order below. List the steps in proper sequence.

a. Prepare a post-closing trial balance.

b. Prepare an adjusted trial balance.

c. Analyze business transactions.

d. Prepare a trial balance.

e. Journalize the transactions.

f. Journalize and post closing entries.

g. Prepare financial statements.

h. Journalize and post adjusting entries.

i. Post to ledger accounts.

DO IT! Exercises

DO IT! 4.1 (LO 1), C 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.

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 one 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.

DO IT! 4.2 (LO 2), AP The ledger of Umatilla, Inc. on March 31, 2025, includes the following selected accounts before adjusting entries.

Prepare adjusting entries for deferrals.

	Debit	Credit
Supplies	2,500	
Prepaid Insurance	2,400	
Equipment	30,000	
Unearned Service Revenue		10,000

An analysis of the accounts shows the following.

1. Insurance expires at the rate of $300 per month.
2. Supplies on hand total $900.
3. The equipment depreciates at $200 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.

DO IT! 4.3 (LO 3), AP Jean Karns is the new owner of Jean's Computer Services. At the end of July 2025, her first month of ownership, Jean is trying to prepare monthly financial statements. She has the following information for the month.

Prepare adjusting entries for accruals.

1. At July 31, Jean owed employees $1,100 in salaries that the company will pay in August.
2. On July 1, Jean borrowed $20,000 from a local bank on a 1-year note. The annual interest rate is 9%. Interest will be paid with the note at maturity.
3. Service revenue unrecorded in July totaled $1,600.

Prepare the adjusting entries needed at July 31, 2025.

DO IT! 4.4a (LO 4), C Indicate in which financial statement each of the following adjusted trial balance accounts would be presented.

Prepare financial statements from adjusted trial balance.

Service Revenue	Accounts Receivable
Notes Payable	Accumulated Depreciation
Common Stock	Utilities Expense

DO IT! 4.4b (LO 4), AP Paloma Company shows the following balances in selected accounts of its adjusted trial balance.

Prepare closing entries.

Supplies	$32,000	Service Revenue	$108,000
Supplies Expense	6,000	Salaries and Wages Expense	40,000
Accounts Receivable	12,000	Utilities Expense	8,000
Dividends	22,000	Rent Expense	18,000
Retained Earnings	70,000		

Prepare the remaining closing entries at December 31.

Exercises

Determine point of revenue recognition.

E4.1 **(LO 1), C** The following independent situations require professional judgment for determining when to recognize revenue from the transactions.

a. **Southwest Airlines** sells you an advance-purchase airline ticket in September for your flight home in December.

b. **Ultimate Electronics** sells you a home theater on a "no money down and full payment in three months" promotional deal.

c. The **Toronto Blue Jays** sell season tickets online to games in the Skydome. Fans can purchase the tickets at any time, although the season doesn't officially begin until April. The major league baseball season runs from April through October.

d. **RBC Financial Group** loans money on August 1. The loan and the interest are repayable in full in November.

e. In August, a customer orders a sweater from the **Target** website, paying with a Target credit card. The sweater arrives in September. Target sends a bill in October and receives payment in October.

Instructions

Identify when revenue should be recognized in each of the above situations.

Determine point of revenue recognition.

E4.2 **(LO 2), C** The following independent situations require professional judgment for determining when to recognize revenue from transactions. Assume the companies make monthly adjusting entries.

a. **Google** sells an advance payment advertising services on June 1 for services to be provided during June.

b. **Amazon.com** sells a box of specialty cat food on July 10. The cat food is delivered on July 12.

c. **Netflix** receives payment on September 1 for movie services to be provided during September.

d. **Apple** receives an order for a set of ear buds on March 10. The ear buds are delivered on March 14.

e. **Zoom Video Communications** sells a 1-year subscription to video conferencing services. Payment for the 12-month subscription is received on October 1.

Instructions

Determine when revenue should be recognized in each of the above situations.

Identify accounting assumptions, principles, and constraint.

E4.3 **(LO 1), K** These accounting concepts were discussed in this and previous chapters.

1. Economic entity assumption.
2. Expense recognition principle.
3. Monetary unit assumption.
4. Periodicity assumption.
5. Historical cost principle.
6. Materiality.
7. Full disclosure principle.
8. Going concern assumption.
9. Revenue recognition principle.
10. Cost constraint.

Instructions

Identify by number the accounting concept that describes each situation below. Do not use a number more than once.

____ a. Is the rationale for why plant assets are not reported at liquidation value. (Do not use the historical cost principle.)

____ b. Indicates that personal and business recordkeeping should be separately maintained.

____ c. Ensures that all relevant financial information is reported.

____ d. Assumes that the dollar is the "measuring stick" used to report on financial performance.

____ e. Requires that accounting standards be followed for all items of **significant** size.

____ f. Separates financial information into time periods for reporting purposes.

____ g. Requires recognition of expenses in the same period as related revenues.

____ h. Indicates that fair value changes subsequent to purchase are not recorded in the accounts.

E4.4 (LO 1), C Here are some accounting reporting situations.

Identify the violated assumption, principle, or constraint.

a. East Lake Company recognizes revenue at the end of the production cycle but before sale. The price of the product, as well as the amount that can be sold, is not certain.

b. Hilo Company is in its fifth year of operation and has yet to issue financial statements. (Do not use the full disclosure principle.)

c. Gomez, Inc. is carrying inventory at its original cost of $100,000. Inventory has a fair value of $110,000.

d. Bly Hospital Supply Corporation reports only current assets and current liabilities on its balance sheet. Equipment and bonds payable are reported as current assets and current liabilities, respectively. Liquidation of the company is unlikely.

e. Chieu Company has inventory on hand that cost $400,000. Chieu reports inventory on its balance sheet at its current fair value of $425,000.

f. Toxy Syles, president of Classic Music Company, bought a computer for her personal use. She paid for the computer by using company funds and debited the "Computers" account.

Instructions

For each situation, list the assumption, principle, or constraint that has been violated, if any. (Some were presented in earlier chapters.) List only one answer for each situation.

E4.5 (LO 1, 2, 3), AP Your examination of the records of a company that follows the cash basis of accounting tells you that the company's reported cash-basis earnings in 2025 are $33,640. If this firm had followed accrual-basis accounting practices, it would have reported the following year-end balances.

Convert earnings from cash to accrual basis.

	2025	2024
Accounts receivable	$3,400	$2,800
Supplies on hand	1,300	1,460
Unpaid wages owed	2,000	2,400
Other unpaid expenses	1,400	1,100

Instructions

Determine the company's net earnings on an accrual basis for 2025. Show all your calculations in an orderly fashion.

E4.6 (LO 1), AP In its first year of operations, Gomes Company recognized $28,000 in service revenue, $6,000 of which was on account and still outstanding at year-end. The remaining $22,000 was received in cash from customers.

Determine cash-basis and accrual-basis earnings.

The company incurred operating expenses of $15,800. Of these expenses, $12,000 were paid in cash; $3,800 was still owed on account at year-end. In addition, Gomes prepaid $2,400 for insurance coverage that would not be used until the second year of operations.

Instructions

a. Calculate the first year's net earnings under the cash basis of accounting, and calculate the first year's net earnings under the accrual basis of accounting.

b. Which basis of accounting (cash or accrual) provides more useful information for decision-makers?

E4.7 (LO1, 2, 3), AP Franken Company, a ski tuning and repair shop, opened on November 1, 2024. The company carefully kept track of all its cash receipts and cash payments. The following information is available at the end of the ski season, April 30, 2025.

Convert earnings from cash to accrual basis; prepare accrual-based financial statements.

	Cash Receipts	Cash Payments
Issuance of common shares	$20,000	
Payment to purchase repair shop equipment		$ 9,200
Rent payments to landlord		1,050
Newspaper advertising payment		375
Utility bill payments		970
Part-time helper's wage payments		2,600
Income tax payment		10,000
Cash receipts from ski and snowboard repair services	32,150	
Subtotals	52,150	24,195
Cash balance		27,955
Totals	$52,150	$52,150

The repair shop equipment was purchased on November 1 and has an estimated useful life of 4 years. Lease payments to the landlord are made at the beginning of each month. The part-time helper is owed $420 at April 30, 2025, for unpaid wages. At April 30, 2025, customers owe Franken Company $540 for services they have received but have not yet paid for.

Instructions

a. Prepare an accrual-basis income statement for the 6 months ended April 30, 2025.

b. Prepare the April 30, 2025, classified balance sheet.

Identify differences between cash and accrual accounting.

E4.8 **(LO 1, 2, 3), C** **Writing** BizCon, a consulting firm, has just completed its first year of operations. The company's sales growth was explosive. To encourage clients to hire its services, BizCon offered 180-day financing—meaning its largest customers do not pay for nearly 6 months. Because BizCon is a new company, its equipment suppliers insist on being paid cash on delivery. Also, it had to pay up front for 2 years of insurance. At the end of the year, BizCon owed employees for one full month of salaries, but due to a cash shortfall, it promised to pay them the first week of next year.

Instructions

a. Explain how cash and accrual accounting would differ for each of the events listed above and describe the proper accrual accounting.

b. Assume that at the end of the year, BizCon reported a favorable net income, yet the company's management is concerned because the company is very short of cash. Explain how BizCon could have positive net income and yet run out of cash.

Identify types of adjustments and accounts before adjustment.

E4.9 **(LO 1, 2, 3), AN** Wang Company accumulates the following adjustment data at December 31.

a. Services performed but unbilled total $600.

b. Store supplies of $160 are on hand. The supplies account shows a $1,900 balance.

c. Utility expenses of $275 are unpaid.

d. Services performed of $490 collected in advance.

e. Salaries of $620 are unpaid.

f. Prepaid insurance totaling $400 has expired.

Instructions

For each item, indicate (1) the type of adjustment (prepaid expense, unearned revenue, accrued revenue, or accrued expense) and (2) the status of the accounts before adjustment (overstated or understated).

Prepare adjusting entries from selected account data.

E4.10 **(LO 2, 3), AP** The ledger of Howard Rental Agency on March 31 of the current year includes the selected accounts below before adjusting entries have been prepared.

	Debit	Credit
Supplies	$ 3,000	
Prepaid Insurance	3,600	
Equipment	25,000	
Accumulated Depreciation—Equipment		$ 8,400
Notes Payable		20,000
Unearned Rent Revenue		12,400
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 $280 per month.
2. Half of the unearned rent revenue was earned during the quarter.
3. Interest of $400 is accrued on the notes payable.
4. Supplies on hand total $850.
5. Insurance expires at the rate of $400 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.

E4.11 (LO 2, 3), AP The CCBC Corporation had the following unadjusted trial balance at the end of its fiscal year, July 31, 2025.

	Debit	Credit
Cash	$ 8,175	
Accounts Receivable	4,775	
Supplies	1,400	
Prepaid Rent	1,500	
Equipment	15,000	
Accumulated Depreciation—Equipment		$ 6,000
Accounts Payable		200
Unearned Service Revenue		3,500
Notes Payable		1,000
Common Stock		5,000
Retained Earnings		15,150
Totals	$30,850	$30,850

Additional information for adjusting entries:

1. On July 31, the company had performed $800 of services for a client that it had not billed or recorded.
2. Record rent expense this month. The current balance in Prepaid Rent represents 2 months of rent.
3. Supplies on hand on July 31 were $500.
4. Unrecorded monthly depreciation is $250.
5. Interest is due on the note payable on the first day of each following month, beginning August 1. Interest for July is $2.
6. As of July 31, the company owed $2,500 of salaries and wages to its employees for the month just ended.
7. During July, the company satisfied $2,000 worth of services related to amounts that had previously been recorded as Unearned Service Revenue. This revenue has not yet been recorded.

Instructions

Prepare the adjusting entries for July 31.

Prepare adjusting entries.

E4.12 (LO 2, 3), AP Al Medina, D.D.S., opened an incorporated dental practice on January 1, 2025. During the first month of operations, the following transactions occurred.

1. Performed services for patients who had dental plan insurance. At January 31, $760 of such services was completed but not yet billed to the insurance companies.
2. Utility expenses incurred but not paid prior to January 31 totaled $450.
3. Purchased dental equipment on January 1 for $80,000, paying $20,000 in cash and signing a $60,000, 3-year note payable (interest is paid each December 31). The equipment depreciates $400 per month. Interest is $500 per month.
4. Purchased a 1-year malpractice insurance policy on January 1 for $24,000.
5. Purchased $1,750 of dental supplies (recorded as increase to Supplies). On January 31, determined that $550 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 Accounts Payable.

Prepare adjusting entries.

E4.13 **(LO 2, 3), AP** The unadjusted trial balance for Sierra Corp. is shown in Illustration 4.5. 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 $500.
2. Expired insurance for the month is $100.
3. Depreciation for the month is $75.
4. As of October 31, services worth $800 related to the previously recorded unearned revenue had been performed.
5. Services performed but unbilled (and no receivable has been recorded) at October 31 are $280.
6. Interest expense accrued at October 31 is $70.
7. Accrued salaries at October 31 are $1,400.

Instructions

Prepare the adjusting entries for the items above.

Prepare adjusting entries from selected account data.

E4.14 **(LO 2, 3), AP** The ledger of Armour Lake Lumber Supply on July 31, 2025, includes the selected accounts below before adjusting entries have been prepared.

	Debit	Credit
Notes Receivable	$ 20,000	
Supplies	24,000	
Prepaid Rent	3,600	
Buildings	250,000	
Accumulated Depreciation—Buildings		$140,000
Unearned Service Revenue		11,500

An analysis of the company's accounts shows the following.

1. The investment in the notes receivable earns interest at a rate of 6% per year.
2. Supplies on hand at the end of the month totaled $18,600.
3. The balance in Prepaid Rent represents 4 months of rent costs.
4. Employees were owed $3,100 related to unpaid salaries and wages.
5. Depreciation on buildings is $6,000 per year.
6. During the month, the company satisfied obligations worth $4,700 related to the Unearned Service Revenue.
7. Unpaid maintenance and repairs costs were $2,300.

Instructions

Prepare the adjusting entries at July 31 assuming that adjusting entries are made monthly. Use additional accounts as needed.

Prepare a correct income statement.

Excel

E4.15 **(LO 1, 2, 3), AN** The income statement of Norski Co. for the month of July shows net income of $2,000 based on Service Revenue $5,500, Salaries and Wages Expense $2,100, Supplies Expense $900, and Utilities Expense $500. In reviewing the statement, you discover the following:

1. Insurance expired during July of $350 was omitted.
2. Supplies expense includes $200 of supplies that are still on hand at July 31.
3. Depreciation on equipment of $150 was omitted.
4. Accrued but unpaid wages at July 31 of $360 were not included.
5. Services performed but unrecorded totaled $700.

Instructions

Prepare a correct income statement for July 2025.

Journalize basic transactions and adjusting entries.

E4.16 **(LO 2, 3), AN** Selected accounts of Villa Company are shown here.

Supplies Expense

July 31	750		

Salaries and Wages Payable

		July 31	1,000

Salaries and Wages Expense

July 15	1,000		
31	1,000		

Accounts Receivable

July 31	500		

Service Revenue

		July 14	3,800
		31	900
		31	500

Unearned Service Revenue

July 31	900	July 1	Bal. 1,500
		20	600

Supplies

July 1	Bal. 1,100	July 31	750
10	200		

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.)

Analyze adjusted data.

Excel

E4.17 **(LO 1, 2, 3), AN** This is a partial adjusted trial balance of Ramon Company.

Ramon Company
Adjusted Trial Balance
January 31, 2025

	Debit	Credit
Supplies	$ 700	
Prepaid Insurance	1,560	
Salaries and Wages Payable		$1,060
Unearned Service Revenue		750
Supplies Expense	950	
Insurance Expense	520	
Salaries and Wages Expense	1,800	
Service Revenue		4,000

Instructions

Answer these questions, assuming the year begins January 1.

a. If the amount in Supplies Expense is the January 31 adjusting entry and $300 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 $2,500 of salaries was paid in January, what was the balance in Salaries and Wages Payable at December 31, 2024?

d. If $1,800 was received in January for services performed in January, what was the balance in Unearned Service Revenue at December 31, 2024?

Determine effect of adjusting entries.

E4.18 **(LO 2, 3), AN** On December 31, 2025, Waters Company prepared an income statement and balance sheet, but failed to take into account three adjusting entries. The balance sheet showed total assets $150,000, total liabilities $70,000, and stockholders' equity $80,000. The incorrect income statement showed net income of $70,000.

The data for the three adjusting entries were:

1. Salaries and wages amounting to $10,000 for the last 2 days in December were not paid and not recorded. The next payroll will be in January.

2. Rent payments of $8,000 was received for two months in advance on December 1. The entire amount was credited to Unearned Rent Revenue when paid.

3. Depreciation expense for 2025 is $9,000.

Instructions

Complete the following table to correct the financial statement amounts shown (indicate deductions with parentheses).

Item	Net Income	Total Assets	Total Liabilities	Stockholders' Equity
Incorrect balances	$70,000	$150,000	$70,000	$80,000
Effects of:				
Salaries and Wages	______	______	______	______
Rent Revenue	______	______	______	______
Depreciation	______	______	______	______
Correct balances	______	______	______	______

Prepare and post transactions and adjusting entries for prepayments.

E4.19 **(LO 2), AP** Action Quest Games Inc. adjusts its accounts annually. The following information is available for the year ended December 31, 2025.

1. Purchased a 1-year insurance policy on June 1 for $1,800 cash.
2. Paid $6,500 on August 31 for 5 months' rent in advance.
3. On September 4, received $3,600 cash in advance from a corporation to sponsor a game each month for a total of 9 months for the most improved students at a local school.
4. Signed a contract for cleaning services starting December 1 for $1,000 per month. Paid for the first 2 months on November 30. (*Hint:* Use the account Prepaid Cleaning to record prepayments.)
5. On December 5, received $1,500 in advance from a gaming club. Determined that on December 31, $475 of these games had not yet been played.

Instructions

a. For each of the above transactions, prepare the journal entry to record the initial transaction.
b. For each of the above transactions, prepare the adjusting journal entry that is required on December 31. (*Hint:* Use the account Service Revenue for item 3 and Maintenance and Repairs Expense for item 4.)
c. Post the journal entries in parts (a) and (b) to T-accounts and determine the final balance in each account balance. (*Note:* Posting to the Cash account is not required.)

Prepare adjusting and subsequent entries for accruals.

E4.20 **(LO 3), AP** Greenock Limited has the following information available for accruals for the year ended December 31, 2025. The company adjusts its accounts annually.

1. The December utility bill for $425 was unrecorded on December 31. Greenock paid the bill on January 11.
2. Greenock is open 7 days a week and employees are paid a total of $3,500 every Monday for a 7-day (Monday–Sunday) workweek. December 31 is a Thursday, so employees will have worked 4 days (Monday, December 28–Thursday, December 31) that they have not been paid for by year-end. Employees will be paid next on January 4.
3. Greenock signed a $45,000, 5% bank loan on November 1, 2024, due in 2 years. Interest is payable on the first day of each following month. (For example, interest incurred during November would be paid on December 1.)
4. Greenock receives a fee from Pizza Shop next door for all pizzas sold to customers using Greenock's facility. The amount owed for December is $300, which Pizza Shop will pay on January 4. (*Hint:* Use the Service Revenue account.)
5. Greenock rented some of its unused warehouse space to a client for $6,000 a month, payable the first day of the following month. It received the rent for the month of December on January 2.

Instructions

a. For each situation, prepare the adjusting entry required at December 31. (Round all calculations to the nearest dollar.)
b. For each situation, prepare the journal entry to record the subsequent cash transaction in 2026.

Identify accounting terms.

E4.21 **(LO 1, 2, 3, 4), C** The following is a list of terms and phrases discussed in the chapter.

1. Contra asset account
2. Permanent accounts
3. Depreciation
4. Adjusting entries
5. Prepaid expenses (prepayments)
6. Temporary accounts
7. Book value
8. Adjusted trial balance
9. Closing entries
10. Earnings management
11. Income Summary

Instructions

Match each term or phrase with its description below.

a. ________ Expenses paid in cash before they are used or consumed.
b. ________ The difference between the cost of a depreciable asset and its related accumulated depreciation.
c. ________ A list of accounts and their balances after all adjustments have been made.
d. ________ Entries made at the end of an accounting period to ensure that the revenue recognition and expense recognition principles are followed.

e. ________ Entries at the end of an accounting period to transfer the balances of temporary accounts to a permanent stockholders' equity account, Retained Earnings.

f. ________ Revenue, expense, and dividend accounts whose balances a company transfers to Retained Earnings at the end of an accounting period.

g. ________ The planned timing of revenues, expenses, gains, and losses to smooth out bumps in net income.

h. ________ An account that is offset against an asset account on the balance sheet.

i. ________ A temporary account used in closing revenue and expense accounts.

j. ________ Balance sheet accounts whose balances are carried forward to the next accounting period.

k. ________ The process of allocating the cost of an asset to expense over its useful life.

E4.22 (LO 4), AP A partial adjusted trial balance for Ramon Company is given in E4.17.

Prepare closing entries.

Instructions

Prepare the closing entries at January 31, 2025.

E4.23 (LO 4), AP Selected year-end account balances from the adjusted trial balance as of December 31, 2025, for Tippy Corporation is provided below.

Prepare closing entries.

	Debit	Credit
Accounts Receivable	$ 72,600	
Dividends	26,300	
Depreciation Expense	13,200	
Equipment	212,800	
Salaries and Wages Expense	91,100	
Accounts Payable		$ 53,000
Accumulated Depreciation—Equipment		114,800
Unearned Rent Revenue		22,900
Service Revenue		183,800
Rent Revenue		6,200
Rent Expense	3,600	
Retained Earnings		61,800
Supplies Expense	1,400	

Instructions

a. Prepare closing entries.

b. Determine the post-closing balance in Retained Earnings.

E4.24 (LO 5), AP The adjusted trial balance for Laurel Developments as of March 31, 2025, is as follows.

Prepare closing entries and determine ending retained earnings balance.

	Debit	Credit
Cash	$ 56,000	
Accounts Receivable	177,000	
Prepaid Insurance	5,000	
Equipment	401,000	
Accumulated Depreciation—Equipment		$ 120,000
Accounts Payable		32,000
Unearned Service Revenue		5,000
Salaries and Wages Payable		11,000
Common Stock		103,000
Retained Earnings		88,000
Dividends	21,000	
Service Revenue		956,000
Interest Revenue		19,000
Depreciation Expense	50,000	
Salaries and Wages Expense	561,000	
Utilities Expense	9,000	
Insurance Expense	12,000	
Income Tax Expense	42,000	

Instructions

a. Prepare the closing entries.

b. Determine Laurel Developments' ending retained earnings balance as of March 31, 2025.

Prepare adjusting entries from analysis of trial balance.

Excel

E4.25 (LO 2, 3, 4), AN The following trial balances are before and after adjustment for Ryan Company at the end of its fiscal year.

Ryan Company
Trial Balance
August 31, 2025

	Before Adjustment		After Adjustment	
	Dr.	**Cr.**	**Dr.**	**Cr.**
Cash	$10,900		$10,900	
Accounts Receivable	8,800		9,400	
Supplies	2,500		500	
Prepaid Insurance	4,000		2,500	
Equipment	16,000		16,000	
Accumulated Depreciation—Equipment		$ 3,600		$ 4,800
Accounts Payable		5,800		5,800
Salaries and Wages Payable		0		1,100
Unearned Rent Revenue		1,800		800
Common Stock		10,000		10,000
Retained Earnings		5,500		5,500
Dividends	2,800		2,800	
Service Revenue		34,000		34,600
Rent Revenue		12,100		13,100
Salaries and Wages Expense	17,000		18,100	
Supplies Expense	0		2,000	
Rent Expense	10,800		10,800	
Insurance Expense	0		1,500	
Depreciation Expense	0		1,200	
	$72,800	$72,800	$75,700	$75,700

Instructions

Prepare the adjusting entries that were made.

Prepare financial statements from adjusted trial balance.

E4.26 (LO 4), AP The adjusted trial balance for Ryan Company is given in E4.25.

Instructions

Prepare the income and retained earnings statements for the year and the classified balance sheet at August 31.

Prepare closing entries.

E4.27 (LO 4), AP The adjusted trial balance for Ryan Company is given in E4.25.

Instructions

Prepare the closing entries for the temporary accounts at August 31.

Problems

Record transactions on accrual basis; convert revenue to cash receipts.

Excel

P4.1 (LO 1, 2, 3), AP The following selected data are taken from the comparative financial statements of Yankee Curling Club. The club prepares its financial statements using the accrual basis of accounting.

September 30	**2025**	**2024**
Accounts receivable for member dues	$ 15,000	$ 19,000
Unearned sales revenue	20,000	23,000
Service revenue (from member dues)	151,000	135,000

Dues are billed to members based upon their use of the club's facilities. Unearned sales revenues arise from the sale of tickets to events, such as the Skins Game.

Instructions

(*Hint:* You will find it helpful to use T-accounts to analyze the following data. You must analyze these data sequentially, as missing information must first be deduced before moving on. Post your journal entries as you progress, rather than waiting until the end.)

a. Prepare journal entries for each of the following events that took place during 2025.

1. Dues receivable from members from 2024 were all collected during 2025.
2. During 2025, goods were provided for all of the unearned sales revenue at the end of 2024.
3. Additional tickets were sold for $44,000 cash during 2025; a portion of these were used by the purchasers during the year. The entire balance remaining in Unearned Sales Revenue relates to the upcoming Skins Game in 2025.
4. Dues for the 2024–2025 fiscal year were billed to members.
5. Dues receivable for 2025 (i.e., those billed in item 4 above) were partially collected.

b. Determine the amount of cash received by Yankee from the above transactions during the year ended September 30, 2025.

b. Cash received $199,000

P4.2 (LO 2, 3, 4), AP Len Kumar started his own consulting firm, Kumar Consulting, on June 1, 2025. The trial balance at June 30 is as follows.

Prepare adjusting entries, post to ledger accounts, and prepare adjusted trial balance.

Kumar Consulting
Trial Balance
June 30, 2025

	Debit	Credit
Cash	$ 6,850	
Accounts Receivable	7,000	
Supplies	2,000	
Prepaid Insurance	2,880	
Equipment	15,000	
Accounts Payable		$ 4,230
Unearned Service Revenue		5,200
Common Stock		22,000
Service Revenue		8,300
Salaries and Wages Expense	4,000	
Rent Expense	2,000	
	$39,730	$39,730

In addition to those accounts listed on the trial balance, the chart of accounts for Kumar also contains the following accounts: Accumulated Depreciation—Equipment, Salaries and Wages Payable, Depreciation Expense, Insurance Expense, Utilities Expense, and Supplies Expense.

Other data:

1. Supplies on hand at June 30 total $720.
2. A utility bill for $180 has not been recorded and will not be paid until next month.
3. The insurance policy is for a year.
4. Services were performed for $4,100 of unearned service revenue by the end of the month.
5. Salaries of $1,250 are accrued at June 30.
6. The equipment has a 5-year life with no salvage value and is being depreciated at $250 per month for 60 months.
7. Invoices representing $3,900 of services performed by Kumar during the month have not been recorded as of June 30.

Instructions

a. Prepare the adjusting entries for the month of June.

b. Post the adjusting entries to the ledger accounts. Enter the totals from the trial balance as beginning account balances. (Use T-accounts.)

c. Prepare an adjusted trial balance at June 30, 2025.

b. Service rev. $16,300

c. Tot. adj. trial balance $45,310

P4.3 (LO 2, 3, 4), AP The following is Wolastoq Tours Inc.'s unadjusted trial balance at its year-end, November 30, 2025. The company adjusts its accounts annually.

Prepare and post adjusting entries; prepare adjusted trial balance.

	Debit	Credit
Cash	$ 15,800	
Accounts Receivable	7,640	
Supplies	965	
Prepaid Rent	2,400	
Prepaid Insurance	7,320	
Equipment	153,840	
Accumulated Depreciation—Equipment		$ 50,160
Accounts Payable		1,925
Unearned Service Revenue		14,000
Notes Payable (due 2028)		54,000
Common Stock		10,000
Retained Earnings		27,225
Service Revenue		130,575
Salaries and Wages Expense	69,560	
Maintenance and Repairs Expense	11,170	
Rent Expense	13,200	
Interest Expense	3,465	
Advertising Expense	825	
Income Tax Expense	1,700	
	$287,885	$287,885

Additional information:

1. The insurance policy has a 1-year term beginning April 1, 2025. At that time, a premium of $7,320 was paid.
2. The equipment was acquired on December 1, 2022. The equipment is depreciated at an annual rate of $25,080.
3. A physical count shows $300 of supplies on hand at November 30.
4. The note payable has a 7% interest rate. Interest is paid on the first day of each following month and was last paid on November 1.
5. Deposits of $1,400 each were received for advance tour reservations from 10 school groups. At November 30, tours have been provided for all of these groups.
6. Employees are owed a total of $500 in salaries and wages at November 30.
7. A senior citizens' organization that had not made an advance deposit took a river tour for $1,250. This group was not billed until December for the services performed.
8. Additional advertising costs of $260 have been incurred, but the bills have not been received by November 30.
9. On November 1, the company paid $2,400 rent in advance for November and December.
10. Income taxes payable for the year are estimated to be an additional $300 beyond that recorded to date.

Instructions

a. Prepare the adjusting entries required at November 30.

c. Total debits $315,590

b. Set up T-accounts, enter the opening balances, and post the November adjusting entries to the general ledger.

c. Prepare an adjusted trial balance at November 30.

Prepare adjusting entries, adjusted trial balance, and financial statements.

P4.4 **(LO 2, 3, 4), AP** The Moto Hotel opened for business on May 1, 2025. Here is its trial balance before adjustment on May 31.

Moto Hotel
Trial Balance
May 31, 2025

	Debit	Credit
Cash	$ 2,500	
Supplies	2,600	
Prepaid Insurance	1,800	
Land	15,000	
Buildings	70,000	
Equipment	16,800	

	Debit	Credit
Accounts Payable		$ 4,700
Unearned Rent Revenue		3,300
Notes Payable		36,000
Common Stock		60,000
Rent Revenue		9,000
Salaries and Wages Expense	$ 3,000	
Utilities Expense	800	
Advertising Expense	500	
	$113,000	$113,000

Other data:

1. Insurance expires at the rate of $450 per month.
2. A count of supplies shows $1,050 of unused supplies on May 31.
3. Annual depreciation is $3,600 on the building and $3,000 on equipment.
4. The notes payable interest rate is 6%. (The note was taken out on May 1 and has a 1-year life. Interest and principal are to be repaid at the maturity of the note.)
5. Unearned rent of $2,500 has been earned.
6. Salaries of $900 are accrued and unpaid at May 31.

Instructions

a. Journalize the adjusting entries on May 31.
b. Prepare a ledger using T-accounts. Enter the trial balance amounts and post the adjusting entries.
c. Prepare an adjusted trial balance on May 31.
d. Prepare (1) an income statement and (2) a retained earnings statement for the month of May and (3) a classified balance sheet at May 31.
e. Identify which accounts should be closed on May 31.

c. Rent revenue $11,500
Tot. adj. trial balance $114,630
d. Net income $3,570

P4.5 (LO 2, 3, 4), AP Salt Creek Golf Inc. was organized on July 1, 2025. Quarterly financial statements are prepared. The trial balance and adjusted trial balance on September 30 are shown as follows.

Prepare adjusting entries and financial statements; identify accounts to be closed.

Salt Creek Golf Inc.
Trial Balance
September 30, 2025

	Unadjusted		Adjusted	
	Dr.	Cr.	Dr.	Cr.
Cash	$ 6,700		$ 6,700	
Accounts Receivable	400		1,000	
Supplies	1,200		180	
Prepaid Rent	1,800		900	
Equipment	15,000		15,000	
Accumulated Depreciation—Equipment				$ 350
Notes Payable		$ 5,000		5,000
Accounts Payable		1,070		1,070
Salaries and Wages Payable				600
Interest Payable				50
Unearned Rent Revenue		1,000		800
Common Stock		14,000		14,000
Retained Earnings		0		0
Dividends	600		600	
Service Revenue		14,100		14,700
Rent Revenue		700		900
Salaries and Wages Expense	8,800		9,400	
Rent Expense	900		1,800	
Depreciation Expense			350	
Supplies Expense			1,020	
Utilities Expense	470		470	
Interest Expense			50	
	$35,870	$35,870	$37,470	$37,470

Instructions

a. Journalize the adjusting entries that were made.

b. Net income $2,510
Tot. assets $23,430

b. Prepare an income statement and a retained earnings statement for the 3 months ending September 30 and a classified balance sheet at September 30.

c. Identify which accounts should be closed on September 30.

d. If the note bears interest at 12%, how many months has it been outstanding?

Prepare adjusting entries.

P4.6 (LO 2, 3), AP A review of the ledger of Lewis Company at December 31, 2025, produces these data pertaining to the preparation of annual adjusting entries.

1. Prepaid Insurance $15,200. The company has separate insurance policies on its buildings and its motor vehicles. Policy B4564 on the building was purchased on July 1, 2024, for $9,600. The policy has a term of 3 years. Policy A2958 on the vehicles was purchased on January 1, 2025, for $7,200. This policy has a term of 18 months.

2. Rent revenue $84,000

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.

Date	Term (in months)	Monthly Rent	Number of Leases
Nov. 1	9	$5,000	5
Dec. 1	6	$8,500	4

3. Notes Payable $40,000. This balance consists of a note for 6 months at an annual interest rate of 7%, dated October 1.

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 $600 each per week, and three employees earn $700 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, 2025.

Prepare adjusting entries and a corrected income statement.

P4.7 (LO 2, 3), AN **Writing** Roadside Travel Court was organized on July 1, 2024, by Betty Johnson. Betty is a good manager but a poor accountant. From the trial balance prepared by a part-time bookkeeper, Betty prepared the following income statement for her fourth quarter, which ended June 30, 2025.

Roadside Travel Court
Income Statement
For the Quarter Ended June 30, 2025

Revenues		
Rent revenue		$212,000
Operating expenses		
Advertising expense	$ 3,800	
Salaries and wages expense	80,500	
Utilities expense	900	
Depreciation expense	2,700	
Maintenance and repairs expense	4,300	
Total operating expenses		92,200
Net income		$119,800

Betty suspected that something was wrong with the statement because net income had never exceeded $30,000 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 trial balance contains the following additional selected balances at June 30, 2025.

Supplies	$ 8,200
Prepaid Insurance	14,400
Notes Payable	14,000

You then make inquiries and discover the following.

1. Roadside rental revenues include advanced rental payments received for summer occupancy, in the amount of $57,000.
2. There were $1,800 of supplies on hand at June 30.

3. Prepaid insurance resulted from the payment of a 1-year policy on April 1, 2025.
4. The mail in July 2025 brought the following bills: advertising for the week of June 24, $110; repairs made June 18, $4,450; and utilities for the month of June, $215.
5. Wage expense is $300 per day. At June 30, 4 days' wages have been incurred but not paid.
6. The note payable is a 6% note dated May 1, 2025, and due on July 31, 2025.
7. Income tax of $13,400 for the quarter is due in July but has not yet been recorded.

Instructions

a. Prepare any adjusting journal entries required at June 30, 2025.

b. Prepare a correct income statement for the quarter ended June 30, 2025.

b. Net income $33,285

c. Explain the generally accepted accounting principles that Betty did not recognize in preparing her income statement and their effect on her results.

Journalize transactions and follow through accounting cycle to preparation of financial statements.

P4.8 (LO 2, 3, 4), AP On November 1, 2025, the following were the account balances of Soho Equipment Repair.

	Debit		Credit
Cash	$ 2,790	Accumulated Depreciation—Equipment	$ 500
Accounts Receivable	2,910	Accounts Payable	2,300
Supplies	1,120	Unearned Service Revenue	400
Equipment	10,000	Salaries and Wages Payable	620
		Common Stock	10,000
		Retained Earnings	3,000
	$16,820		$16,820

During November, the following summary transactions were completed.

Nov.	8	Paid $1,220 for salaries due employees, of which $600 is for November and $620 is for October salaries payable.
	10	Received $1,800 cash from customers in payment of account.
	12	Received $3,700 cash for services performed in November.
	15	Purchased store equipment on account $3,600.
	17	Purchased supplies on account $1,300.
	20	Paid creditors $2,500 of accounts payable due.
	22	Paid November rent $480.
	25	Paid salaries $1,000.
	27	Performed services on account worth $900 and billed customers.
	29	Received $750 from customers for services to be performed in the future.

Adjustment data:

1. Supplies on hand are valued at $1,100.
2. Accrued salaries payable are $480.
3. Depreciation for the month is $250.
4. Services were performed to satisfy $500 of unearned service revenue.

Instructions

a. Enter the November 1 balances in the ledger accounts. (Use T-accounts.)

b. Journalize the November transactions.

c. Post to the ledger accounts. Use Service Revenue, Depreciation Expense, Supplies Expense, Salaries and Wages Expense, and Rent Expense.

d. Prepare a trial balance at November 30.

e. Journalize and post adjusting entries.

f. Prepare an adjusted trial balance.

g. Prepare an income statement and a retained earnings statement for November and a classified balance sheet at November 30.

f. Cash $3,840
Tot. adj. trial balance $24,680

g. Net income $970

Continuing Case

leungchopan/
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Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 through 3.)

CC4 Natalie has had a very busy December. She needs to catch up by recording transactions and adjusting entries, so she can then prepare the financial statements.

Go to Wiley Course Resources for complete case details and instructions.

Comprehensive Accounting Cycle Review

Complete all steps in accounting cycle.

ACR4.1 **(LO 2, 3, 4), AP** Mike Greenberg opened Kleene Window Washing Inc. on July 1, 2025. During July, the following transactions were completed.

July	1	Issued 12,000 shares of common stock for $12,000 cash.
	1	Purchased used truck for $8,000, paying $2,000 cash and the balance on account.
	3	Purchased cleaning supplies for $900 on account.
	5	Paid $1,800 cash on a 1-year insurance policy effective July 1.
	12	Billed customers $3,700 for cleaning services performed.
	18	Paid $1,000 cash on amount owed on truck and $500 on amount owed on cleaning supplies.
	20	Paid $2,000 cash for employee salaries.
	21	Collected $1,600 cash from customers billed on July 12.
	25	Billed customers $2,500 for cleaning services performed.
	31	Paid $290 for maintenance of the truck during month.
	31	Declared and paid $600 cash dividend.

The chart of accounts for Kleene Window Washing contains the following accounts: Cash, Accounts Receivable, Supplies, Prepaid Insurance, Equipment, Accumulated Depreciation—Equipment, Accounts Payable, Salaries and Wages Payable, Common Stock, Retained Earnings, Dividends, Income Summary, Service Revenue, Maintenance and Repairs Expense, Supplies Expense, Depreciation Expense, Insurance Expense, and Salaries and Wages Expense.

Instructions

a. Journalize the July transactions.

b. Post to the ledger accounts. (Use T-accounts.)

c. Prepare a trial balance at July 31.

d. Journalize the following adjustments.

1. Services performed but unbilled and uncollected at July 31 were $1,700.
2. Depreciation on equipment for the month was $180.
3. One-twelfth of the insurance expired.
4. A count shows $320 of cleaning supplies on hand at July 31.
5. Accrued but unpaid employee salaries were $400.

e. Post adjusting entries to the T-accounts.

f. Cash $5,410

g. Tot. assets $21,500

f. Prepare an adjusted trial balance.

g. Prepare the income statement and a retained earnings statement for July and a classified balance sheet at July 31.

h. Journalize and post closing entries and complete the closing process.

i. Prepare a post-closing trial balance at July 31.

Complete all steps in accounting cycle.

ACR4.2 **(LO 2, 3, 4), AP** Lars Linken opened Lars Cleaners on March 1, 2025. During March, the following transactions were completed.

Mar.	1	Issued 10,000 shares of common stock for $15,000 cash.
	1	Borrowed $6,000 cash by signing a 6-month, 6%, $6,000 note payable. Interest will be paid the first day of each subsequent month.

1	Purchased used truck for $8,000 cash.
2	Paid $1,500 cash to cover rent from March 1 through May 31.
3	Paid $2,400 cash on a 6-month insurance policy effective March 1.
6	Purchased cleaning supplies for $2,000 on account.
14	Billed customers $3,700 for cleaning services performed.
18	Paid $500 on amount owed on cleaning supplies.
20	Paid $1,750 cash for employee salaries.
21	Collected $1,600 cash from customers billed on March 14.
28	Billed customers $4,200 for cleaning services performed.
31	Paid $350 for gas and oil used in truck during month (use Maintenance and Repairs Expense).
31	Declared and paid a $900 cash dividend.

The chart of accounts for Lars Cleaners contains the following accounts: Cash, Accounts Receivable, Supplies, Prepaid Insurance, Prepaid Rent, Equipment, Accumulated Depreciation—Equipment, Accounts Payable, Salaries and Wages Payable, Notes Payable, Interest Payable, Common Stock, Retained Earnings, Dividends, Income Summary, Service Revenue, Maintenance and Repairs Expense, Supplies Expense, Depreciation Expense, Insurance Expense, Salaries and Wages Expense, Rent Expense, and Interest Expense.

Instructions

a. Journalize the March transactions.

b. Post to the ledger accounts. (Use T-accounts.)

c. Prepare a trial balance at March 31.

d. Journalize the following adjustments.

1. Services performed but unbilled and uncollected at March 31 was $200.
2. Depreciation on equipment for the month was $250.
3. One-sixth of the insurance expired.
4. An inventory count shows $280 of cleaning supplies on hand at March 31.
5. Accrued but unpaid employee salaries were $1,080.
6. One month of the prepaid rent has expired.
7. One month of interest expense related to the note payable has accrued and will be paid April 1. (*Hint:* Use the formula from Illustration 4.19 to compute interest.)

e. Post adjusting entries to the T-accounts.

f. Prepare an adjusted trial balance.

g. Prepare the income statement and a retained earnings statement for March and a classified balance sheet at March 31.

h. Journalize and post closing entries and complete the closing process.

i. Prepare a post-closing trial balance at March 31.

f. Tot. adj. trial balance $31,960
g. Tot. assets $24,730

ACR4.3 (LO 2, 3, 4), AP On August 1, 2025, the following were the account balances of B&B Repair Services.

Journalize transactions and follow through accounting cycle to preparation of financial statements.

	Debit		Credit
Cash	$ 6,040	Accumulated Depreciation—Equipment	$ 600
Accounts Receivable	2,910	Accounts Payable	2,300
Notes Receivable	4,000	Unearned Service Revenue	1,260
Supplies	1,030	Salaries and Wages Payable	1,420
Equipment	10,000	Common Stock	12,000
		Retained Earnings	6,400
	$23,980		$23,980

During August, the following summary transactions were completed.

Aug.	1	Paid $400 cash for advertising in local newspapers. Advertising flyers will be included with newspapers delivered during August and September.
	3	Paid August rent $380.
	5	Received $1,200 cash from customers in payment of account.
	10	Paid $3,120 for salaries due employees, of which $1,700 is for August and $1,420 is for July salaries payable.
	12	Received $2,800 cash for services performed in August.
	15	Purchased store equipment on account $2,000.

20	Paid creditors $2,000 of accounts payable due.
22	Purchased supplies on account $800.
25	Paid $2,900 cash for employees' salaries.
27	Billed customers $3,760 for services performed.
29	Received $780 from customers for services to be performed in the future.

Adjustment data:

1. A count shows supplies on hand of $960.
2. Accrued but unpaid employees' salaries are $1,540.
3. Depreciation on equipment for the month is $320.
4. Services were performed to satisfy $800 of unearned service revenue.
5. One month's worth of advertising services has been received.
6. One month of interest revenue related to the $4,000 note receivable has accrued. The 4-month note has a 6% annual interest rate. (*Hint:* Use the formula from Illustration 4.19 to compute interest.)

Instructions

a. Enter the August 1 balances in the ledger accounts. (Use T-accounts.)

b. Journalize the August transactions.

c. Post to the ledger accounts. B&B's chart of accounts includes Prepaid Advertising, Interest Receivable, Service Revenue, Interest Revenue, Advertising Expense, Depreciation Expense, Supplies Expense, Salaries and Wages Expense, and Rent Expense.

d. Prepare a trial balance at August 31.

e. Journalize and post adjusting entries.

f. Prepare an adjusted trial balance.

g. Prepare an income statement and a retained earnings statement for August and a classified balance sheet at August 31.

h. Journalize and post closing entries and complete the closing process.

i. Prepare a post-closing trial balance at August 31.

f. Cash $2,020
Tot. adj. trial balance $32,580
g. Net loss $530

Record and post transactions, adjusting, and closing journal entries; prepare adjusted trial balance and financial statements.

ACR4.4 (LO 2, 3, 4), AP At June 30, 2025, the end of its most recent fiscal year, Green River Computer Consultants' post-closing trial balance was as follows.

	Debit	Credit
Cash	$5,230	
Accounts Receivable	1,200	
Supplies	690	
Accounts Payable		$ 400
Unearned Service Revenue		1,120
Common Stock		3,600
Retained Earnings		2,000
	$7,120	$7,120

The company underwent a major expansion in July. New staff was hired and more financing was obtained. Green River conducted the following transactions during July 2025, and adjusts its accounts monthly.

July 1	Purchased equipment, paying $4,000 cash and signing a 2-year note payable for $20,000. The equipment has a 4-year useful life. The note has a 6% interest rate which is payable on the first day of each following month.
2	Issued 20,000 shares of common stock for $50,000 cash.
3	Paid $3,600 cash for a 12-month insurance policy effective July 1.
3	Paid the first 2 (July and August 2025) months' rent for an annual lease of office space for $4,000 per month.
6	Paid $3,800 for supplies.
9	Visited client offices and agreed on the terms of a consulting project. Green River will bill the client, Connor Productions, on the 20th of each month for services performed.
10	Collected $1,200 cash on account from Milani Brothers. This client was billed in June when Green River performed the service.
13	Performed services for Fitzgerald Enterprises. This client paid $1,120 in advance last month. All services relating to this payment are now completed.
14	Paid $400 cash for a utility bill. This related to June utilities that were accrued at the end of June.

16 Met with a new client, Thunder Bay Technologies. Received $12,000 cash in advance for future services to be performed.
18 Paid semi-monthly salaries for $11,000.
20 Performed services worth $28,000 on account and billed customers.
20 Received a bill for $2,200 for advertising services received during July. The amount is not due until August 15.
23 Performed the first phase of the project for Thunder Bay Technologies. Recognized $10,000 of revenue from the cash advance received July 16.
27 Received $15,000 cash from customers billed on July 20.

Adjustment data:

1. Adjustment of prepaid insurance.
2. Adjustment of prepaid rent.
3. Supplies used, $1,250.
4. Equipment depreciation, $500 per month.
5. Accrual of interest on note payable. (*Hint:* Use the formula from Illustration 4.19 to compute interest.)
6. Salaries for the second half of July, $11,000, to be paid on August 1.
7. Estimated utilities expense for July, $800 (invoice will be received in August).
8. Income tax for July, $1,200, will be paid in August.

The chart of accounts for Green River Computer Consultants contains the following accounts: Cash, Accounts Receivable, Supplies, Prepaid Insurance, Prepaid Rent, Equipment, Accumulated Depreciation—Equipment, Accounts Payable, Notes Payable, Interest Payable, Income Taxes Payable, Salaries and Wages Payable, Unearned Service Revenue, Common Stock, Retained Earnings, Dividends, Income Summary, Service Revenue, Supplies Expense, Depreciation Expense, Insurance Expense, Salaries and Wages Expense, Advertising Expense, Income Tax Expense, Interest Expense, Rent Expense, and Utilities Expense.

Instructions

a. Enter the July 1 balances in the ledger accounts. (Use T-accounts.)
b. Journalize the July transactions.
c. Post to the ledger accounts.
d. Prepare a trial balance at July 31.
e. Journalize and post adjusting entries for the month ending July 31.
f. Prepare an adjusted trial balance.
g. Prepare an income statement and a retained earning statement for July and a classified balance sheet at July 31.
h. Journalize and post closing entries and complete the closing process.
i. Prepare a post-closing trial balance at July 31.

g. Net income $6,770
Tot. assets $99,670

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT4.1 The financial statements of **Apple Inc.** are presented in Appendix A.

Instructions

a. Using the consolidated income statement and balance sheet, identify items that may result in adjusting entries for deferrals.
b. Using the consolidated income statement, identify two items that may result in adjusting entries for accruals.
c. What was the amount of depreciation and amortization expense for 2020 and 2019? (You will need to examine the notes to the financial statements or the statement of cash flows.) Where was accumulated depreciation and amortization reported?
d. What was the cash paid for income taxes during 2020, reported at the bottom of the consolidated statement of cash flows? What was income tax expense (provision for income taxes) for 2020?

Comparative Analysis Problem: Columbia Sportswear Company vs. Under Armour, Inc.

CT4.2 The financial statements of Columbia Sportswear Company are presented in Appendix B. Financial statements of Under Armour, Inc. are presented in Appendix C.

Instructions

a. Identify two accounts on Columbia's balance sheet that provide evidence that Columbia uses accrual accounting. In each case, what income statement account would normally be affected by the adjustment process?

b. Identify two accounts on Under Armour's balance sheet that provide evidence that Under Armour uses accrual accounting (different from the two you listed for Columbia). In each case, what income statement account would normally be affected by the adjustment process?

Comparative Analysis Problem: Amazon.com, Inc. vs. Walmart Inc.

CT4.3 The financial statements of Amazon.com, Inc. are presented in Appendix D. Financial statements of Walmart Inc. are presented in Appendix E.

Instructions

a. Identify two accounts on Amazon's balance sheet that provide evidence that Amazon uses accrual accounting. In each case, what income statement account would normally be affected by the adjustment process?

b. Identify two accounts on Walmart's balance sheet that provide evidence that Walmart uses accrual accounting (different from the two you listed for Amazon). In each case, what income statement account would normally be affected by the adjustment process?

Interpreting Financial Statements

CT4.4 Laser Recording Systems, founded in 1981, produces disks for use in the home market. The following is an excerpt from Laser Recording Systems' financial statements (all dollars in thousands).

Laser Recording Systems

Management Discussion

Accrued liabilities increased to $1,642 at January 31, from $138 at the end of the previous fiscal year. Compensation and related accruals increased $195 due primarily to increases in accruals for severance, vacation, commissions, and relocation expenses. Accrued professional services increased by $137 primarily as a result of legal expenses related to several outstanding contractual disputes. Other expenses increased $35, of which $18 was for interest payable.

Instructions

a. Can you tell from the discussion whether Laser Recording Systems has prepaid its legal expenses and is now making an adjustment to the asset account Prepaid Legal Expenses, or whether the company is handling the legal expense via an accrued expense adjustment?

b. Identify each of the adjustments Laser Recording Systems is discussing as one of the four types of possible adjustments discussed in the chapter. How is net income ultimately affected by each of the adjustments?

c. What journal entry did Laser Recording make to record the accrued interest?

Real-World Focus

CT4.5 You can use the Internet to learn about the functions of the Securities and Exchange Commission (SEC).

Instructions

Use the information at the SEC's website to answer the following questions.

a. What event spurred the creation of the SEC? Why was the SEC created?

b. What are the five divisions of the SEC? Briefly describe the purpose of each.

c. What are the responsibilities of the chief accountant?

Decision-Making Across the Organization

CT4.6 Abbey Park was organized on April 1, 2024, by Trudy Crawford. Trudy is a good manager but a poor accountant. From the trial balance prepared by a part-time bookkeeper, Trudy prepared the following income statement for the quarter that ended March 31, 2025.

Abbey Park
Income Statement
For the Quarter Ended March 31, 2025

Revenues		
Rent revenue		$83,000
Operating expenses		
Advertising expense	$ 4,200	
Salaries and wages expense	27,600	
Utilities expense	1,500	
Depreciation expense	800	
Maintenance and repairs expense	2,800	
Total operating expenses		36,900
Net income		$46,100

Trudy knew 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 in the income statement, the ledger contains these selected balances at March 31, 2025.

Supplies	$ 4,500
Prepaid Insurance	7,200
Notes Payable	20,000

You then make inquiries and discover the following.

1. Rent revenue includes advanced rentals for summer-month occupancy, $21,000.
2. There were $600 of supplies on hand at March 31.
3. Prepaid insurance resulted from the payment of a 1-year policy on January 1, 2025.
4. The mail on April 1, 2025, brought the following bills: advertising for week of March 24, $110; repairs made March 10, $1,040; and utilities $240.
5. Wage expense totals $290 per day. At March 31, 3 days' wages have been incurred but not paid.
6. The note payable is a 3-month, 7% note dated January 1, 2025.

Instructions

With the class divided into groups, answer the following.

a. Prepare a correct income statement for the quarter ended March 31, 2025.
b. Explain to Trudy the generally accepted accounting principles that she did not follow in preparing her income statement and their effect on her results.

Communication Activity

CT4.7 On numerous occasions, proposals have surfaced to put the federal government on the accrual basis of accounting. This is no small issue because if this basis were used, it would mean that billions in unrecorded liabilities would have to be booked and the federal deficit would increase substantially.

Instructions

a. What is the difference between accrual-basis accounting and cash-basis accounting?
b. Comment on why politicians prefer a cash-basis accounting system over an accrual-basis system.
c. Write a letter to your senators explaining why you think the federal government should adopt the accrual basis of accounting.

Ethics Case

CT4.8 Wells Company is a pesticide manufacturer. Its sales declined greatly this year due to the passage of legislation outlawing the sale of several of Wells's chemical pesticides. During the coming year, Wells will have environmentally safe and competitive replacement chemicals to replace these discontinued products. Sales in the next year are expected to greatly exceed those of any prior year. Therefore, the decline in this year's sales and profits appears to be a one-year aberration.

Even so, the company president believes that a large dip in the current year's profits could cause a significant drop in the market price of Wells's stock and make it a takeover target. To avoid this possibility, he urges Tim Allen, controller, to accrue every possible revenue and to defer as many expenses as possible in making this period's year-end adjusting entries. The president says to Tim, "We need the revenues this year, and next year we can easily absorb expenses deferred from this year. We can't let our stock price be hammered down!" Tim didn't get around to recording the adjusting entries until January 17, but he dated the entries December 31 as if they were recorded then. Tim 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 the president's request and Tim's dating the adjusting entries December 31?

c. Can Tim accrue revenues and defer expenses and still be ethical?

All About You

CT4.9 Companies prepare balance sheets in order to know their financial position at a specific point in time. This enables them to make a comparison to their position at previous points in time and gives them a basis for planning for the future. In order to evaluate *your* financial position, you can prepare a personal balance sheet. Assume that you have compiled the following information regarding your finances. (*Hint:* Some of the items might not be used in your personal balance sheet.)

Amount owed on student loan balance (long-term)	$ 5,000
Balance in checking account	1,200
Certificate of deposit (6-month)	3,000
Annual earnings from part-time job	11,300
Automobile	7,000
Balance on automobile loan (current portion)	1,500
Balance on automobile loan (long-term portion)	4,000
Home computer	800
Amount owed to you by younger brother	300
Balance in money market account	1,800
Annual tuition	6,400
Video and stereo equipment	1,250
Balance owed on credit card (current portion)	150
Balance owed on credit card (long-term portion)	1,650

Instructions

Prepare a personal balance sheet using the format you have learned for a classified balance sheet for a company. For the equity account, use M. Y. Own, Capital.

FASB Codification Activity

CT4.10 If your school has a subscription to the FASB Codification, log in and prepare responses to the following.

Instructions

Access the glossary ("Master Glossary") to answer the following.

a. What is the definition of revenue?

b. What is the definition of compensation?

Answers to Insight and Accounting Across the Organization Questions

Reporting Revenue Accurately **Q:** In the past, why was it argued that Apple should spread the recognition of iPhone revenue over a two-year period, rather than recording it upfront? **A:** Apple promises to provide software updates over the life of the phone's use. Because this represents an unfulfilled performance obligation, it was argued that Apple should spread its revenue recognition over a two-year estimated life of the phone.

Turning Gift Cards into Revenue **Q:** Suppose that Robert Jones purchases a $100 gift card at Best Buy on December 24, 2024, and gives it to his wife, Mary Jones, on December 25, 2024. On January 3, 2025, Mary uses the card to purchase a $100 smart speaker. When do you think Best Buy 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 results when Best Buy provides the goods. Thus, when Best Buy receives cash in exchange for the gift card on December 24, 2024, it should recognize a liability, Unearned Sales Revenue, for $100. On January 3, 2025, when Mary Jones exchanges the card for merchandise, Best Buy should recognize revenue and eliminate $100 from the balance in the Unearned Sales Revenue account.

Got Junk? **Q:** What accounting issue might this cause for companies? **A:** The balance sheet 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 balance sheet, 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 reduce their costs.

CHAPTER 5

Merchandising Operations and the Multiple-Step Income Statement

Chapter Preview

Merchandising is one of the largest and most influential industries in the United States. Many of you have worked 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 multiple-step income statement.

Feature Story

Buy Now, Vote Later

Have you ever shopped for outdoor gear at an **REI (Recreational Equipment, Inc.)** store? If so, you might have been surprised if a salesclerk asked if you were a member. A member? What do you mean a member? REI is a consumer cooperative, or "co-op" for short. To figure out what that means, consider this:

As a cooperative, the Company is owned by its members. Each member is entitled to one vote in the election of the Company's Board of Directors. Recent data show that we have more than 18 million members.

Voting rights? Now that's something you don't get from shopping at **Walmart**. REI members get other benefits as well, including sharing in the company's profits through a dividend at the end of the year. The more you spend, the bigger your dividend.

Since REI is a co-op, you might also wonder whether management's incentives might be a little different than at other stores. Management is still concerned about making a profit, as it ensures the long-term viability of the company. REI's members also want the company to be run efficiently, so that prices remain low. In order for its members to evaluate just how well management is doing, REI publishes an audited annual report, just like publicly traded companies do.

How well is this business model working for REI? Well, it has consistently been rated as one of the best places to work in the United States by *Fortune* magazine.

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Describe merchandising operations and inventory systems.	• Operating cycles • Flow of costs	**DO IT! 1** Merchandising Operations and Inventory Systems
LO 2 Record purchases under a perpetual inventory system.	• Freight costs • Purchase returns and allowances • Purchase discounts • Summary of purchasing transactions	**DO IT! 2** Purchase Transactions
LO 3 Record sales under a perpetual inventory system.	• Sales returns and allowances • Sales discounts • Data analytics and credit sales	**DO IT! 3** Sales Transactions
LO 4 Prepare a multiple-step income statement.	• Single-step income statement • Multiple-step income statement	**DO IT! 4** Multiple-Step Income Statement
LO 5 Determine cost of goods sold under a periodic inventory system.	• Cost of goods purchased • Cost of goods sold	**DO IT! 5** Cost of Goods Sold—Periodic System
LO 6 Compute and analyze gross profit rate and profit margin.	• Gross profit rate • Profit margin	**DO IT! 6** Gross Profit Rate and Profit Margin

Go to the Review and Practice section at the end of the chapter for a review of key concepts and practice applications with solutions.

Visit Wiley Course Resources for additional tutorials and practice opportunities.

5.1 Merchandising Operations and Inventory Systems

LEARNING OBJECTIVE 1

Describe merchandising operations and inventory systems.

REI, **Walmart Inc.**, and **Amazon.com** 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** might buy goods from wholesaler **McKesson**, and retailer **Office Depot** might buy office supplies from wholesaler **United Stationers**.

The primary source of revenue 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.

1. **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.
2. **Operating expenses** are incurred in the process of earning sales revenue. Examples include advertising expense and rent expense. Note that operating expenses are a category of expenses, not a single line item on the income statement.

The difference between sales revenue and cost of goods sold is called **gross profit**. **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.

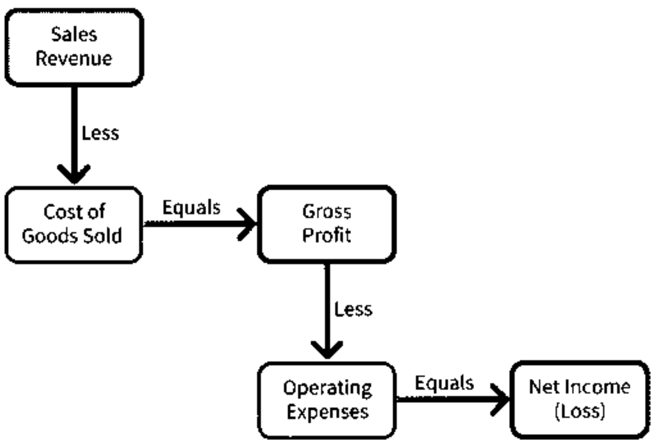


ILLUSTRATION 5.1
Income measurement process for a merchandising company

Operating Cycles

The operating cycle of a merchandising company is ordinarily 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.

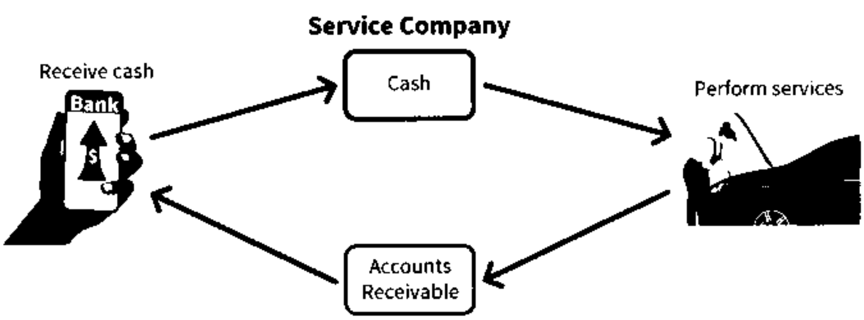
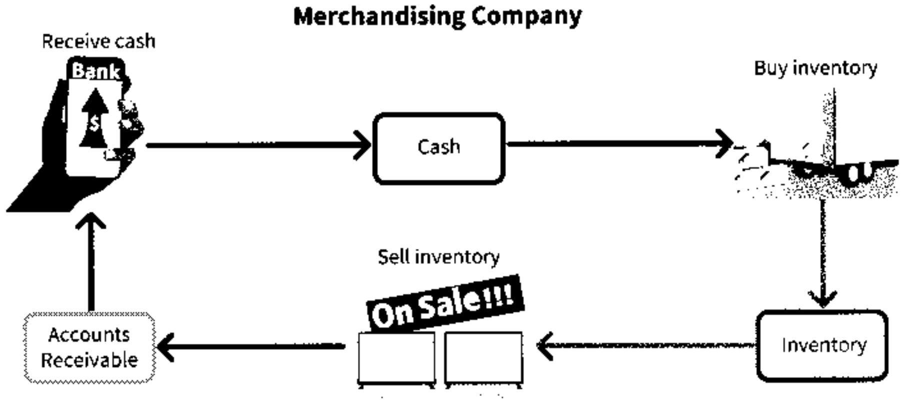


ILLUSTRATION 5.2
Operating cycle for a service company

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. **Inventory** is the merchandise that companies buy and sell to customers. Companies report inventory as a current asset on the balance sheet.

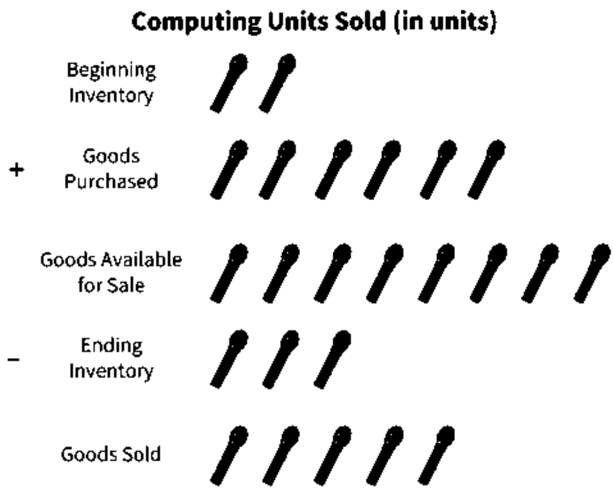
Flow of Costs

For a merchandising company, its inventory process is as follows.

- Beginning inventory plus goods purchased determines the goods available for sale.
- Those goods that are not sold by the end of the accounting period represent ending inventory.
- Goods that are sold are assigned to cost of goods sold.

Illustration 5.4 shows this process.

ILLUSTRATION 5.4
Inventory process



Companies use one of two systems to account for the cost of inventory: a **perpetual inventory system** or a **periodic inventory system**.

HELPFUL HINT
Even under perpetual inventory systems, companies take a physical inventory count. This is done as a control procedure to verify inventory levels, in order to detect theft or "shrinkage."

Perpetual System

In a **perpetual inventory system**, companies keep detailed records of the cost of each inventory purchase and sale (see **Helpful Hint**). These records continuously—perpetually—show the inventory that should be on hand for every item. For example, a **Ford** dealership has separate inventory records for each automobile, truck, and van on its lot and showroom floor. Similarly, a **Whole Foods**'s 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**.

Periodic System

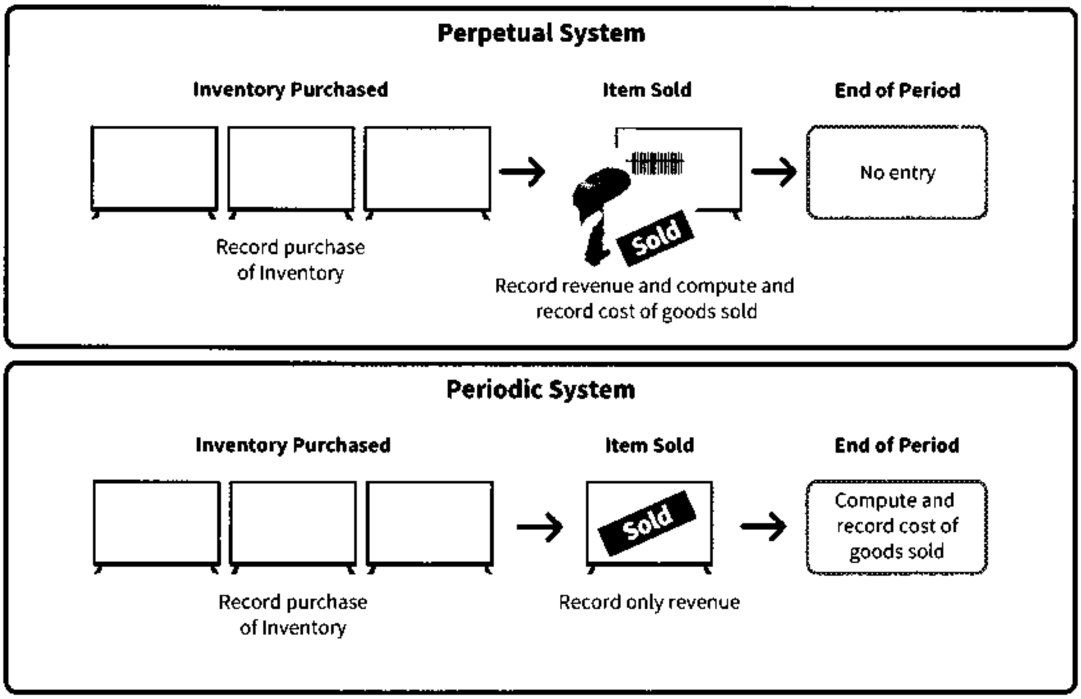
In a **periodic inventory system**, companies do not keep detailed inventory records of the goods on hand throughout the period. Instead, they determine the cost of goods sold **only at the end of the accounting period**—that is, periodically. At that point, the company takes a physical inventory count 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 the cost of goods purchased.
3. Subtract the cost of goods on hand **as determined by the physical inventory count** at the end of the accounting period.

Illustration 5.5 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 identified, 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. Much of **Amazon.com**'s success is attributed to its sophisticated inventory system.

Some businesses find it either unnecessary or uneconomical to invest in a sophisticated, computerized perpetual inventory system such as Amazon's. Many small merchandising businesses now use basic accounting software, which 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 5A.

Investor Insight Morrow Snowboards, Inc.

Sportstock/Getty Images

Improving Stock Appeal

Investors are often eager to invest in a company that has a hot new product. However, when snowboard-maker Morrow Snowboards, Inc. (now part of K2 Sports) issued shares of stock to the public for the first time, some investors expressed reluctance to invest in Morrow because of a number of accounting control problems. To reduce investor concerns, Morrow 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.

If a perpetual system keeps track of inventory on a daily basis, why do companies ever need to do a physical count? (Answer is available at the end of the chapter.)

ACTION PLAN

- **Review merchandising concepts.**
- **Understand the flow of costs in a merchandising company.**

DO IT! 1 Merchandising Operations and Inventory Systems

Indicate whether the following statements are true or false. If false, indicate how to correct the statement.

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.

Solution

1. False. The primary source of revenue for a service company (not a merchandising company) results from performing services for customers. Merchandising companies sell products. 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, BE5.2, DO IT! 5.1, and E5.1.

5.2 Recording Purchases Under a Perpetual System

LEARNING OBJECTIVE 2

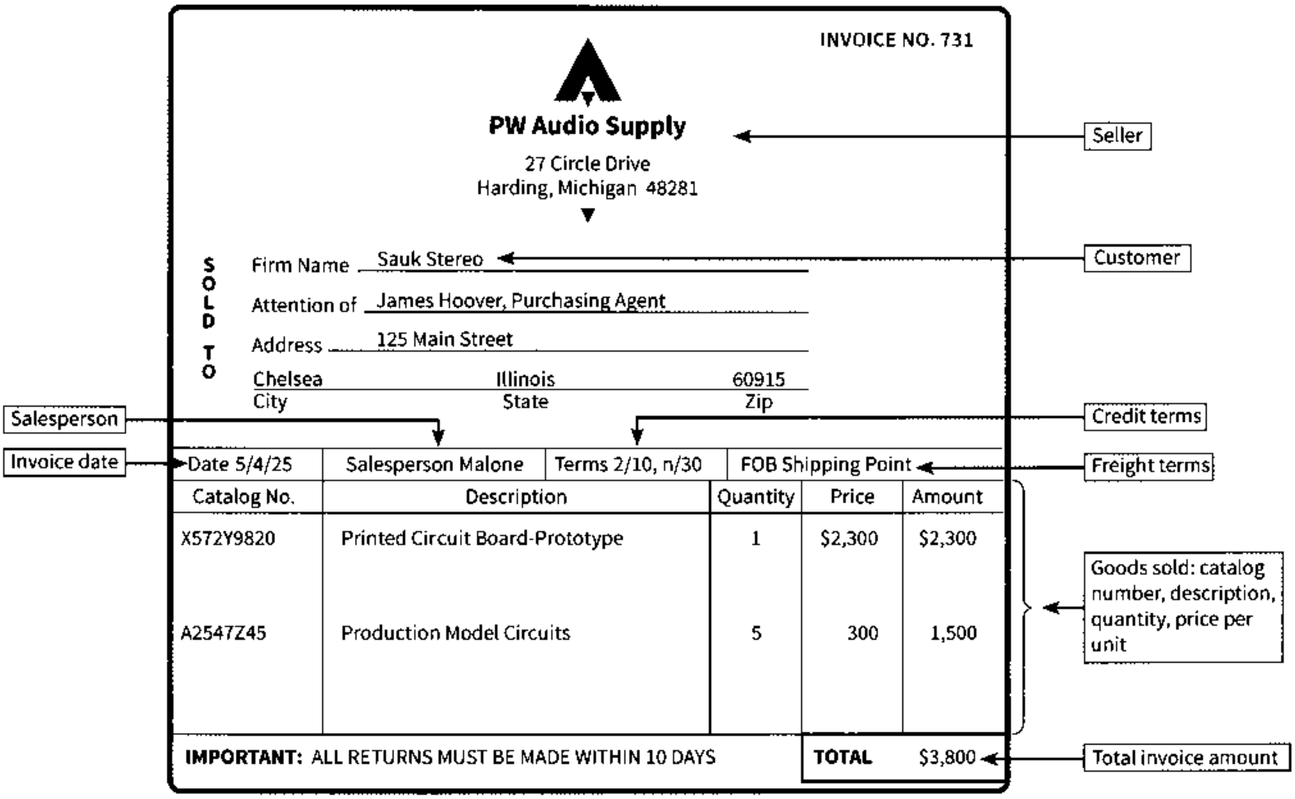
Record purchases under a perpetual inventory system.

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 (or bill) indicates the total purchase price and other relevant information.
- A purchase invoice to a buyer is a sales invoice to a seller.

In **Illustration 5.6**, for example, Sauk Stereo (the buyer) uses as a purchase invoice the sales invoice prepared by PW Audio Supply, (the seller).

ILLUSTRATION 5.6 **Sales invoice used as purchase invoice by Sauk Stereo**


INVOICE NO. 731

PW Audio Supply
27 Circle Drive
Harding, Michigan 48281

SOLD TO
Firm Name Sauk Stereo
Attention of James Hoover, Purchasing Agent
Address 125 Main Street
Chelsea (City) Illinois (State) 60915 (Zip)

Date 5/4/25	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
IMPORTANT: ALL RETURNS MUST BE MADE WITHIN 10 DAYS			**TOTAL**	$3,800

Sauk Stereo makes the following journal entry to record its purchase from PW Audio Supply on account. 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	+	SE
+3,800				
		+3,800		

Cash Flows
no effect

Under the perpetual inventory system, companies record purchases of merchandise for resale in the Inventory account. Not all purchases are debited to Inventory, however. Recall that companies record purchases of assets acquired for use and not for resale, such as supplies and equipment, 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, Sauk Stereo increases (debits) Supplies (instead of the Inventory account).

Freight Costs

Freight terms are agreed to by the buyer and seller. They indicate who is responsible for paying the freight charges (shipping costs) and who is responsible for the risk of loss or damage to the merchandise during transport. Identifying which party bears the risk of loss or damage is an important factor in determining when the goods cease being an asset of the seller and become an asset of the buyer.

Freight terms are expressed as either FOB shipping point or FOB destination. The letters FOB mean **free on board** until the point where ownership is transferred.

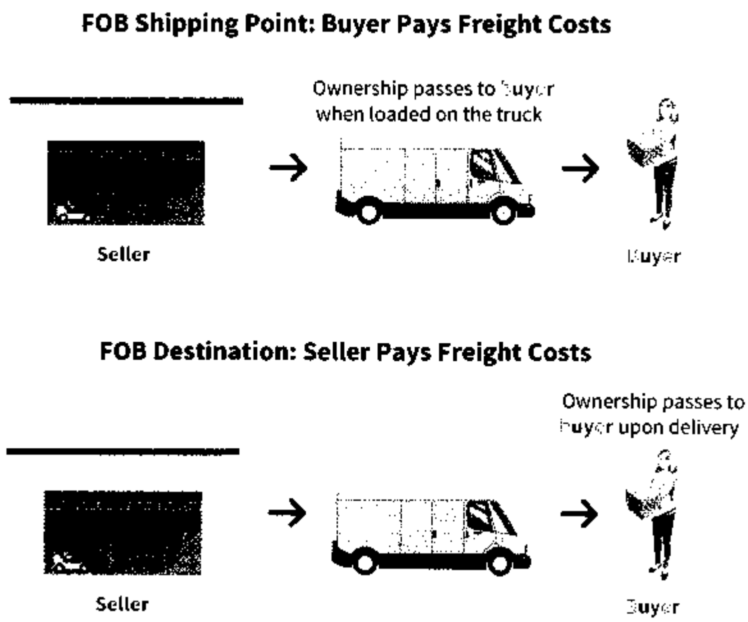
- **FOB shipping point** means that ownership of goods passes to the buyer when the public carrier accepts the goods from the seller. The buyer is responsible for the freight costs from the shipping point to the buyer's destination (normally the buyer's place of business). The buyer is also responsible for any loss or damage that occurs along the way. In other words, the goods become part of the buyer's inventory at the point of shipping even though the goods will not arrive at the buyer's destination for several days or even weeks.
- **FOB destination** means that ownership of goods remains with the seller until the goods reach the buyer. The seller is responsible for delivering the goods to the destination. The seller pays the freight costs for transporting the goods to the buyer's destination and is responsible for any loss or damage that occurs along the way. As such, the goods would be included in the seller's inventory until they are delivered.

HELPFUL HINT

The buyer pays freight only when the shipping terms are FOB shipping point.

For example, the sales invoice in Illustration 5.6 indicates FOB shipping point. (see **Helpful Hint**). Thus, the buyer (Sauk Stereo) pays the freight charges. **Illustration 5.7** shows 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 Public Carrier Co. $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	+	SE
+150				
−150				

Cash Flows
−150

Thus, any freight costs incurred by the buyer are part of the cost of inventory 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 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	+	SE
				−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.

- 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**.

For example, assume that Sauk Stereo returned goods costing $300 to PW Audio Supply on May 8. The goods were purchased on credit. The following entry by Sauk Stereo for the returned merchandise decreases (debits) Accounts Payable and decreases (credits) Inventory.

May 8	Accounts Payable	300	
	Inventory		300
	(To record return of goods purchased from PW Audio Supply)		

A	=	L	+	SE
		−300		
−300				

Cash Flows
no effect

Because Sauk Stereo increased Inventory when the goods were received, Inventory is now decreased when Sauk Stereo returns the goods.

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 (see **Helpful Hint**).

HELPFUL HINT

Although the Inventory account is decreased, there are not fewer inventory units, only a decrease in cost of the existing units purchased.

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 its operating cycle by converting the accounts receivable into cash more quickly.

> **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 if the discount is not taken.

- In the sales invoice in Illustration 5.6, credit terms are 2/10, n/30, which is read "two-ten, net thirty" (see **Helpful Hint**).
- 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 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. Since the terms are 2/10, n/30, 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 net amount owed, reduces (credits) Inventory by the \$70 discount, and reduces (credits) Cash by the net amount paid.

A	=	L	+	SE
		−3,500		
−3,430				
−70				

Cash Flows
−3,430

May 14	Accounts Payable	3,500	
	Cash		3,430
	Inventory		70
	(To record payment within discount period)		

If Sauk Stereo failed to take the discount and instead made full payment of \$3,500 on June 3 (after the expiration of the discount period), it would debit Accounts Payable and credit Cash for \$3,500 each.

A	=	L	+	SE
		−3,500		
−3,500				

Cash Flows
−3,500

June 3	Accounts Payable	3,500	
	Cash		3,500
	(To record payment with no discount taken)		

A merchandising company should usually 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 any interest rate less than 36.5% than to lose the discount (prevailing bank interest rates are between 6% and 10%).

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.

Summary of Purchasing Transactions

The following T-account (with transaction descriptions in red) provides a summary of the effect of Sauk Stereo's previous transactions on Inventory.

1. Sauk Stereo originally purchased $3,800 of inventory on account (May 4).
2. It paid $150 in freight charges (May 6).
3. It then returned $300 of goods (May 8).
4. 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 (May 14).

	Inventory				
Purchase	May 4	3,800	May 8	300	**Purchase return**
Freight-in	6	150	14	70	**Purchase discount**
Balance		3,580			

DO IT! 2 Purchase Transactions

On September 5, De La Hoya Company buys merchandise on account from Junot Diaz Company. The selling price of the goods to De La Hoya is $1,500, and the cost to Diaz Company was $800. On September 8, De La Hoya returns defective goods with a selling price of $200. Record the transactions on the books of De La Hoya Company.

ACTION PLAN

- **Purchaser records goods at cost.**
- **When goods are returned, purchaser reduces Inventory.**

Solution

Sept. 5	Inventory	1,500	
	Accounts Payable		1,500
	(To record goods purchased on account)		
8	Accounts Payable	200	
	Inventory		200
	(To record return of defective goods)		

Related exercise material: BE5.3, BE5.5, DO IT! 5.2, E5.2, and E5.3.

5.3 Recording Sales Under a Perpetual System

LEARNING OBJECTIVE 3

Record sales under a perpetual inventory system.

The revenue recognition principle, requires that 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, provides support for a credit sale (see **Helpful Hint**).
- The invoice shows the date of sale, customer name, total sales price, and other relevant information.

HELPFUL HINT

The original invoice goes to the customer, and the seller keeps a copy for use in recording the sale.

The seller makes two entries for each sale:

1. The seller increases (debits) Cash (or Accounts Receivable if a credit sale) and also increases (credits) Sales Revenue.
2. 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	+	SE
+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	+	SE
				−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 revenue account. For example, PW Audio Supply may decide to keep separate sales revenue accounts for its sales of TVs, smart speakers, and headsets. **REI** might use separate accounts for camping gear, children's clothing, and ski equipment—or it might have even more narrowly defined accounts. By using separate sales revenue accounts for major product lines, rather than a single combined sales revenue account, company management can more closely monitor sales trends and respond to changes in sales patterns more strategically. For example, if TV sales are increasing while smart speaker 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 reports only a single sales figure—the sum of all of its individual sales revenue accounts. This is done for two reasons:

1. Providing detail on all of its individual sales revenue accounts would add considerable length to the income statement.
2. Companies do not want their competitors to know the details of their operating results.

However, **Microsoft** expanded its disclosure of revenue from three to five types. The reason: The additional categories enabled financial statement users to better evaluate the growth of the company's consumer and Internet businesses (see **Ethics Note**).

ETHICS NOTE

Many companies are trying to improve the quality of their financial reporting. For example, General Electric increased the detail about on its revenues and operating profits.

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.

Anatomy of a Fraud[1]

Holly Harmon was a cashier at a national superstore for only a short time 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. After Holly quit, a review of past surveillance tapes 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.

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 returned goods involve two journal entries: (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)		

A	=	L	+	SE
				−300 Rev
−300				

Cash Flows
no effect

8	Inventory	140	
	Cost of Goods Sold		140
	(To record cost of goods returned)		

A	=	L	+	SE
+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 credit Cost of Goods Sold for $50.

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 since no items are returned.

[1] The "Anatomy of a Fraud" stories in this text 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.

Sales Returns and Allowances is a **contra revenue account** to Sales Revenue. A contra revenue account is an account that is offset against a revenue account on the income statement. The Sales Returns and Allowances account is deducted from Sales Revenue 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 track separately in the accounts and to report separately in the income statement the amount of sales returns and allowances. Disclosure of this information is important to management for the following reasons.

- Excessive returns and allowances may suggest problems—inferior merchandise, inaccuracies in filling orders, errors in billing customers, or delivery or shipment mistakes.
- 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.

At the end of the accounting period, if the company anticipates that future sales returns and allowances will be material, the company should make an adjusting entry to estimate the amount of these returns. In some industries, such as those relating to the sale of books and periodicals, returns are often material. The accounting for situations where returns must be estimated is addressed in advanced accounting courses.

Accounting Across the Organization Costco Wholesale

Jacob Wackerhausen/ Getty Images

The Point of No Return?

In most industries, sales returns are relatively minor. But returns of consumer electronics can really take a bite out of profits. At one time, the marketing executives at Costco Wholesale faced a difficult decision. Costco always prided itself on its generous return policy. Most goods had an unlimited grace period for returns. However, a new policy requires that certain electronics must be returned within 90 days of their purchase. The reason? The cost of returned products such as high-definition TVs, computers, and iPods cut an estimated 8¢ per share off Costco's earnings per share, which was $2.30.

Online sales have accentuated the return problem. Many retailers have found that to compete, they must offer free shipping for returned goods. However, to address the significant costs of returns, many retailers now encourage customers to return goods directly to stores. These retailers have benefited from the additional purchases that customers make once in the stores.

Sources: Kris Hudson, "Costco Tightens Policy on Returning Electronics," *Wall Street Journal* (February 27, 2007), p. B4; Loretta Chao, "More Retailers Offering Free Shipping on Returns," *Wall Street Journal* (October 11, 2015); and Erica Phillips, "Retailers Offer Myriad Returns Options to Retain Customers; Traditional and Online Retailers Are Expanding Returns Strategies, Aiming to Boost Convenience, Cut Costs," *Wall Street Journal Online* (December 27, 2017).

If a company expects significant returns, what are the implications for revenue recognition? (Answer is available at the end of the chapter.)

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	+	SE
+3,430				
				−70 Rev
−3,500				

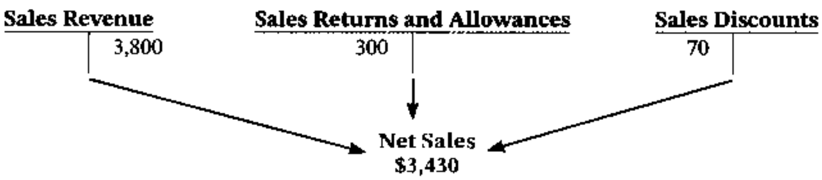
Cash Flows
+3,430

May 14	Cash	3,430	
	Sales Discounts	70	
	Accounts Receivable		3,500
	(To record collection within the 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 track 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.

At the end of the accounting period, if the amount of potential discounts is material, the company should make an adjusting entry to estimate the discounts. This would not usually be the case for sales discounts but might be necessary for other types of discounts, such as volume discounts, which are addressed in more advanced accounting courses.

The following T-accounts summarize the three sales-related transactions and show their combined effect on net sales for PW Audio Supply.



Data Analytics and Credit Sales

Increased access to ever larger amounts of data about customers, suppliers, products, and virtually every other aspect of a business has resulted in a greater reliance by companies on data analytics to support business decisions. Credit sales, sales returns and allowances, and sales discounts all provide rich opportunities for the use of data analytics.

- Effectively analyzing data regarding current, as well as potential, customers can help a company expand its sales base while minimizing the risk of unpaid receivables.
- In recent years, companies such as **Best Buy**, **REI**, and **Costco** have all refined their customer return policies, sometimes with unique rules for specific product types, as a result of data analytics applied to their data on product returns.
- To achieve the optimal cost-benefit balance on sales discounts, companies statistically analyze past discount practices to determine how large the discount should be, how long the payment period should be, and other factors.

Further, both **Amazon** and **Walmart** now use artificial intelligence to decide whether it would be more profitable to process a return or simply refund a customer's money without return of the product. Amazon also uses algorithms to detect fraudulent returns by cybercriminals.

People, Planet, and Profit Insight REI

Robert Alexander/ Archive Photos/ Getty Images

Selling Green

REI had sustainable business practices long before social responsibility became popular at other companies. A recent stewardship report states, "we reduced the absolute amount of energy we use despite opening four new stores and growing our business; we grew the amount of FSC-certified paper we use to 58.4 percent of our total paper footprint—including our cash register receipt paper; we facilitated 2.2 million volunteer hours and we provided $3.7 million to more than 330 conservation and recreation nonprofits."

So, while REI, like other retailers, closely monitors its financial results, it also strives to succeed in other areas.

Efforts to be profitable while making meaningful efforts toward sustainability are sometimes referred to as "monetizing environmental sustainability." What do you think is meant by "monetize environmental sustainability"? (Answer is available at the end of the chapter.)

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).**

DO IT! 3 Sales Transactions

On September 5, Junot Diaz Company sells merchandise on account to De La Hoya Company. The selling price of the goods is $1,500, and the cost to Diaz Company was $800. On September 8, De La Hoya returns defective goods with an initial selling price of $200 and a fair value of $30. Record the transactions on the books of Junot Diaz Company.

Solution

Sept. 5	Accounts Receivable	1,500	
	Sales Revenue		1,500
	(To record credit sale)		
5	Cost of Goods Sold	800	
	Inventory		800
	(To record cost of goods sold)		
8	Sales Returns and Allowances	200	
	Accounts Receivable		200
	(To record credit granted for receipt of returned goods)		
8	Inventory	30	
	Cost of Goods Sold		30
	(To record fair value of goods returned)		

Related exercise material: BE5.3, BE5.4, DO IT! 5.3, E5.4, E5.5, E5.6, and E5.7.

5.4 Preparing the Multiple-Step Income Statement

LEARNING OBJECTIVE 4

Prepare a multiple-step income statement.

Single-Step Income Statement

International Note

The IASB and FASB are involved in a joint project to evaluate the format of financial statements. The first phase of that project involves a focus on how to best present revenues and expenses. One longer-term result of the project may be an income statement format that better reflects how businesses are run.

Companies widely use two forms of the income statement (see **International Note**). One is the **single-step income statement**. The statement is so named because only one step, subtracting total expenses from total revenues, is required in determining net income (or net loss).

In a single-step statement, all data are classified into two categories:

1. **Revenues**, which include both operating revenues and nonoperating revenues and gains (for example, interest revenue and gain on sale of equipment).
2. **Expenses**, which include cost of goods sold, operating expenses, and nonoperating expenses and losses (for example, interest expense, loss on sale of equipment, or income tax expense).

The single-step income statement is the form we have used thus far in the text. **Illustration 5.9** shows a single-step statement for REI. (Note that REI's 2019 year-end was December 28, 2019.)

There are two primary reasons for using the single-step form.

1. A company does not realize any type of profit or income until total revenues exceed total expenses, so it makes sense to divide the statement into these two categories.
2. The form is simple and easy to read.

ILLUSTRATION 5.8

Single-step income statement

Real World

Recreational Equipment, Inc.
Income Statement
For the Year Ended December 28, 2019
(in thousands)

Revenues	
Net sales	$3,122,994
Other revenues	3,656
	3,126,650
Expenses	
Cost of goods sold	1,715,246
Payroll-related expenses	630,531
Occupancy, general and administrative	619,877
Patronage refunds and other	134,153
Income tax expense	5,799
	3,105,606
Net income	$ 21,044

Multiple-Step Income Statement

A second form of the income statement is the **multiple-step income statement**. The multiple-step income statement is often considered more useful because it highlights the components of net income. The REI income statement in Illustration 5.9 is an example.

ILLUSTRATION 5.9

Multiple-step income statements

Real World

Recreational Equipment, Inc.
Income Statement
For the Year Ended December 28, 2019
(in thousands)

Net sales	$3,122,994
Cost of goods sold	1,715,246
Gross profit	1,407,748
Operating expenses	
Payroll-related expenses	630,531
Occupancy, general and administrative	619,877
Total operating expenses	1,250,408
Income from operations	157,340
Other revenues and gains	
Other revenues	3,656
Other expenses and losses	
Patronage refunds and other	134,153
Income before income taxes	26,843
Income tax expense	5,799
Net income	$ 21,044

The multiple-step income statement has three important line items: gross profit, income from operations, and net income. They are determined as follows.

1. Subtract cost of goods sold from net sales to determine **gross profit**.
2. Deduct operating expenses from gross profit to determine **income from operations**.
3. Add or subtract the results of activities not related to operations to income from operations to determine **net income**.

Note that companies report income tax expense in a separate section of the income statement before net income. The net incomes in Illustrations 5.8 and 5.9 are the same. The two income statements differ in the amount of detail displayed and the order presented. The following discussion provides additional information about the components of a multiple-step income statement.

Sales

The income statement for a merchandising company typically presents gross sales for the period. The company deducts sales returns and allowances and sales discounts (both contra accounts) from sales revenue in the income statement to arrive at **net sales**. Illustration 5.10 shows the sales section of the income statement for PW Audio Supply.

ILLUSTRATION 5.10

Statement presentation of sales section

PW Audio Supply, Inc.
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

Gross Profit

ALTERNATIVE TERMINOLOGY

Gross profit is sometimes referred to as *gross margin*.

The excess of net sales over cost of goods sold is **gross profit** (see **Alternative Terminology**). It is determined by deducting **cost of goods sold** from net sales. As shown in Illustration 5.9, REI had a gross profit of $1,408 million for the year ended December 28,2019. This computation uses **net sales**, which takes into account sales returns and allowances and sales discounts.

On the basis of the PW Audio Supply sales data presented in Illustration 5.10 (net sales of $460,000) and the cost of goods sold (assume a balance of $316,000), PW Audio Supply's gross profit is $144,000, computed as follows.

Net sales	$460,000
Cost of goods sold	316,000
Gross profit	$144,000

It is important to understand what gross profit is—and what it is not.

- Gross profit represents the **merchandising profit** of a company.
- Because operating expenses have not been deducted, it is **not a measure of the overall profit** of a company.

Nevertheless, management and other interested parties closely watch the amount and trend of gross profit. Comparisons of current gross profit with past amounts and rates and with those in the industry indicate the effectiveness of a company's purchasing and pricing policies.

Operating Expenses

Operating expenses are the next component in measuring net income for a merchandising company. At REI, for example, operating expenses were $1,250 million for the year ended December 28, 2019.

At PW Audio Supply, operating expenses were $114,000. The firm determines its income from operations by subtracting operating expenses from gross profit. Thus, income from operations is $30,000, as follows.

Gross profit	$144,000
Operating expenses	114,000
Income from operations	$ 30,000

Nonoperating Activities and Income Tax Expense

Nonoperating activities consist of various revenues and expenses and gains and losses that are unrelated to the company's main line of operations.

- When nonoperating items are included, the label **Income from operations** (or Operating income) precedes them.
- This label clearly identifies the results of the company's normal operations, an amount determined by subtracting cost of goods sold and operating expenses from net sales. The results of nonoperating activities are shown in the categories
- **Other revenues and gains** and **Other expenses and losses.**

Illustration 5.11 lists examples of each.

ILLUSTRATION 5.11

Examples of nonoperating activities

Other Revenues and Gains

Interest revenue from notes receivable and marketable securities.
Dividend revenue from investments in capital stock.
Rent revenue from subleasing a portion of the store.
Gain from the sale of property, plant, and equipment.

Other Expenses and Losses

Interest expense on notes and loans payable.
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.

Nonoperating income is sometimes very significant. For example, in one quarter, Sears Holdings earned more than half of its net income from investments in derivative securities.

The distinction between operating and nonoperating activities is crucial to external users of financial data.

- These users view operating income as sustainable and many nonoperating activities as non-recurring.
- When forecasting next year's income, analysts put the most weight on this year's operating income and less weight on this year's nonoperating activities (see **Ethics Note**).

ETHICS NOTE

Companies manage earnings in various ways. ConAgra Foods **recorded a non-recurring gain for $186 million from the sale of** Pilgrim's Pride **stock to help meet an earnings projection for the quarter.**

Ethics Insight IBM

ImageRite/Getty Images

Disclosing More Details

After Enron, increased investor criticism and regulator scrutiny forced many companies to improve the clarity of their financial disclosures. For example, IBM began providing more detail regarding its Other gains and losses. It had previously included these items in its selling, general, and administrative expenses, with little disclosure. For example, previously if IBM sold off one of its buildings at a gain, it included this gain in the selling, general, and administrative expense line item, thus reducing that expense. This made it appear that the company had done a better job of controlling operating expenses than it actually had.

As another example, when eBay sold the remainder of its investment in Skype to Microsoft, it reported a gain in Other revenues and gains of $1.7 billion. Since eBay's total income from operations was $2.4 billion, it was very important that the gain from the Skype sale not be buried in operating income.

Why have investors and analysts demanded more accuracy in isolating Other gains and losses from operating items? (Answer is available at the end of the chapter.)

Nonoperating activities are reported in the income statement immediately after operating activities. Included among Other revenues and gains in **Illustration 5.12** are Interest revenue and Gain on disposal of plant assets. Included in Other expenses and losses are Interest expense and Casualty loss from vandalism.

- The net amount resulting from Other revenues and gains and Other expenses and losses is added or subtracted from Income from operations to arrive at Income before income taxes.
- This amount is then multiplied by the company's corporate income tax rate to arrive at **Income tax expense**.
- Income tax expense is subtracted from **Income before income taxes** to arrive at net income.

In Illustration 5.12, we provided the multiple-step income statement of PW Audio Supply. This statement provides more detail than that of REI and thus is useful as a guide for homework. *For homework problems, use the multiple-step form of the income statement unless the requirements state otherwise.*

ILLUSTRATION 5.12 **Multiple-step income statement**

PW Audio Supply, Inc.
Income Statement
For the Year Ended December 31, 2025

Sales			
Sales revenue		$480,000	
Less: Sales returns and allowances	$12,000		**Calculation of gross profit**
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		**Calculation of income from operations**
Freight-out	7,000		
Insurance expense	2,000		
Total operating expenses		114,000	
Income from operations		30,000	
Other revenues and gains			
Interest revenue	3,000		**Results of activities not related to operations**
Gain on disposal of plant assets	600	3,600	
Other expenses and losses			
Interest expense	1,800		
Casualty loss from vandalism	200	2,000	
Income before income taxes		31,600	
Income tax expense		10,100	
Net income		$ 21,500	

DO IT! 4 Multiple-Step Income Statement

The following information is available for Art Center Corp. for the year ended December 31, 2025.

Other revenues and gains	$ 8,000	Sales revenue	$462,000
Other expenses and losses	3,000	Operating expenses	187,000
Cost of goods sold	147,000	Sales discounts	20,000

Prepare a multiple-step income statement for Art Center Corp. The company has a tax rate of 25%.

ACTION PLAN

- **Subtract cost of goods sold from net sales to determine gross profit.**
- **Subtract operating expenses from gross profit to determine income from operations.**
- **Add/subtract nonoperating items to income from operations to determine income before tax.**
- **Multiply the tax rate by income before tax to determine tax expense.**

Solution

Art Center Corp.
Income Statement
For the Year Ended December 31, 2025

Sales		
Sales revenue		$462,000
Sales discounts		20,000
Net sales		442,000
Cost of goods sold		147,000
Gross profit		295,000
Operating expenses		187,000
Income from operations		108,000
Other revenues and gains	$8,000	
Other expenses and losses	3,000	5,000
Income before income taxes		113,000
Income tax expense		28,250
Net income		$ 84,750

Related exercise material: **BE5.6, BE5.7, BE5.8, DO IT! 5.4, E5.8, E5.9, E5.14, and E5.15.**

5.5 Cost of Goods Sold Under a Periodic System

LEARNING OBJECTIVE 5

Determine cost of goods sold under a periodic inventory 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 goods available for sale**.

Cost of goods available for sale is the sum of beginning inventory plus purchases, as shown in **Illustration 5.13**.

ILLUSTRATION 5.13

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, purchase returns, and purchase discounts). The periodic system does not do this.

- The periodic system creates different accounts for purchases, freight costs, purchase returns, and purchase discounts.
- These various accounts are shown in **Illustration 5.14**, which presents the calculation of cost of goods sold for PW Audio Supply using the periodic approach (see **Helpful Hint**).

Note that the basic elements from Illustration 5.13 are highlighted in Illustration 5.14.

ILLUSTRATION 5.14

Cost of goods sold for a merchandiser using a periodic inventory system

PW Audio Supply, Inc.
Cost of Goods Sold
For the Year Ended December 31, 2025

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
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.

The use of the periodic inventory system does not affect the form of presentation in the balance sheet. As under the perpetual system, a company reports inventory in the current assets section. Appendix 5A provides further detail on the use of the periodic system.

DO IT! 5 Cost of Goods Sold—Periodic System

Aerosmith Company's accounting records show the following at the year-end December 31, 2025.

Purchase Discounts	$ 3,400
Freight-In	6,100
Purchases	162,500
Beginning Inventory	18,000
Ending Inventory	20,000
Purchase Returns and Allowances	5,200

Assuming that Aerosmith Company uses the periodic system, compute (a) cost of goods purchased and (b) cost of goods sold.

ACTION PLAN

- **To determine cost of goods purchased, adjust purchases for returns, discounts, and freight-in.**
- **To determine cost of goods sold, add cost of goods purchased to beginning inventory, and subtract ending inventory.**

Solution

a. Cost of goods purchased = \$160,000:

Purchases	−	Purchase returns and allowances	−	Purchase discounts	+	Freight-in	
\$162,500	−	\$5,200	−	\$3,400	+	\$6,100	= \$160,000

b. Cost of goods sold = \$158,000:

Beginning inventory	+	Cost of goods purchased	−	Ending inventory	
\$18,000	+	\$160,000	−	\$20,000	= \$158,000

Related exercise material: BE5.9, BE5.10, BE5.11, DO IT! 5.5, E5.16, and E5.17.

5.6 Gross Profit Rate and Profit Margin

LEARNING OBJECTIVE 6

Compute and analyze gross profit rate and profit margin.

Gross Profit Rate

Gross profit is an important element reported in a multiple-step income statement. Analysts often express gross profit as a **percentage** by dividing the amount of gross profit by net sales. This is referred to as the **gross profit rate**. For PW Audio Supply, the gross profit rate is 31.3% (\$144,000 ÷ \$460,000).

- Analysts generally consider the gross profit **rate** to be more informative than the gross profit **amount** because it expresses a more meaningful (qualitative) relationship between gross profit and net sales (see **Decision Tools**).
- For example, a gross profit amount of \$1,000,000 may sound impressive. But if it was the result of sales of \$100,000,000, the company's gross profit rate was only 1%.

Decision Tools

The gross profit rate helps companies decide if the prices of their goods are in line with changes in the cost of inventory.

Illustration 5.15 demonstrates that gross profit rates differ greatly across industries.

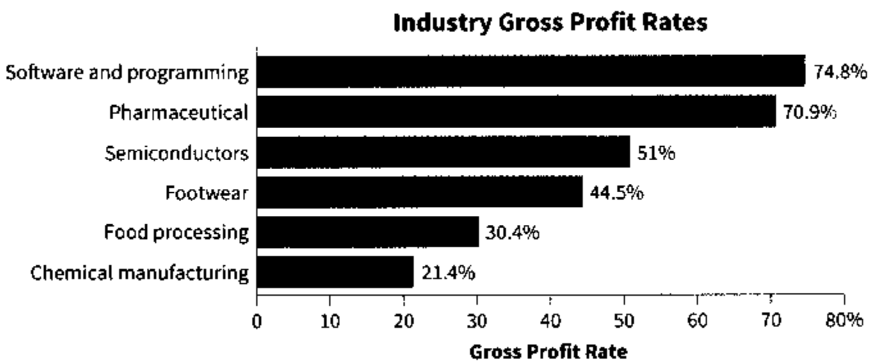


ILLUSTRATION 5.15

Gross profit rate by industry

A decline in a company's gross profit rate might have several causes. For example, a decline might result if a company began to sell products with a lower "markup"—such as budget blue jeans versus designer blue jeans. Or, increased competition may have resulted in a lower selling price. Another reason may be that the company was forced to pay higher prices to its suppliers and was not able to pass these costs on to its customers. The gross profit rates for REI and Dick's Sporting Goods are presented in **Illustration 5.16**.

ILLUSTRATION 5.16
Gross profit rate

$$\text{Gross Profit Rate} = \frac{\text{Gross Profit}}{\text{Net Sales}}$$

REI ($ in thousands)		Dick's Sporting Goods
2019	2018	2019
$\frac{\$1{,}407{,}748}{\$3{,}122{,}994} = 45.1\%$	43.7%	29.2%

REI's gross profit rate increased from 43.7% in 2018 to 45.1% in 2019. What might cause changes in REI's gross profit rate? When the economy changes, retailers also often adjust their selling prices. Changes in national weather patterns can also affect the amount of time people spend outdoors—and therefore impact their purchases of REI merchandise.

Why does REI's gross profit rate differ so much from that of Dick's Sporting Goods?

- The gross profit rate often differs across retailers because of differences in the nature of their goods. REI focuses on outdoor equipment, while Dick's also sells sporting goods and hunting gear.
- The markup may differ significantly in these different product sectors.
- The quality of the equipment they sell might differ. If REI tends to sell more "high-end" goods compared to Dick's, its gross profit rate would tend to be higher. Higher-quality goods often receive a higher markup, but the retailer also sells fewer of them.

In general, retailers adopt either a high-volume–low-margin approach (e.g., **Walmart**) or a low-volume–high-margin approach (e.g., **Saks Fifth Avenue**). The strategic choice is often revealed in differences in the companies' gross profit rates.

Profit Margin

Profit margin measures the percentage of each dollar of sales that results in net income. We compute this ratio by dividing net income by net sales (revenue) for the period.

How do the gross profit rate and profit margin differ?

Decision Tools

The profit margin helps companies decide if they are maintaining an adequate margin between sales and expenses.

- The gross profit rate measures the margin by which selling price exceeds cost of goods sold.
- **The profit margin measures the extent by which selling price covers all expenses** (including cost of goods sold) (see **Decision Tools**).
- A company can improve its profit margin by either increasing its gross profit rate and/or by controlling its operating expenses and other costs.

For example, at one time **Radio Shack** reported increased profit margins which it accomplished by closing stores and slashing costs. Eventually, however, it was forced to file for bankruptcy as sales continued to decline.

Profit margins vary across industries. Businesses with high turnover, such as grocery stores (**Safeway** and **Kroger**) and discount stores (**Target** and **Walmart**), generally experience low profit margins. Low-turnover businesses, such as high-end jewelry stores (**Tiffany and Co.**) or major drug manufacturers (**Merck**), have high profit margins. Further, when companies own separate business lines that have significantly different profit margins, they often choose to provide additional disclosures regarding the profitability of each business segment. For example, **American Eagle Outfitters** recently began to provide separate information about its highly profitable and rapidly growing **Aerie** segment as well as its lower-margin and declining **American Eagle** segment. **Illustration 5.17** shows profit margins from a variety of industries.

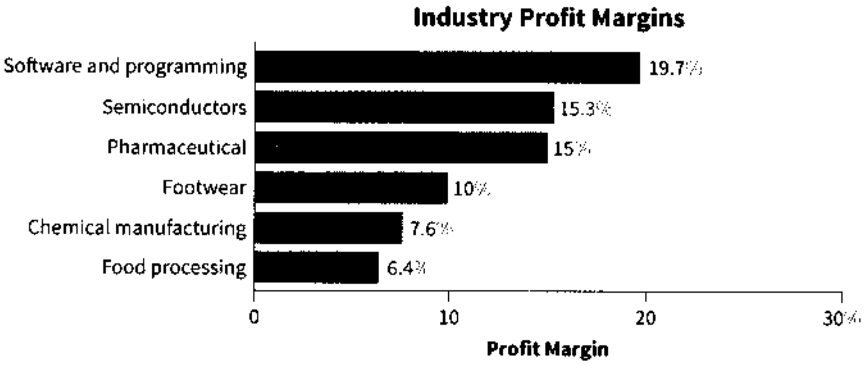


ILLUSTRATION 5.17

Profit margins by industry

Profit margins for REI and Dick's Sporting Goods are presented in Illustration 5.18.

ILLUSTRATION 5.18

Profit margin

$$\text{Profit Margin} = \frac{\text{Net Income}}{\text{Net Sales}}$$

REI ($ in thousands)		Dick's Sporting Goods
2019	**2018**	**2019**
$\frac{\$21{,}044}{\$3{,}122{,}994} = 0.7\%$	1.7%	3.4%

REI's profit margin fell from 1.7 to 0.7 between 2018 to 2019. This means that the company generated 0.7¢ of profit on each dollar of sales. This decline in profit margin occurred even though the gross profit rate increased.

- A change in the profit margin can be caused by a change in the gross profit rate, a change in the amount of operating expenses relative to sales, or a change in the amount of other items (other revenues and gains, or other expenses and losses) relative to sales.
- From Illustration 5.16, we know that REI's gross profit rate increased slightly.
- Thus, it appears that the decline in REI's profit margin was due to increased operating expenses.

How does REI compare to its competitors? Its profit margin was lower than Dick's in 2019. Thus, its profit margin does not suggest exceptional profitability.

Keeping an Eye on Cash

You learned previously that **earnings have high quality if they provide a full and transparent depiction of how a company performed.** In order to quickly assess earnings quality, analysts sometimes employ the **quality of earnings ratio.** It is calculated as net cash provided by operating activities divided by net income.

$$\text{Quality of Earnings Ratio} = \frac{\text{Net Cash Provided by Operating Activities}}{\text{Net Income}}$$

In general, a measure significantly less than 1 suggests that a company may be using more aggressive accounting techniques in order to accelerate income recognition (record income in earlier periods). A measure significantly greater than 1 suggests that a company is using conservative accounting techniques, which cause it to delay the recognition of income.

Measures that are significantly less than 1 do not provide definitive evidence of low-quality earnings. Low measures do, however, indicate that analysts should investigate the causes of the difference between net income and net cash provided by operating activities. Examples of factors that would cause differences are presented in the "Keeping an Eye on Cash" box in Chapter 4.

The following are recent quality of earnings ratios for a number of well-known companies, all of which have measures in excess of 1. (Dollar amounts are in millions.)

Company Name	Net Cash Provided by Operating Activities	÷	Net Income	=	Quality of Earnings Ratio
DuPont	$4,741		$1,769		2.7
Intel	$11,170		$4,369		2.6
Nike	$1,736		$1,487		1.2
Microsoft	$19,037		$14,569		1.3
Wal-Mart	$26,249		$14,335		1.8

ACTION PLAN

- To determine gross profit rate, divide gross profit by net sales.
- To find profit margin, divide net income by net sales.

DO IT! 6 Gross Profit Rate and Profit Margin

Rachel Rose, Inc. reported the following in its 2025 and 2024 income statements.

	2025	2024
Net sales	$80,000	$120,000
Cost of goods sold	40,000	60,000
Operating expenses	14,000	28,000
Income tax expense	8,000	12,000
Net income	$18,000	$ 20,000

Determine the company's gross profit rate and profit margin. Discuss the cause for changes in the ratios.

Solution

	2025	2024
Gross profit rate	$\frac{(\$80{,}000 - \$40{,}000)}{\$80{,}000} = 50\%$	$\frac{(\$120{,}000 - \$60{,}000)}{\$120{,}000} = 50\%$
Profit margin	$18,000 ÷ $80,000 = 22.5%	$20,000 ÷ $120,000 = 16.7%

The company's gross profit rate remained constant. However, its profit margin increased significantly due to a sharp decline in its operating costs as a percentage of sales, which declined from 23.3% ($28,000 ÷ $120,000) in 2024 to 17.5% ($14,000 ÷ $80,000) in 2025.

Related exercise material: BE5.12, BE5.13, BE5.14, DO IT! 5.6, E5.10, E5.11, E5.12, and E5.13.

USING THE DECISION TOOLS | Mountain Equipment Cooperative

Like REI, Mountain Equipment Cooperative (MEC) was a retailer of outdoor equipment organized as a cooperative (though MEC *only* sold to its members, who paid a one-time fee of $5). Also like REI, MEC had a significant commitment to sustainability. Many of its stores employed state-of-the-art building techniques to minimize energy use, and it pledged 1% of annual sales revenue to environmental causes. Since MEC was a Canadian company, it followed International Financial Reporting Standards (IFRS) rather than U.S. GAAP. Unfortunately, MEC recently closed due to insufficient profits. It had a difficult time competing against online retailers.

Here is some of the last data available for MEC.

($ in thousands)	
Net income	$ (4,652)
Sales revenue	464,876
Cost of goods sold	318,803

Instructions

Using the basic facts in the table, evaluate MEC's profit margin and gross profit rate. How did MEC's profit margin and gross profit rate compare to those of REI and Dick's Sporting Goods?

Solution

($ in thousands)

Profit margin	$\frac{\$(4,652)}{\$464,876} = -1.0\%$
Gross profit rate	$\frac{\$146,073^*}{\$464,876} = 31.4\%$

*$464,876 – $318,803

MEC's profit margin (income per dollar of sales) was a negative 1%. This is below both REI's (0.7%) and Dick's (3.4%). Thus, MEC was not as effective at turning its sales into net income as these two competitors.

MEC's gross profit rate was 31.4%, lower than REI's (45.1%) but slightly higher than Dick's (29.2%). Dick's gross profit is depressed by the fact that it sells many low-margin products. REI is superior to MEC both in its ability to maintain its markup above its costs of goods sold (its gross profit rate) and in its ability to control operating costs (its profit margin).

Appendix 5A Periodic Inventory System

LEARNING OBJECTIVE *7

Record 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, you may want to refer back to Illustration 5.5.

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**.

- Under a periodic system, companies 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.**

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/sale transactions between PW Audio Supply, Inc. 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) and receipt of the merchandise ordered from PW Audio Supply, Sauk Stereo records the $3,800 purchase as follows.

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 Public Freight Company $150 for freight charges on its purchase from PW Audio Supply on May 6, the entry on Sauk Stereo's books is as follows.

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 on the invoice cost of the merchandise.

Purchase Returns and Allowances

Sauk Stereo returns goods costing $300 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) as follows.

May 4	Accounts Receivable	3,800	
	Sales Revenue		3,800
	(To record credit sale to Sauk Stereo per invoice #731)		

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

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
May 6	Freight costs on purchases.	Inventory	150		Freight-In	150	
		Cash		150	Cash		150
May 8	Purchase returns and allowances.	Accounts Payable	300		Accounts Payable	300	
		Inventory		300	Purchase Returns and Allowances		300
May 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			
May 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			
May 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

Appendix 5B Adjusting Entries for Credit Sales with Returns and Allowances

LEARNING OBJECTIVE *8

Prepare adjusting entries for credit sales with returns and allowances.

Sales returns are common for many types of businesses. As noted in the chapter, at the end of the accounting period a company must estimate the amount of goods sold during the period that will be returned in subsequent periods and accrue for this amount.

To illustrate the accounting for an estimated return situation, assume that Rainbow Company began operations on January 1, 2025. On January 12, 2025, Rainbow sells 100 pairs of shoes for $100 each **on account** to Tanner Inc. Rainbow allows Tanner to return any unused shoes within 45 days of purchase. The cost of each product is $60. Rainbow records the sale as follows.

Accounts Receivable	10,000	
Sales Revenue (100 × $100)		10,000
Cost of Goods Sold	6,000	
Inventory (100 × $60)		6,000
(To record the sale of shoes and related cost of goods sold)		

On January 24, Tanner returns two pairs of shoes because they were the wrong color. Rainbow records the return as follows.

Sales Returns and Allowances	200	
Accounts Receivable (2 × $100)		200
Inventory	120	
Cost of Goods Sold (2 × $60)		120
(To record the return of shoes)		

On January 31, Rainbow prepares monthly financial statements and estimates that it is likely that only one more pair of shoes will be returned. Rainbow records two adjusting entries to account for this estimate.

- The first entry requires a debit to Sales Returns and Allowances and a credit to Refund Liability for the selling price of the estimated returns.
- The second entry requires a debit to Estimated Inventory Returns and a credit to Cost of Goods Sold for the cost of the estimated returns.

Rainbow makes the following adjusting entries to account for expected return at January 31, 2025.

Sales Returns and Allowances	100	
Refund Liability (1 × $100)		100
(To record expected sales return)		
Estimated Inventory Returns	60	
Cost of Goods Sold (1 × $60)		60
(To record the expected return of shoes and related reduction in Cost of Goods Sold)		

Refund Liability is a liability account. It reflects the estimated future amount owed to customers in response to future returned goods. The Estimated Inventory Returns account will generally be added to the Inventory account at the end of the reporting period.

On February 18, Tanner returns another pair of shoes to Rainbow. Assuming that Tanner has not already paid Rainbow for the shoes, Rainbow records the entry as follows.

Refund Liability	100	
Accounts Receivable (1 × $100)		100
Inventory	60	
Estimated Inventory Returns (1 × $60)		60
(To record the return of shoes)		

If Tanner had initially paid for the shoes in cash or paid its balance due on a credit purchase prior to returning the shoes on February 18, Rainbow would credit Accounts Payable rather than Accounts Receivable as shown in the following entry.

Refund Liability	100	
Accounts Payable (1 × $100)		100
Inventory	60	
Estimated Inventory Returns (1 × $60)		60
(To record the return of shoes)		

Review and Practice

Learning Objectives Review

1 Describe merchandising operations and inventory systems.

Because of the presence 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 inventory system and a periodic inventory system.

2 Record purchases under a perpetual inventory system.

The Inventory account is debited for all purchases of merchandise and for freight costs, and it is credited for purchase discounts and purchase returns and allowances.

3 Record sales under a perpetual inventory system.

When inventory is sold, Accounts Receivable (or Cash) is debited and Sales Revenue is credited for the selling price of the merchandise. At the same time, Cost of Goods Sold is debited and Inventory is credited for the cost of inventory items sold. Separate contra revenue accounts are maintained for Sales Returns and Allowances and Sales Discounts. These accounts are debited as needed to record returns, allowances, or discounts related to the sale.

4 Prepare a multiple-step income statement.

In a single-step income statement, companies classify all data under two categories, revenues or expenses, and net income is determined in one step. A multiple-step income statement shows numerous steps in determining net income, including results of nonoperating activities.

5 Determine cost of goods sold under a periodic inventory system.

The periodic system uses multiple accounts to keep track of transactions that affect inventory. To determine cost of goods sold, first calculate cost of goods purchased by adjusting purchases for returns, allowances, discounts, and freight-in. Then calculate cost of goods sold by adding cost of goods purchased to beginning inventory and subtracting ending inventory.

6 Compute and analyze gross profit rate and profit margin.

Profitability is affected by gross profit, as measured by the gross profit rate, and by management's ability to control costs, as measured by the profit margin.

*7 Record purchases and sales of inventory under a periodic inventory system.

To record purchases, entries are required for (a) cash and credit purchases, (b) purchase returns and allowances, (c) purchase discounts, and (d) freight costs. To record sales, entries are required for (a) cash and credit sales, (b) sales returns and allowances, and (c) sales discounts.

*8 Prepare adjusting entries for credit sales with returns and allowances.

Adjusting credit sales for returns and allowances requires two entries at the end of the period. The first entry requires a debit to Sales Returns and Allowances and a credit to Refund Liability for the selling price of the estimated returns. The second entry requires a debit to Estimated Inventory Returns and a credit to Cost of Goods Sold for the cost of the estimated returns. Refund Liability is a liability account and reflects the estimated future amount owed to customers in response to future returned goods. Estimated Inventory Returns will generally be added to the Inventory account at the end of the period.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Is the price of goods keeping pace with changes in the cost of inventory?	Gross profit and net sales	$\text{Gross profit rate} = \dfrac{\text{Gross profit}}{\text{Net sales}}$	Higher ratio suggests the average margin between selling price and inventory cost is increasing. Too high a margin may result in lost sales.
Is the company maintaining an adequate margin between sales and expenses?	Net income and net sales	$\text{Profit margin} = \dfrac{\text{Net income}}{\text{Net sales}}$	Higher value suggests favorable return on each dollar of sales.

Glossary Review

Contra revenue account An account that is offset against a revenue account on the income statement. (p. 5-14).

Cost of goods sold The total cost of merchandise sold during the period. (p. 5-3).

FOB destination Freight terms indicating that ownership of goods remains with the seller until the goods reach the buyer. (p. 5-8).

FOB shipping point Freight terms indicating that ownership of goods passes to the buyer when the public carrier accepts the goods from the seller. (p. 5-8).

Gross profit The excess of net sales over the cost of goods sold. (pp. 5-3, 5-18).

Gross profit rate Gross profit expressed as a percentage by dividing the amount of gross profit by net sales. (p. 5-23).

Income tax expense The product of a company's income before income taxes and its corporate income tax rate. (p. 5-20).

Inventory The merchandise that companies buy and sell to customers. (p. 5-4).

Net sales Sales less sales returns and allowances and sales discounts. (p. 5-18).

Periodic inventory system An inventory system in which a company does not maintain detailed records of goods on hand throughout the period and determines the cost of goods sold only at the end of an accounting period. (p. 5-5).

Perpetual inventory system A detailed inventory system in which a company maintains the cost of each inventory item, and the records continuously show the inventory that should be on hand. (p. 5-4).

Profit margin Measures the percentage of each dollar of sales that results in net income, computed by dividing net income by net sales. (p. 5-24).

Purchase allowance A deduction made to the selling price of merchandise, granted by the seller, so that the buyer will keep the merchandise. (p. 5-9).

Purchase discount A cash discount claimed by a buyer for prompt payment of a balance due. (p. 5-10).

Purchase invoice A document that provides support for each purchase. (p. 5-7).

Purchase return A return of goods from the buyer to the seller for cash or credit. (p. 5-9).

Quality of earnings ratio A measure used to indicate the extent to which a company's earnings provide a full and transparent depiction of its performance; computed as net cash provided by operating activities divided by net income. (p. 5-25).

Sales discount A reduction given by a seller for prompt payment of a credit sale. (p. 5-14).

Sales invoice A document that provides support for each sale. (p. 5-12).

Sales returns and allowances Transactions in which the seller either accepts goods back from the purchaser (a return) or grants a reduction in the purchase price (an allowance) so that the buyer will keep the goods. (p. 5-13).

Sales revenue Primary source of revenue for a merchandising company. (p. 5-3).

Practice Multiple-Choice Questions

1. (LO 1) Which of the following statements about a periodic inventory system is **true**?
   - **a.** Companies determine cost of goods sold only at the end of the accounting period.
   - **b.** Companies continuously maintain detailed records of the cost of each inventory purchase and sale.
   - **c.** The periodic system provides better control over inventories than a perpetual system.
   - **d.** The increased use of computerized systems has increased the use of the periodic system.

2. (LO 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. (LO 3) Which sales accounts normally have a debit balance?
   - **a.** Sales Discounts.
   - **b.** Sales Returns and Allowances.

c. Both Sales Discounts and Sales Returns and Allowances.

d. Neither Sales Discounts nor Sales Returns and Allowances.

4. **(LO 3)** A company makes a credit sale of $750 on June 13, terms 2/10, n/30, on which it grants a return of $50 on June 16. What amount is received as payment in full on June 23?

a. $700. c. $685.

b. $686. d. $650.

5. **(LO 3)** 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.

6. **(LO 4)** Gross profit will result if:

a. operating expenses are less than net income.

b. net sales are greater than operating expenses.

c. net sales are greater than cost of goods sold.

d. operating expenses are greater than cost of goods sold.

7. **(LO 4)** If net sales are $400,000, cost of goods sold is $310,000, and operating expenses are $60,000, what is the gross profit?

a. $30,000. c. $340,000.

b. $90,000. d. $400,000.

8. **(LO 4)** The multiple-step income statement for a merchandising company shows each of these features **except**:

a. gross profit.

b. cost of goods sold.

c. a sales section.

d. an investing activities section.

9. **(LO 5)** If beginning inventory is $60,000, cost of goods purchased is $380,000, and ending inventory is $50,000, what is cost of goods sold under a periodic system?

a. $390,000. c. $330,000.

b. $370,000. d. $420,000.

10. **(LO 5)** Bufford Corporation had reported the following amounts at December 31, 2025: sales revenue $184,000, ending inventory $11,600, beginning inventory $17,200, purchases $60,400, purchase discounts $3,000, purchase returns and allowances $1,100, freight-in $600, and freight-out $900. Calculate the cost of goods available for sale.

a. $69,400. c. $56,900.

b. $74,100. d. $197,700.

11. **(LO 6)** Which of the following would affect the gross profit rate? (Assume sales remains constant.)

a. An increase in advertising expense.

b. A decrease in depreciation expense.

c. An increase in cost of goods sold.

d. A decrease in insurance expense.

12. **(LO 6)** The gross profit rate is equal to:

a. net income divided by sales.

b. cost of goods sold divided by sales.

c. net sales minus cost of goods sold, divided by net sales.

d. sales minus cost of goods sold, divided by cost of goods sold.

13. **(LO 6)** During the year ended December 31, 2025, Bjornstad Corporation had the following results: net sales $267,000, cost of goods sold $107,000, net income $92,400, operating expenses $55,400, and net cash provided by operating activities $108,950. What was the company's profit margin?

a. 40%. c. 20.5%.

b. 60%. d. 34.6%.

14. **(LO 6)** A quality of earnings ratio:

a. is computed as net income divided by net cash provided by operating activities.

b. that is less than 1 indicates that a company might be using aggressive accounting tactics.

c. that is greater than 1 indicates that a company might be using aggressive accounting tactics.

d. is computed as net cash provided by operating activities divided by total assets.

*15. **(LO 7)** When goods are purchased for resale by a company using a periodic inventory system:

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. **a.** Under the periodic inventory system, cost of goods sold is determined only at the end of the accounting period. The other choices are incorrect because (b) detailed records of the cost of each inventory purchase and sale are maintained continuously when a perpetual, not periodic, system is used; (c) the perpetual system provides better control over inventories than a periodic system; and (d) the increased use of computerized systems has increased the use of the perpetual, not periodic, system.

2. **a.** Under a perpetual inventory system, purchases on account are debited to the Inventory account. Choices (b) and (c) are incorrect because Purchases and Purchase Returns and Allowances are not used in a perpetual inventory system. Choice (d) is incorrect because freight costs incurred for purchased goods are 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 $686 is paid within 10 days of the purchase {($750 − $50) − [($750 − $50) × 2%]}. The other choices are incorrect because (a) does not consider the discount of $14; (c) the amount of the discount is based upon the amount after the return is granted ($700 × 2%), not the amount before the return of merchandise ($750 × 2%); and (d) does not constitute payment in full on June 23.

5. **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.

6. **c.** Gross profit will result if net sales 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 net sales are greater than cost of goods sold, not operating expenses; and (d) gross profit results when net sales, not operating expenses, are greater than cost of goods sold.

7. **b.** Gross profit = Net sales ($400,000) − Cost of goods sold ($310,000) = $90,000, not (a) $30,000, (c) $340,000, or (d) $400,000.

8. **d.** An investing activities section appears on the statement of cash flows, not on a multiple-step income statement. Choices (a) gross profit, (b) cost of goods sold, and (c) a sales section are all features of a multiple-step income statement.

9. **a.** Beginning inventory ($60,000) + Cost of goods purchased ($380,000) − Ending inventory ($50,000) = Cost of goods sold ($390,000), not (b) $370,000, (c) $330,000, or (d) $420,000.

10. **b.** Beginning inventory ($17,200) + Purchases ($60,400) − Purchases discounts ($3,000) − Purchase returns and allowances ($1,100) + Freight-in ($600) = Cost of goods available for sale ($74,100). The other choices are therefore incorrect.

11. **c.** Gross profit rate = Gross profit ÷ Net sales. Therefore, any changes in sale revenue, sales returns and allowances, sales discounts, or cost of goods sold will affect the ratio. Changes in (a) advertising expense, (b) depreciation expense, or (d) insurance expense will not affect the computation of the gross profit rate.

12. **c.** Gross profit rate = Gross profit (Net sales − Cost of goods sold) ÷ Net sales. The other choices are therefore incorrect.

13. **d.** Net income ($92,400) ÷ Net sales ($267,000) = Profit margin of 34.6%, not (a) 40%, (b) 60%, or (c) 20.5%.

14. **b.** A quality of earnings ratio that is less than 1 indicates that a company might be using aggressive accounting tactics. The other choices are incorrect because (a) Quality of earnings = Net cash provided by operating activities ÷ Net income, not vice versa; (c) a ratio that is significantly greater than 1 suggests that a company is using conservative accounting techniques, and (d) Quality of earnings = Net cash provided by operating activities ÷ Net income (not Total assets).

*15. **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 Brief Exercises

Compute the missing amounts in determining cost of goods sold.

1. **(LO 1, 4)** Presented below are the components in determining cost of goods sold for (a) Frazier Company, (b) Todd Company, and (c) Abreu Enterprises. Determine the missing amounts.

	Beginning Inventory	Purchases	Cost of Goods Available for Sale	Ending Inventory	Cost of Goods Sold
a.	$120,000	$150,000	?	?	$160,000
b.	$ 50,000	?	$125,000	$45,000	?
c.	?	$220,000	$330,000	$61,000	?

Solution

1. **a.** Cost of goods available for sale = $120,000 + $150,000 = $270,000
   Ending inventory = $270,000 − $160,000 = $110,000

   b. Purchases = $125,000 − $50,000 = $75,000
   Cost of goods sold = $125,000 − $45,000 = $80,000

   c. Beginning inventory = $330,000 − $220,000 = $110,000
   Cost of goods sold = $330,000 − $61,000 = $269,000

Journalize purchase transactions.

2. **(LO 2)** Prepare the journal entries to record the following transactions on Robertson Company's books using a perpetual inventory system.

   a. On March 2, Melky Company sold $800,000 of merchandise to Robertson Company, terms 2/10, n/30.

   b. On March 6, Robertson Company returned $100,000 of the merchandise purchased on March 2.

   c. On March 12, Robertson Company paid the balance due to Melky Company.

Solution

		Debit	Credit
2. a.	Inventory	800,000	
	Accounts Payable		800,000
b.	Accounts Payable	100,000	
	Inventory		100,000
c.	Accounts Payable ($800,000 – $100,000)	700,000	
	Inventory ($700,000 × 2%)		14,000
	Cash ($700,000 – $14,000)		686,000

3. **(LO 3)** Prepare the journal entries to record the following transactions on Wendel Company's books using a perpetual inventory system.

Journalize sales transactions.

   a. On March 2, Wendel Company sold $700,000 of merchandise to Krista Company, terms 2/10, n/30. The cost of the merchandise sold was $460,000.

   b. On March 6, Krista Company returned $80,000 of the merchandise purchased on March 2. The cost of the merchandise returned was $54,000.

   c. On March 12, Wendel Company received the balance due from Krista Company.

Solution

3. a.	March 2	Accounts Receivable	700,000	
		Sales Revenue		700,000
	2	Cost of Goods Sold	460,000	
		Inventory		460,000
b.	6	Sales Returns and Allowances	80,000	
		Accounts Receivable		80,000
	6	Inventory	54,000	
		Cost of Goods Sold		54,000
c.	12	Cash ($620,000 – $12,400)	607,600	
		Sales Discounts ($620,000 × 2%)	12,400	
		Accounts Receivable ($700,000 – $80,000)		620,000

4. **(LO 4, 6)** Assume Yoan Company has the following reported amounts: Sales revenue $400,000, Sales discounts $10,000, Cost of goods sold $234,000, and Operating expenses $60,000. 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.

Solution

4. **a.** Net sales = $400,000 – $10,000 = $390,000

   b. Gross profit = $390,000 – $234,000 = $156,000

   c. Income from operations = $156,000 – $60,000 = $96,000

   d. Gross profit rate = $156,000 ÷ $390,000 = 40%

Practice Exercises

1. **(LO 2, 3)** 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 is $70. On June 19, Vareen pays Harrah Company in full, less the purchase discount. Both companies use a perpetual inventory system.

Prepare purchase and sales entries.

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
	Cost of Goods Sold	4,800	
	Inventory		4,800
12	Sales Returns and Allowances	300	
	Accounts Receivable		300
	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 multiple-step and single-step income statements.

2. **(LO 4)** In its income statement for the year ended December 31, 2025, Marten Company reported the following condensed data.

Interest expense	$ 70,000	Sales revenue	$2,300,000
Operating expenses	725,000	Interest revenue	25,000
Cost of goods sold	1,300,000	Loss on disposal of plant assets	17,000
Sales discounts	100,000	Income tax expense	10,000

Instructions

a. Prepare a multiple-step income statement.

b. Prepare a single-step income statement. (*Hint:* Compute net sales.)

Solution

2. a.

Marten Company
Income Statement
For the Year Ended December 31, 2025

Sales		
Sales revenue	$2,300,000	
Less: Sales discounts	100,000	
Net sales		$2,200,000
Cost of goods sold		1,300,000
Gross profit		900,000
Operating expenses		725,000
Income from operations		175,000
Other revenues and gains		
Interest revenue		25,000
Other expenses and losses		
Interest expense	70,000	
Loss on disposal of plant assets	17,000	(87,000)
Income before income taxes		113,000
Income tax expense		10,000
Net income		$ 103,000

b.

Marten Company
Income Statement
For the Year Ended December 31, 2025

Revenues		
Net sales		$2,200,000
Interest revenue		25,000
Total revenues		2,225,000
Expenses		
Cost of goods sold	$1,300,000	
Operating expenses	725,000	
Interest expense	70,000	
Loss on disposal of plant assets	17,000	
Income tax expense	10,000	
Total expenses		2,122,000
Net income		$ 103,000

Practice Problem

(LO 4) The adjusted trial balance for the year ended December 31, 2025, for Dykstra Company is shown below.

Prepare a multiple-step income statement.

Dykstra Company
Adjusted Trial Balance
For the Year Ended December 31, 2025

	Debit	Credit
Cash	$ 14,500	
Accounts Receivable	11,100	
Inventory	29,000	
Prepaid Insurance	2,500	
Equipment	95,000	
Accumulated Depreciation—Equipment		$ 18,000
Notes Payable		25,000
Accounts Payable		10,600
Common Stock		70,000
Retained Earnings		11,000
Dividends	12,000	
Sales Revenue		536,800
Sales Returns and Allowances	6,700	
Sales Discounts	5,000	
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	
Interest Revenue		2,500
	$673,900	$673,900

Instructions

Prepare a multiple-step income statement for Dykstra Company. Assume a tax rate of 25%.

Solution

Dykstra Company
Income Statement
For the Year Ended December 31, 2025

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 revenues and gains		
Interest revenue		2,500
Other expenses and losses		
Interest expense		3,600
Income before income taxes		29,500
Income tax expense		7,375
Net income		$ 22,125

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Note: All 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 differ from the steps in the accounting cycle for a service company." Do you agree or disagree?

   b. Is the measurement of net income in a merchandising company conceptually the same as in a service company? Explain.

2. How do the components of revenues and expenses differ between a merchandising company and a service company?

3. Maria Lopez, CEO of Sales Bin Stores, is considering a recommendation made by both the company's purchasing manager and director of finance that the company should invest in a sophisticated new perpetual inventory system to replace its periodic system. Explain the primary difference between the two systems, and discuss the potential benefits of a perpetual inventory system.

4. **a.** Explain the income measurement process in a merchandising company.

   b. How does income measurement differ between a merchandising company and a service company?

5. Waymon Co. has net sales of $100,000, cost of goods sold of $70,000, and operating expenses of $18,000. What is its gross profit?

6. Masie Ascot believes revenues from credit sales may be recorded before they are collected in cash. Do you agree? Explain.

7. **a.** What is the primary source document for recording (1) cash sales and (2) credit sales?

   b. Using XXs for amounts, give the journal entry for each of the transactions in part (a), assuming perpetual inventory.

8. A credit sale is made on July 10 for $900, terms 1/15, n/30. On July 12, the purchaser returns $100 of goods for credit. Give the journal entry on July 19 to record the receipt of the balance due within the discount period.

9. As the end of Smyle Company's fiscal year approached, it became clear that the company had considerable excess inventory. Marvin Ross, the head of marketing and sales, ordered salespeople to "add 20% more units to each order that you ship. The customers can always ship the extra back next period if they decide they don't want it. We've got to do it to meet this year's sales goal." Discuss the accounting implications of Marvin's action.

10. To encourage bookstores to buy a broader range of book titles and to discourage price discounting, the publishing industry allows bookstores to return unsold books to the publisher. This results in very significant returns each year. To ensure proper recognition of revenues, how should publishing companies account for these returns?

11. Goods costing $1,900 are purchased on account on July 15 with credit terms of 2/10, n/30. On July 18, the purchaser receives a $300 credit 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 perpetual inventory system.

12. Scribe Company reports net sales of $800,000, gross profit of $560,000, and net income of $230,000. What are its operating expenses?

13. Mai Company has always provided its customers with payment terms of 1/10, n/30. Members of its sale force have commented that competitors are offering customers 2/10, n/45. Explain what these terms mean, and discuss the implications to Mai of switching its payment terms to those of its competitors.

14. In its year-end earnings announcement press release, Ransome Corp. announced that its earnings increased by $15 million relative to the previous year. This represented a 20% increase. Inspection of its income statement reveals that the company reported a $20 million gain under "Other revenues and gains" from the sale of one of its factories. Discuss the implications of this gain from the perspective of a potential investor.

15. Identify the distinguishing features of an income statement for a merchandising company.

16. Why is the normal operating cycle for a merchandising company likely to be longer than for a service company?

17. What title does **Apple** use for gross profit? By how much did its total gross profit change, and in what direction, for the year ended September 26, 2020?

18. What merchandising account(s) will appear in the post-closing trial balance?

19. What types of businesses are most likely to use a perpetual inventory system?

20. Identify the accounts that are added to or deducted from purchases to determine the cost of goods purchased under a periodic system. For each account, indicate (a) whether it is added or deducted, and (b) its normal balance.

21. In the following cases, use a periodic inventory system to identify the item(s) designated by the letters X and Y.

a. Purchases $- X - Y =$ Net purchases.

b. Cost of goods purchased $-$ Net purchases $= X$.

c. Beginning inventory $+ X =$ Cost of goods available for sale.

d. Cost of goods available for sale $-$ Cost of goods sold $= X$.

22. What two ratios measure factors that affect profitability?

23. What factors affect a company's gross profit rate—that is, what can cause the gross profit rate to increase and what can cause it to decrease?

24. Earl Massey, director of marketing, wants to reduce the selling price of his company's products by 15% to increase market share. He says, "I know this will reduce our gross profit rate, but the increased number of units sold will make up for the lost margin." Before this action is taken, what other factors does the company need to consider?

25. Mark Coney is considering investing in Wiggles Pet Food Company. Wiggles' net income increased considerably during the most recent year even though many other companies in the same industry reported disappointing earnings. Mark wants to know whether the company's earnings provide a reasonable depiction of its results. What initial step can Mark take to help determine whether he needs to investigate further?

*26. On July 15, a company purchases on account goods costing $1,900, with credit terms of 2/10, n/30. On July 18, the company receives a $400 credit memo 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.

*27. What are the steps to record an end of period adjustment for credit sales with returns and allowances?

*28. What treatment do Refund Liability and Estimated Inventory Returns receive in the financial statements?

Brief Exercises

BE5.1 (LO 1), AP Presented below are the components in determining cost of goods sold. Determine the missing amounts.

Compute missing amounts in determining cost of goods sold.

Beginning Inventory	Purchases	Cost of Goods Available for Sale	Ending Inventory	Cost of Goods Sold
$80,000	$100,000	(a)	(b)	$120,000
$50,000	(c)	$115,000	$35,000	(d)
(e)	$110,000	$160,000	$29,000	(f)

BE5.2 (LO 1, 4), AP Presented here are the components in Salas Company's income statement. Determine the missing amounts.

Compute missing amounts in determining net income.

Sales Revenue	Cost of Goods Sold	Gross Profit	Operating Expenses	Net Income
$ 71,200	(a)	$ 30,000	(b)	$12,100
$108,000	$70,000	(c)	(d)	$29,500
(e)	$71,900	$109,600	$46,200	(f)

Journalize perpetual inventory entries.

BE5.3 (LO 2, 3), AP Rita Company buys merchandise on account from Linus Company. The selling price of the goods is $900 and the cost of the goods sold is $590. Both companies use perpetual inventory systems. Journalize the transactions on the books of both companies.

Journalize sales transactions.

BE5.4 (LO 3), AP Prepare the journal entries to record the following transactions on Borst Company's books using a perpetual inventory system.

a. On March 2, Borst Company sold $800,000 of merchandise to McLeena Company on account, terms 2/10, n/30. The cost of the merchandise sold was $540,000.

b. On March 6, McLeena Company returned $140,000 of the merchandise purchased on March 2. The cost of the merchandise returned was $94,000.

c. On March 12, Borst Company received the balance due from McLeena Company.

Journalize purchase transactions.

BE5.5 (LO 2), AP From the information in BE5.4, prepare the journal entries to record these transactions on McLeena Company's books under a perpetual inventory system.

Prepare sales section of income statement.

BE5.6 (LO 4), AP Barto Company provides this information for the month ended October 31, 2025: sales on credit $300,000, cash sales $150,000, sales discounts $5,000, and sales returns and allowances $19,000. Prepare the sales section of the multiple-step income statement based on this information.

Prepare multiple-step income statement.

BE 5.7 (LO 4), AP The following information is available for Rancid Corp. for the year ended December 31, 2025.

Other revenues and gains	$ 22,600	Sales revenue	$752,000
Other expenses and losses	3,400	Operating expenses	216,000
Cost of goods sold	286,000	Sales returns and allowances	10,000
Sales discounts	3,600		

Prepare a multiple-step income statement for Rancid Corp. The company has a tax rate of 25%.

Identify placement of items on a multiple-step income statement.

BE5.8 (LO 4), AP Explain where each of these items would appear on a multiple-step income statement: gain on disposal of plant assets, cost of goods sold, depreciation expense, and sales returns and allowances.

Determine cost of goods sold using basic periodic formula.

BE5.9 (LO 5), AP Silas Company sold goods with a total selling price of $800,000 during the year. It purchased goods for $380,000 and had beginning inventory of $67,000. A count of its ending inventory determined that goods on hand was $50,000. What was its cost of goods sold?

Compute net purchases and cost of goods purchased.

BE5.10 (LO 5), AP Assume that Spacey Company uses a periodic inventory system and has these account balances: Purchases $404,000, Purchase Returns and Allowances $13,000, Purchase Discounts $9,000, and Freight-In $16,000. Determine net purchases and cost of goods purchased.

Compute cost of goods sold and gross profit.

BE5.11 (LO 5), AP Assume the same information as in BE5.10 and also that Spacey Company has beginning inventory of $60,000, ending inventory of $90,000, and net sales of $612,000. Determine the amounts to be reported for cost of goods sold and gross profit.

Calculate profitability ratios.

BE5.12 (LO 6), AP Dublin Corporation reported net sales of $250,000, cost of goods sold of $150,000, operating expenses of $50,000, net income of $32,500, beginning total assets of $520,000, and ending total assets of $600,000. Calculate each of the following values and explain what they mean: (a) profit margin and (b) gross profit rate.

Calculate profitability ratios.

BE5.13 (LO 6), AP Garten Corporation reported net sales $800,000, cost of goods sold $520,000, operating expenses $210,000, and net income $68,000. Calculate the following values and explain what they mean: (a) profit margin and (b) gross profit rate.

Evaluate quality of earnings.

BE5.14 (LO 6), C Cabo Corporation reported net income of $346,000, cash of $67,800, and net cash provided by operating activities of $224,900. What does this suggest about the quality of the company's earnings? What further steps should be taken?

*BE5.15 **(LO 7), AP** Prepare the journal entries to record these transactions on Kimble Company's books using a periodic inventory system.

Journalize purchase transactions.

a. On March 2, Kimble Company purchased $800,000 of merchandise from Poe Company, terms 2/10, n/30.

b. On March 6, Kimble Company returned $95,000 of the merchandise purchased on March 2.

c. On March 12, Kimble Company paid the balance due to Poe Company.

*BE5.16 **(LO 8), AP** At December 31, 2025, Familla Corporation estimates that goods with a selling price of $1,400 and a cost of $650 that were sold on account during the current period will be returned during the next accounting period. Record the entry or entries required to adjust for this information.

Record entry for estimated sales returns.

DO IT! Exercises

DO IT! 5.1 (LO 1), C Indicate whether the following statements are true or false. If false, indicate how to correct the statement.

Answer general questions about merchandisers.

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.

DO IT! 5.2 (LO 2), AP On October 5, Iverson Company buys merchandise on account from Lasse Company. The selling price of the goods is $5,000, and the cost to Lasse Company is $3,000. On October 8, Iverson returns defective goods with a selling price of $640 and a scrap value of $240. Record the transactions of Iverson Company, assuming a perpetual approach.

Record transactions of purchasing company.

DO IT! 5.3 (LO 3), AP Assume information similar to that in **DO IT!** 5.2. That is: On October 5, Iverson Company buys merchandise on account from Lasse Company. The selling price of the goods is $5,000, and the cost to Lasse Company is $3,000. On October 8, Iverson returns defective goods with a selling price of $640 and a scrap value of $240. Record the transactions on the books of Lasse Company, assuming a perpetual approach.

Record transactions of selling company.

DO IT! 5.4 (LO 4), AP The following information is available for Berlin Corp. for the year ended December 31, 2025:

Prepare multiple-step income statement.

Other revenues and gains	$ 12,700	Sales revenue	$592,000
Other expenses and losses	13,300	Operating expenses	186,000
Cost of goods sold	156,000	Sales returns and allowances	40,000

Prepare a multiple-step income statement for Berlin Corp. The company has a tax rate of 30%.

DO IT! 5.5 (LO 5), AP Clean Lake Corporation's accounting records show the following at year-end December 31, 2025:

Determine cost of goods sold using periodic system.

Purchase Discounts	$ 5,900	Beginning Inventory	$31,720
Freight-In	8,400	Ending Inventory	27,950
Freight-Out	11,100	Purchase Returns and Allowances	3,600
Purchases	162,500		

Assuming that Clean Lake Corporation uses the periodic system, compute (a) cost of goods purchased and (b) cost of goods sold.

Compute and analyze profitability ratios.

DO IT! 5.6 (LO 6), AN Owen Wise, Inc. reported the following in its 2025 and 2024 income statements.

	2025	2024
Net sales	$150,000	$120,000
Cost of goods sold	90,000	72,000
Operating expenses	32,000	16,000
Income tax expense	18,000	10,000
Net income	$ 10,000	$ 22,000

Determine the company's gross profit rate and profit margin for both years. Discuss the cause for changes in the ratios.

Exercises

Answer general questions about merchandisers.

E5.1 (LO 1), C Mr. Etemadi has prepared the following list of statements about service companies and merchandisers.

1. Measuring net income for a merchandiser is conceptually the same as for a service company.
2. For a merchandiser, sales revenue 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.

Journalize purchase transactions.

E5.2 (LO 2), AP This information relates to Rice Co.

1. On April 5, purchased merchandise on account from Jax Company for $28,000, terms 2/10, n/30.
2. On April 6, paid freight costs of $700 on merchandise purchased from Jax.
3. On April 7, purchased equipment on account for $30,000.
4. On April 8, returned $3,600 of April 5 merchandise to Jax Company.
5. On April 15, paid the amount due to Jax Company in full.

Instructions

a. Prepare the journal entries to record the transactions listed above on Rice Co.'s books. Rice Co. uses a perpetual inventory system.
b. Assume that Rice Co. paid the balance due to Jax Company on May 4 instead of April 15. Prepare journal entry to record this payment.

Journalize purchase transactions.

E5.3 (LO 2), AP Olaf Corp. uses a perpetual inventory system. The company had the following inventory transactions in April.

Apr.	3	Purchased merchandise from DeVito Ltd. for $28,000, terms 2/10, n/30, FOB shipping point.
	6	The appropriate company paid freight costs of $700 on the merchandise purchased on April 3.
	7	Purchased supplies on account for $5,000 from Lomax Industries.
	8	Returned merchandise to DeVito and received a credit of $3,500. The merchandise was returned to inventory for future resale.
	30	Paid the amount due to DeVito in full.

Instructions

Record the above inventory transactions on Olaf's books.

E5.4 **(LO 3), AP** Refer to the information in E5.3 for Olaf Corp. and the following additional information.

Journalizes sales transactions.

1. The cost of the merchandise sold on April 3 was $19,000.
2. The cost of the merchandise returned on April 8 was $2,300.
3. DeVito uses a perpetual inventory system.

Instructions

Record the transactions in the books of DeVito.

E5.5 **(LO 3), AP** The following transactions are for Alonzo Company.

Journalize sales transactions.

1. On December 3, Alonzo Company sold $500,000 of merchandise to Arte Co., on account, terms 1/10, n/30. The cost of the merchandise sold was $330,000.
2. On December 8, Arte Co. was granted an allowance of $25,000 for merchandise purchased on December 3.
3. On December 13, Alonzo Company received the balance due from Arte Co.

Instructions

a. Prepare the journal entries to record these transactions on the books of Alonzo Company. Alonzo uses a perpetual inventory system.

b. Assume that Alonzo Company received the balance due from Arte Co. on January 2 of the following year instead of December 13. Prepare the journal entry to record the receipt of payment on January 2.

E5.6 **(LO 2, 3), AP** Assume that on September 1, **Office Depot** had an inventory that included a variety of calculators. The company uses a perpetual inventory system. During September, these transactions occurred.

Journalize perpetual inventory entries.

Sept.	6	Purchased calculators from Dragoo Co. at a total cost of $1,650, on account, terms n/30.
	9	Paid freight of $50 on calculators purchased from Dragoo Co.
	10	Returned calculators to Dragoo Co. for $66 credit because they did not meet specifications.
	12	Sold calculators costing $520 for $690 to Fryer Book Store, on account, terms n/30.
	14	Granted credit of $45 to Fryer Book Store for the return of one calculator that was not ordered. The calculator cost $34.
	20	Sold calculators costing $570 for $760 to Heasley Card Shop, on account, terms n/30.

Instructions

Journalize the September transactions.

E5.7 **(LO 2, 3), AP** On June 10, Pais Company purchased $9,000 of merchandise from McGiver Company, on account, terms 3/10, n/30. Pais pays the freight costs of $400 on June 11. Goods totaling $600 are returned to McGiver for credit on June 12. On June 19, Pais Company pays McGiver Company in full, less the purchase discount. Both companies use a perpetual inventory system.

Journalize perpetual inventory entries.

Instructions

a. Prepare separate entries for each transaction on the books of Pais Company.

b. Prepare separate entries for each transaction for McGiver Company. The merchandise purchased by Pais on June 10 cost McGiver $5,000, and the goods returned cost McGiver $310.

E5.8 **(LO 4), AP** The adjusted trial balance of Doqe Company shows these data pertaining to sales at the end of its fiscal year, October 31, 2025: Sales Revenue $900,000, Freight-Out $14,000, Sales Returns and Allowances $22,000, and Sales Discounts $13,500.

Prepare sales section of income statement.

Instructions

Prepare the sales section of the income statement.

E5.9 **(LO 4), AP** The following selected accounts from Orlando Corporation's general ledger are for the year ended December 31, 2025.

Prepare income statement.

Accounts receivable	$ 265,000	Insurance expense	$ 23,000
Accumulated depreciation—equipment	764,500	Interest expense	62,000
		Interest revenue	30,000
Advertising expense	55,000	Inventory	97,000
Common stock	250,000	Prepaid expenses	31,000
Cost of goods sold	1,172,000	Rent revenue	24,000
Depreciation expense	125,000	Retained earnings	535,000
Dividends	150,000	Salaries and wages expense	705,000
Equipment	1,450,000	Sales revenue	2,589,500
Freight-out	25,000	Unearned sales revenue	18,000

Instructions

Prepare a multiple-step income statement.

Prepare an income statement and calculate profitability ratios.

E5.10 (LO 4, 6), AP Presented below is information for Lieu Co. for the month of January 2025.

Cost of goods sold	$212,000	Rent expense	$ 32,000
Freight-out	7,000	Sales discounts	8,000
Insurance expense	12,000	Sales returns and allowances	20,000
Salaries and wages expense	60,000	Sales revenue	370,000
Income tax expense	5,000		

Instructions

a. Prepare a multiple-step income statement.

b. Calculate the profit margin and the gross profit rate.

Compute missing amounts and calculate profitability ratios.

E5.11 (LO 4, 6), AP Financial information is presented here for two companies.

	Yoste Company	Noone Company
Sales revenue	$90,000	(d)
Sales returns and allowances	(a)	$ 5,000
Net sales	84,000	100,000
Cost of goods sold	58,000	(e)
Gross profit	(b)	40,000
Operating expenses	14,380	(f)
Net income	(c)	17,000

Instructions

a. Fill in the missing amounts. Show all computations.

b. Calculate the profit margin and the gross profit rate for each company.

c. Discuss your findings in part (b).

Prepare multiple-step income statement and calculate profitability ratios.

E5.12 (LO 4, 6), AP In its income statement for the year ended December 31, 2025, Darren Company reported the following condensed data.

Salaries and wages expense	$465,000	Loss on disposal of plant assets	$ 83,500
Cost of goods sold	987,000	Sales revenue	2,210,000
Interest expense	71,000	Income tax expense	25,000
Interest revenue	65,000	Sales discounts	160,000
Depreciation expense	310,000	Utilities expense	110,000

Instructions

a. Prepare a multiple-step income statement.

b. Calculate the profit margin and gross profit rate.

c. In 2024, Darren had a profit margin of 5%. Is the decline in 2025 a cause for concern? (Ignore income tax effects.)

Prepare multiple-step income statement and calculate profitability ratios.

E5.13 (LO 4, 6), AP Suppose in its income statement for the year ended June 30, 2025, The Clorox Company reported the following condensed data (dollars in millions).

Salaries and wages expense	$ 460	Research and development expense	$ 114
Depreciation expense	90	Income tax expense	276
Sales revenue	5,730	Loss on disposal of plant assets	46
Interest expense	161	Cost of goods sold	3,104
Advertising expense	499	Rent expense	105
Sales returns and allowances	280	Utilities expense	60

Instructions

a. Prepare a multiple-step income statement.

b. Calculate the gross profit rate and the profit margin and explain what each means.

c. Assume the marketing department has presented a plan to increase advertising expenses by $340 million. It expects this plan to result in an increase in both net sales and cost of goods sold of 25%.

(*Hint:* Increase both sales revenue and sales returns and allowances by 25%.) Redo parts (a) and (b) and discuss whether this plan has merit. (Assume a tax rate of 34%, and round all amounts to whole dollars.)

E5.14 (LO 4), AP In its income statement for the year ended December 31, 2025, Laine Inc. reported the following condensed data.

Prepare an income statement.

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	Sales revenue	2,350,000
Income tax expense	47,000	Sales discounts	150,000

Instructions

Prepare a multiple-step income statement.

E5.15 (LO 4), AP The following selected accounts from the Blue Door Corporation's general ledger are presented below for the year ended December 31, 2025:

Prepare a multiple-step income statement.

Advertising expense	$ 55,000	Interest revenue	$ 30,000
Common stock	250,000	Inventory	67,000
Cost of goods sold	1,085,000	Rent revenue	24,000
Depreciation expense	125,000	Retained earnings	535,000
Dividends	150,000	Salaries and wages expense	675,000
Freight-out	25,000	Sales discounts	8,500
Income tax expense	70,000	Sales returns and allowances	41,000
Insurance expense	15,000		
Interest expense	70,000	Sales revenue	2,400,000

Instructions

Prepare a multiple-step income statement.

E5.16 (LO 5), AP The trial balance of Mendez Company at the end of its fiscal year, August 31, 2025, includes these accounts: Beginning Inventory $18,700, Purchases $154,000, Sales Revenue $190,000, Freight-In $8,000, Sales Returns and Allowances $3,000, Freight-Out $1,000, and Purchase Returns and Allowances $5,000. The ending inventory is $21,000.

Prepare cost of goods sold section using periodic system.

Instructions

Prepare a cost of goods sold section (periodic system) for the year ending August 31, 2025.

E5.17 (LO 5), AP Below is a series of cost of goods sold sections for companies B, M, O, and S.

Prepare cost of goods sold section using periodic system.

	B	M	O	S
Beginning inventory	$ 250	$ 120	$ 700	$ (j)
Purchases	1,500	1,080	(g)	43,590
Purchase returns and allowances	80	(d)	290	(k)
Net purchases	(a)	1,040	7,410	42,290
Freight-in	130	(e)	(h)	2,240
Cost of goods purchased	(b)	1,230	8,050	(l)
Cost of goods available for sale	1,800	1,350	(i)	49,530
Ending inventory	310	(f)	1,150	6,230
Cost of goods sold	(c)	1,230	7,600	43,300

Instructions

Fill in the lettered blanks to complete the cost of goods sold sections.

E5.18 (LO 6), C Writing Dorsett Corporation reported sales revenue of $257,000, net income of $45,300, cash of $9,300, and net cash provided by operating activities of $23,103. Accounts receivable have increased at three times the rate of sales during the last 3 years.

Evaluate quality of earnings.

Instructions

a. Explain what is meant by high quality of earnings.
b. Evaluate the quality of the company's earnings. Discuss your findings.
c. What factors might have contributed to the company's quality of earnings?

***E5.19 (LO 7), AP** This information relates to Alfie Co.

Journalize purchase transactions.

1. On April 5, purchased merchandise from Bach Company for $27,000, on account, terms 2/10, n/30.
2. On April 6, paid freight costs of $1,200 on merchandise purchased from Bach Company.

3. On April 7, purchased equipment on account for $30,000.
4. On April 8, returned $3,600 of the April 5 merchandise to Bach Company.
5. On April 15, paid the amount due to Bach Company in full.

Instructions

a. Prepare the journal entries to record these transactions on the books of Alfie Co. using a periodic inventory system.
b. Assume that Alfie Co. paid the balance due to Bach Company on May 4 instead of April 15. Prepare the journal entry to record this payment.

Record entry for estimated sales returns.

*E5.20 **(LO 8), AP** At December 31, 2025, Highland Corporation estimates that goods with a selling price of $4,700 and a cost of $1,870 that were sold on account during the current period will be returned during the next accounting period. On January 17, 2026, the goods were returned as estimated. The customer had not paid for the goods by the time of the return.

Instructions

Record the entry or entries required to adjust for this information, as well as the subsequent return.

Problems

Journalize, post, and prepare partial income statement, and calculate ratios.

P5.1 **(LO 2, 3, 4, 6), AP** Winters Hardware Store completed the following merchandising transactions in the month of May. At the beginning of May, Winters' ledger showed Cash of $8,000 and Common Stock of $8,000.

May	1	Purchased merchandise on account from Black Wholesale Supply for $8,000, terms 1/10, n/30.
	2	Sold merchandise on account for $4,400, terms 2/10, n/30. The cost of the merchandise sold was $3,300.
	5	Received credit from Black Wholesale Supply for merchandise returned $200.
	9	Received collections in full, less discounts, from customers billed on May 2.
	10	Paid Black Wholesale Supply in full, less discount.
	11	Purchased supplies for cash $900.
	12	Purchased merchandise for cash $3,100.
	15	Received $230 refund for return of poor-quality merchandise from supplier on cash purchase.
	17	Purchased merchandise on account from Wilhelm Distributors for $2,500, terms 2/10, n/30.
	19	Paid freight on May 17 purchase $250.
	24	Sold merchandise for cash $5,500. The cost of the merchandise sold was $4,100.
	25	Purchased merchandise on account from Clasps Inc. for $800, terms 3/10, n/30.
	27	Paid Wilhelm Distributors in full, less discount.
	29	Made refunds to cash customers for returned merchandise $92. The returned merchandise had cost $70.
	31	Sold merchandise on account for $1,280, terms n/30. The cost of the merchandise sold was $762.

Winters Hardware's chart of accounts includes Cash, Accounts Receivable, Inventory, Supplies, Accounts Payable, Common Stock, Sales Revenue, Sales Returns and Allowances, Sales Discounts, and Cost of Goods Sold.

Instructions

a. Journalize the transactions using a perpetual inventory system.
b. Post the transactions to T-accounts. Be sure to enter the beginning cash and common stock balances.

c. Gross profit $2,908

c. Prepare an income statement through gross profit for the month of May 2025.
d. Calculate the profit margin and the gross profit rate. (Assume operating expenses were $1,408.)

Journalize purchase and sale transactions under a perpetual system.

P5.2 **(LO 2, 3), AP** Powell Warehouse distributes hardback books to retail stores and extends credit terms of 2/10, n/30 to all of its customers. During the month of June, the following merchandising transactions occurred.

June 1 Purchased books on account for $1,040 (including freight) from Catlin Publishers, terms 2/10, n/30.
3 Sold books on account to Garfunkel Bookstore for $1,200. The cost of the merchandise sold was $720.
6 Received $40 credit for books returned to Catlin Publishers.
9 Paid Catlin Publishers in full.
15 Received payment in full from Garfunkel Bookstore.
17 Sold books on account to Bell Tower for $1,200. The cost of the merchandise sold was $730.
20 Purchased books on account for $700 from Priceless Book Publishers, terms 1/15, n/30.
24 Received payment in full from Bell Tower.
26 Paid Priceless Book Publishers in full.
28 Sold books on account to General Bookstore for $1,300. The cost of the merchandise sold was $780.
30 Granted General Bookstore $130 credit for books returned costing $80.

Instructions

Journalize the transactions for the month of June for Powell Warehouse, using a perpetual inventory system.

P5.3 **(LO 2, 3, 4), AP** At the beginning of the current season on April 1, the ledger of Granite Hills Pro Shop showed Cash $2,500, Inventory $3,500, and Common Stock $6,000. The following transactions were completed during April 2025.

Journalize, post, and prepare trial balance and partial income statement.

Apr. 5 Purchased golf bags, clubs, and balls on account from Arnie Co. $1,500, terms 3/10, n/60.
7 Paid freight on Arnie purchase $80.
9 Received credit from Arnie Co. for merchandise returned $200.
10 Sold merchandise on account to members $1,340, terms n/30. The merchandise sold had a cost of $820.
12 Purchased golf shoes, sweaters, and other accessories on account from Woods Sportswear $830, terms 1/10, n/30.
14 Paid Arnie Co. in full.
17 Received credit from Woods Sportswear for merchandise returned $30.
20 Made sales on account to members $810, terms n/30. The cost of the merchandise sold was $550.
21 Paid Woods Sportswear in full.
27 Granted an allowance to members for clothing that did not fit properly $80.
30 Received payments on account from members $1,220.

The chart of accounts for the pro shop includes Cash, Accounts Receivable, Inventory, Accounts Payable, Common Stock, Sales Revenue, Sales Returns and Allowances, and Cost of Goods Sold.

Instructions

a. Journalize the April transactions using a perpetual 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, 2025.

d. Prepare an income statement through gross profit for the month of April 2025.

c. Tot. trial balance $8,150
d. Gross profit $ 700

P5.4 **(LO 4, 6), AP** **Writing** Wolford Department Store is located in midtown Metropolis. During the past several years, net income has been declining because suburban shopping centers have been attracting business away from city areas. At the end of the company's fiscal year on November 30, 2025, these accounts appeared in its adjusted trial balance.

Prepare financial statements and calculate profitability ratios.

Accounts Payable	$ 26,800
Accounts Receivable	17,008
Accumulated Depreciation—Equipment	68,000
Cash	8,000
Common Stock	35,000
Cost of Goods Sold	614,380
Freight-Out	6,200
Equipment	157,000

(Continued)

Depreciation Expense	13,500
Dividends	12,000
Gain on Disposal of Plant Assets	2,000
Income Tax Expense	10,000
Insurance Expense	9,000
Interest Expense	5,112
Inventory	26,200
Notes Payable	43,500
Prepaid Insurance	6,000
Advertising Expense	33,500
Rent Expense	34,000
Retained Earnings	14,200
Salaries and Wages Expense	117,000
Salaries and Wages Payable	6,000
Sales Returns and Allowances	20,000
Sales Revenue	904,000
Utilities Expense	10,600

Additional data: Notes payable are due in 2029.

Instructions

a. Net income $ 32,708
Tot. assets $146,208

a. Prepare a multiple-step income statement, a retained earnings statement, and a classified balance sheet.

b. Calculate the profit margin and the gross profit rate.

c. The vice president of marketing and the director of human resources have developed a proposal whereby the company would compensate the sales force on a strictly commission basis. Given the increased incentive, they expect net sales to increase by 15%. As a result, they estimate that gross profit will increase by $40,443 and expenses by $57,902. Compute the expected new net income. (*Hint:* You do not need to prepare an income statement.) Then, compute the revised profit margin and gross profit rate. Comment on the effect that this plan would have on net income and on the ratios, and evaluate the merit of this proposal. (Ignore income tax effects.)

Prepare a correct multiple-step income statement.

P5.5 **(LO 4), AP** An inexperienced accountant prepared this condensed income statement for Simon Company, a retail firm that has been in business for a number of years.

Simon Company
Income Statement
For the Year Ended December 31, 2025

Revenues	
Net sales	$850,000
Other revenues	22,000
	872,000
Cost of goods sold	555,000
Gross profit	317,000
Operating expenses	
Selling expenses	109,000
Administrative expenses	103,000
	212,000
Net earnings	$105,000

As an experienced, knowledgeable accountant, you review the statement and determine that the following steps were taken by the accountant to compute the amounts presented in the income statement.

1. Net sales, as presented, consist of sales $911,000, less freight-out on merchandise sold $33,000, and sales returns and allowances $28,000.
2. Other revenues, as presented, consist of sales discounts $18,000 and rent revenue $4,000.
3. Selling expenses, as presented, consist of salespersons' salaries $80,000, depreciation on equipment $10,000, advertising $13,000, and sales commissions $6,000. The commissions represent commissions paid. At December 31, $3,000 of commissions have been earned by salespersons but have not been paid. All compensation should be recorded as Salaries and Wages Expense.
4. Administrative expenses, as presented, consist of office salaries $47,000, dividends $18,000, utilities $12,000, interest expense $2,000, and rent expense $24,000, which includes prepayments totaling $6,000 for the first quarter of 2026.

Instructions

Evaluate the steps taken by the inexperienced accountant so you can identify corrections that need to be made. Then, prepare a correct detailed multiple-step income statement. (Assume a 25% tax rate.)

Net income $67,500

P5.6 (LO 4), AP The trial balance of People's Choice Wholesale Company contained the following accounts shown at December 31, the end of the company's fiscal year.

Journalize, post, and prepare adjusted trial balance and financial statement.

People's Choice Wholesale Company
Trial Balance
December 31, 2025

	Debit	Credit
Cash	$ 31,400	
Accounts Receivable	37,600	
Inventory	70,000	
Land	92,000	
Buildings	200,000	
Accumulated Depreciation—Buildings		$ 60,000
Equipment	83,500	
Accumulated Depreciation—Equipment		40,500
Notes Payable		54,700
Accounts Payable		17,500
Common Stock		160,000
Retained Earnings		67,200
Dividends	10,000	
Sales Revenue		922,100
Sales Discounts	6,000	
Cost of Goods Sold	709,900	
Salaries and Wages Expense	51,300	
Utilities Expense	11,400	
Maintenance and Repairs Expense	8,900	
Advertising Expense	5,200	
Insurance Expense	4,800	
	$1,322,000	$1,322,000

Adjustment data:

1. Depreciation is $8,000 on buildings and $7,000 on equipment. (Both are operating expenses.)
2. Interest of $4,500 is due and unpaid on notes payable at December 31.
3. Income tax due and unpaid at December 31 is $24,000.

Other data: $15,000 of the notes payable are payable next year.

Instructions

a. Journalize the adjusting entries.

b. Create T-accounts for all accounts used in part (a). Enter the trial balance amounts into the T-accounts and post the adjusting entries.

c. Prepare an adjusted trial balance.

d. Prepare a multiple-step income statement and a retained earnings statement for the year, and a classified balance sheet at December 31, 2025.

c. Tot. trial balance $1,365,500
d. Net income $ 81,100
Tot. assets $ 399,000

P5.7 (LO 4, 5), AP At the end of Oates Department Store's fiscal year on November 30, 2025, these accounts appeared in its adjusted trial balance.

Determine cost of goods sold and gross profit under a periodic system.

Freight-In	$ 5,060
Inventory (beginning)	41,300
Purchases	613,000
Purchase Discounts	7,000
Purchase Returns and Allowances	6,760
Sales Revenue	902,000
Sales Returns and Allowances	20,000

Additional facts:

1. Inventory on November 30, 2025, is $36,200.
2. Note that Oates Department Store uses a periodic system.

Instructions

Gross profit $272,600

Prepare an income statement through gross profit for the year ended November 30, 2025.

Calculate missing amounts and assess profitability.

P5.8 (LO 4, 5, 6), AN Writing Zhou Inc. operates a retail operation that purchases and sells snowmobiles, among other outdoor products. The company purchases all 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 2023 through 2026, inclusive.

	2023	2024	2025	2026
Income Statement Data				
Sales revenue		$97,000	$ (e)	$82,000
Cost of goods sold		(a)	28,160	27,060
Gross profit		67,900	59,840	(i)
Operating expenses		63,050	(f)	52,480
Net income		$ (b)	$ 3,520	$ (j)
Balance Sheet Data				
Inventory	$13,000	$ (c)	$14,700	$ (k)
Accounts payable	5,800	6,500	4,600	(l)
Additional Information				
Purchases of inventory on account		$25,890	$ (g)	$24,050
Cash payments to suppliers		(d)	(h)	24,650

Instructions

a. Calculate the missing amounts.

b. The vice presidents of sales, marketing, production, and finance are discussing the company's results with the CEO. They note that sales declined over the 3-year fiscal period, 2024–2026. Does that mean that profitability necessarily also declined? Explain, computing the gross profit rate and the profit margin for each fiscal year to help support your answer.

Journalize, post, and prepare trial balance and partial income statement under a periodic system.

***P5.9 (LO 5, 7), AP** At the beginning of the current season on April 1, the ledger of Granite Hills Pro Shop showed Cash $2,500, Inventory $3,500, and Common Stock $6,000. The following transactions occurred during April 2025.

Apr.	5	Purchased golf bags, clubs, and balls on account from Arnie Co. $1,500, terms 3/10, n/60.
	7	Paid freight on Arnie Co. purchases $80.
	9	Received credit from Arnie Co. for merchandise returned $200.
	10	Sold merchandise on account to members $1,340, terms n/30.
	12	Purchased golf shoes, sweaters, and other accessories on account from Woods Sportswear $830, terms 1/10, n/30.
	14	Paid Arnie Co. in full.
	17	Received credit from Woods Sportswear for merchandise returned $30.
	20	Made sales on account to members $810, terms n/30.
	21	Paid Woods Sportswear in full.
	27	Granted credit to members for clothing that did not fit properly $80.
	30	Received payments on account from members $1,220.

The chart of accounts for the pro shop includes Cash, Accounts Receivable, Inventory, Accounts Payable, Common Stock, 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. Tot. trial balance $8,427

c. Prepare a trial balance on April 30, 2025.

d. Gross profit $ 700

d. Prepare an income statement through gross profit, assuming inventory on hand at April 30 is $4,263.

Continuing Case

Cookie Creations

leungchopan/
Shutterstock.com

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 through 4.)

CC5 Because Natalie has had such a successful first few months, she is considering other opportunities to develop her business. One opportunity is to become the exclusive distributor of a line of fine European mixers. Natalie comes to you for advice on how to account for these mixers.

Go to Wiley Course Resources for complete case details and instructions.

Comprehensive Accounting Cycle Review

ACR5.1 On December 1, 2025, Devine Distributing Company had the following account balances.

	Debit		Credit
Cash	$ 7,200	Accumulated Depreciation—	
Accounts Receivable	4,600	Equipment	$ 2,200
Inventory	12,000	Accounts Payable	4,500
Supplies	1,200	Salaries and Wages Payable	1,000
Equipment	22,000	Common Stock	15,000
	$47,000	Retained Earnings	24,300
			$47,000

During December, the company completed the following summary transactions.

Dec.	6	Paid $1,600 for salaries due employees, of which $600 is for December and $1,000 is for November salaries payable.
	8	Received $1,900 cash from customers in payment of account (no discount allowed).
	10	Sold merchandise for cash $6,300. The cost of the merchandise sold was $4,100.
	13	Purchased merchandise on account from Hecht 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 $8,000.
	20	Paid salaries $1,800.
	23	Paid Hecht Co. in full, less discount.
	27	Received collections in full, less discounts, from customers billed on December 18.

Adjustment data:

1. Accrued salaries payable $800.
2. Depreciation $200 per month.
3. Supplies on hand $1,500.
4. Income tax due and unpaid at December 31 is $200.

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, Supplies Expense, Income Tax Expense, and Income Taxes Payable.

c. Journalize and post adjusting entries.

d. Prepare an adjusted trial balance.

e. Prepare an income statement and a retained earnings statement for December and a classified balance sheet at December 31.

d. Totals $65,500
e. Net income $540

ACR5.2 On November 1, 2025, IKonk, Inc. had the following account balances. The company uses the perpetual inventory method.

	Debit		Credit
Cash	$ 9,000	Accumulated Depreciation—	
Accounts Receivable	2,240	Equipment	$ 1,000
Supplies	860	Accounts Payable	3,400
Equipment	25,000	Unearned Service Revenue	4,000
	$37,100	Salaries and Wages Payable	1,700
		Common Stock	20,000
		Retained Earnings	7,000
			$37,100

During November, the following summary transactions were completed.

Nov.	8	Paid $3,550 for salaries due employees, of which $1,850 is for November and $1,700 is for October.
	10	Received $1,900 cash from customers in payment of account.
	11	Purchased merchandise on account from Dimas Discount Supply for $8,000, terms 2/10, n/30.
	12	Sold merchandise on account for $5,500, terms 2/10, n/30. The cost of the merchandise sold was $4,000.
	15	Received credit from Dimas Discount Supply for merchandise returned $300.
	19	Received collections in full, less discounts, from customers billed on sales of $5,500 on November 12.
	20	Paid Dimas Discount Supply in full, less discount.
	22	Received $2,300 cash for services performed in November.
	25	Purchased equipment on account $5,000.
	27	Purchased supplies on account $1,700.
	28	Paid creditors $3,000 of accounts payable due.
	29	Paid November rent $375.
	29	Paid salaries $1,300.
	29	Performed services on account and billed customers $700 for those services.
	29	Received $675 from customers for services to be performed in the future.

Adjustment data:

1. Supplies on hand are valued at $1,600.
2. Accrued salaries payable are $500.
3. Depreciation for the month is $250.
4. $650 of services related to the unearned service revenue has not been performed by month-end.

Instructions

a. Enter the November 1 balances in ledger T-accounts.

b. Journalize the November transactions.

c. Post to the ledger accounts. You will need to add some accounts.

d. Journalize and post adjusting entries.

e. Prepare an adjusted trial balance at November 30.

f. Prepare a multiple-step income statement and a retained earnings statement for November and a classified balance sheet at November 30.

g. Journalize and post closing entries.

e. Tot. adj. trial bal. $4[illegible],025

f. Tot. assets $3[illegible]

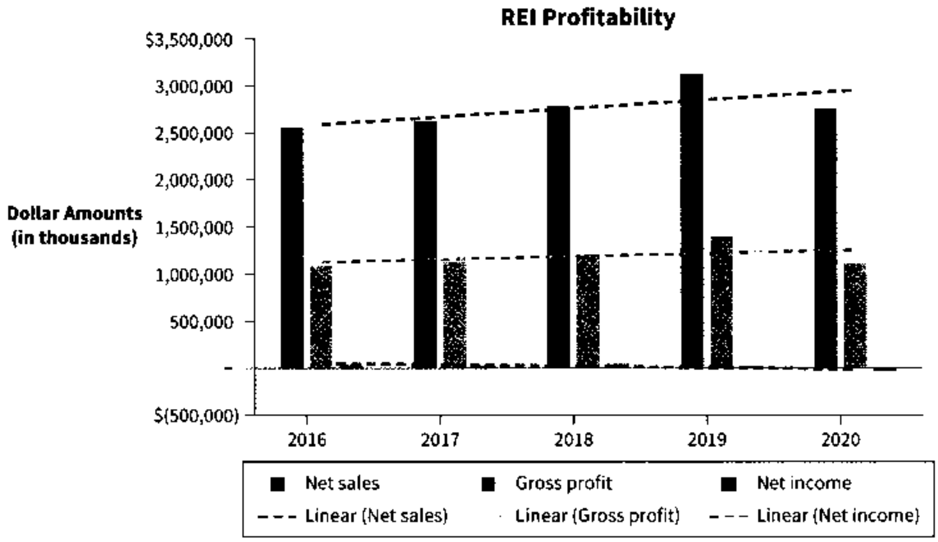
Data Analytics in Action

Using Data Visualization to Analyze Profitability Changes over Time

Excel

DA5.1 Data visualization can be used to understand profitability trends.

Example Recall the Feature Story "Buy Now, Vote Later" presented in the chapter. Even with the arrival of the pandemic in 2020, **REI** continued to be a strong competitor in the outdoor gear industry. The pandemic, however, added to the shift in what, where, and when consumers buy. For example, more customers now buy online as some stores were temporarily closed. So how is REI doing? We can use following column chart to visualize the company's performance.



Source: REI website.

The chart illustrates REI's profitability from 2016 to 2020. We can see that REI's sales increased steadily for the first four years, with the largest dollar increase from 2018 to 2019. The pandemic caused a decline in sales as expected during 2020. Because gross profit is tied to sales, the company's gross profit resulted in a gradual increase as sales increased through 2019, with an expected drop in 2020. The slope of the trend lines shows that the sales increased at a greater rate than gross profit for the first four years, implying that cost of goods sold was increasing faster than sales. Despite the promising increase in gross profit through 2019, REI's net profit margin remained flat through 2019, indicating operating expenses must have been increasing.

For this case, you will use data from five years of REI's income statements to compute the percentage of net sales for each item on the income statements, prepare a clustered column chart by year to visualize each of the four subtotal percentages computed, and evaluate what the chart tells you about trends in sales and expenses. Because REI is a co-op in which members share in the company's profits, note that the company recognizes these distributions as expenses on its income statements.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Visualization to Compare Companies' Profitability

Excel

DA5.2 **Caterpillar** is a manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines, and diesel-electric locomotives. **Cummins** is a company that designs, manufactures, sells, and services diesel and natural gas engines and powertrain-related component products. **CNH Industrial** operates in the capital goods sector and designs, produces, and sells agricultural and construction equipment, trucks, commercial vehicles, buses, and specialty vehicles.

For this case, you will use financial information from these three companies to consider the implications if they each reuse existing materials. This action can reduce their cost of goods sold, which should cause their gross margin to increase. You will compute the gross profit ratio, as well as percentages of cost of goods sold, other expenses, and net income as compared to revenue, for the three companies. You will also prepare a clustered column chart by company showing cost of goods sold, other expenses, and net operating income as a percent of sales revenue, to compare the three companies. Finally, you will research their sustainability reports and consider in what ways Caterpillar, Cummins, and CNH Industrial promote rebuilding and recycling, and what impact recycling has on the companies' profitability.

Go to Wiley Course Resources for complete case details and instructions.

Expand Your Critical Thinking

Financial Reporting Problem: Apple Inc.

CT5.1 The financial statements for **Apple Inc.** are presented in Appendix A.

Instructions

Answer these questions using the Statement of Operations.

a. What was the percentage change in net sales and in net income from the year ended September 28, 2019, to the year ended September 26, 2020?

b. What was the profit margin in each of the 3 years? (Use "Net Sales.") Comment on the trend.

c. What was Apple's gross profit rate in each of the 3 years? (Use "Net Sales" amounts.) Comment on the trend.

Comparative Analysis Problem: Columbia Sportswear Company vs. Under Armour, Inc.

CT5.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements of **Under Armour, Inc.** are presented in Appendix C.

Instructions

a. Based on the information contained in these financial statements, determine the following values for each company.

   1. Profit margin for 2020.
   2. Gross profit for 2020.
   3. Gross profit rate for 2020.
   4. Operating income for 2020.
   5. Percentage change in operating Income from 2019 to 2020. (For Columbia, use Income from operations.)

b. What conclusions concerning the relative profitability of the two companies can be drawn from these data?

Comparative Analysis Problem: Amazon.com, Inc. vs. Walmart Inc.

CT5.3 The financial statements of **Amazon.com, Inc.** are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

a. Based on the information contained in these financial statements, determine the following values for each company.

   1. Profit margin for the most recent year provided. (For Amazon, use "Total net sales.")
   2. Gross profit for the most recent year provided.
   3. Gross profit rate for the most recent year provided.
   4. Operating income for the most recent year provided.
   5. Percentage change in operating income between the most recent year provided and the prior year.

b. What conclusions concerning the relative profitability of the two companies can be drawn from these data?

Interpreting Financial Statements

CT5.4 At one time, it was announced that two giant French retailers, **Carrefour SA** and **Promodes SA**, would merge. A headline in the *Wall Street Journal* blared, "French Retailers Create New Walmart Rival." While **Walmart**'s total sales would still exceed those of the combined company, Walmart's international sales are far less than those of the combined company. This is a serious concern for Walmart, since its primary opportunity for future growth lies outside of the United States.

Below are basic financial data for the combined corporation (in euros) and Walmart (in U.S. dollars) in a recent year. Even though their results are presented in different currencies, by employing ratios we can make some basic comparisons.

	Carrefour (in millions)	Walmart (in millions)
Sales revenue	€70,486	$256,329
Cost of goods sold	54,630	198,747
Net income	1,738	9,054
Total assets	39,063	104,912
Current assets	14,521	34,421
Current liabilities	13,660	37,418
Total liabilities	29,434	61,289

Instructions

Compare the two companies by answering the following.

a. Calculate the gross profit rate for each of the companies, and discuss their relative abilities to control cost of goods sold.

b. Calculate the profit margin, and discuss the companies' relative profitability.

c. Calculate the current ratio and debt to assets ratio for each of the two companies, and discuss their relative liquidity and solvency.

d. What concerns might you have in relying on this comparison?

Real-World Focus

CT5.5 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.

Instructions

Search the Internet for an article on either **PepsiCo** or **Coca-Cola** that sounds interesting to you and that would be relevant to an investor in these companies. Now, assume that you are a personal financial planner and that some of your clients own stock in the company. Write a brief memo to these clients summarizing the article and explaining the implications of the article for their investment.

Decision-Making Across the Organization

CT5.6 Three years ago, Karen Suez and her brother-in-law Reece Jones opened Gigasales Department Store. For the first 2 years, business was good, but the following condensed income statement results for 2025 were disappointing.

Gigasales Department Store
Income Statement
For the Year Ended December 31, 2025

Net sales		$700,000
Cost of goods sold		560,000
Gross profit		140,000
Operating expenses		
Selling expenses	$100,000	
Administrative expenses	20,000	
		120,000
Net income		$ 20,000

Karen believes the problem lies in the relatively low gross profit rate of 20%. Reece believes the problem is that operating expenses are too high.

Karen thinks the gross profit rate can be improved by making two changes. she does not anticipate that these changes will have any effect on operating expenses.

1. Increase average selling prices by 15%; this increase is expected to lower sales volume so that total sales dollars will increase only 4%.
2. Buy merchandise in larger quantities and take all purchase discounts. These changes to selling price and purchasing practices are expected to increase the gross profit rate from its current rate of 20% to a new rate of 25%.

Reece thinks expenses can be cut by making these two changes. He feels that these changes will not have any effect on net sales.

1. Cut 2026 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 2026 delivery expenses of $40,000 by 40%.

Karen and Reece 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 2026 assuming (1) Karen's changes are implemented and (2) Reece's ideas are adopted.

b. What is your recommendation to Karen and Reece?

c. Prepare a condensed income statement for 2026 assuming both sets of proposed changes are made.

d. Discuss the impact that other factors might have. For example, would increasing the quantity of inventory increase costs? Would a salary cut affect employee morale? Would decreased morale affect sales? Would decreased store deliveries decrease customer satisfaction? What other suggestions might be considered?

Communication Activity

CT5.7 The following situation is presented in chronological order.

1. Aikan decides to buy a surfboard.
2. He calls Surfing Hawaii Co. to inquire about their surfboards.
3. Two days later, he requests Surfing Hawaii Co. to make him a surfboard.
4. Three days later, Surfing Hawaii Co. sends him a purchase order to fill out.
5. He sends back the purchase order.
6. Surfing Hawaii Co. receives the completed purchase order.
7. Surfing Hawaii Co. completes the surfboard.
8. Aikan picks up the surfboard.
9. Surfing Hawaii Co. bills Aikan.
10. Surfing Hawaii Co. receives payment from Aikan.

Instructions

In a memo to the president of Surfing Hawaii Co., answer the following questions.

a. When should Surfing Hawaii Co. record the sale?

b. Suppose that with his purchase order, Aikan is required to make a down payment. Would that change your answer to part (a)?

Ethics Cases

CT5.8 Warren Buffett's company, **Berkshire Hathaway**, is one of the world's most successful investment companies. Therefore, it might come as a surprise that a company owned by Berkshire Hathaway may have paid an acquisition price for another company that was five times what the company was worth. How did this happen? Jack Ewing explains in *The New York Times* article entitled "How Berkshire Hathaway May Have Been Snookered in Germany."

Instructions

Do an Internet search for the article and answer the following questions.

a. It appears that Wilhelm Schulz was in financial trouble prior to the acquisition. What steps did the company take to avoid bankruptcy? What fraudulent actions enabled the company to do this?

b. How did Commerzbank initially become aware that the Wilhelm Schulz acquisition might be a problem?

c. What were the alleged steps that Wilhelm Schulz employees took to inflate profits?

CT5.9 Tabitha Andes was just hired as the assistant treasurer of Southside Stores, a specialty chain store company that has nine retail stores concentrated in one metropolitan area. Among other things, the payment of all invoices is centralized in one of the departments Tabitha 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.

Pete Wilson, the former assistant treasurer who has been promoted to treasurer, is training Tabitha in her new duties. He instructs Tabitha 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," Pete 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 mailroom 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. What stakeholders are harmed or benefited?

c. Should Tabitha continue the practice started by Pete? Does she have any choice?

All About You

CT5.10 There are many situations in business where it is difficult to determine the proper period in which to record revenue. Suppose that after graduation with a degree in finance, you take a job as a manager at a consumer electronics store called FarWest Electronics. The company has expanded rapidly in order to compete with **Best Buy**.

FarWest has also begun selling gift cards. The cards are available in any dollar amount and allow the holder of the card to purchase an item for up to 2 years from the time the card is purchased. If the card is not used during those 2 years, it expires.

Instructions

At what point should the revenue from the gift cards be recognized? Include the reasoning to support your answer.

FASB Codification Activity

CT5.11 If your school has a subscription to the FASB Codification, log in and prepare responses to the following.

a. Access the glossary ("Master Glossary") to answer the following.

  1. What is the definition provided for inventory?
  2. What is a customer?

b. What guidance does the Codification provide concerning reporting inventories above cost?

Answers to Insight and Accounting Across the Organization Questions

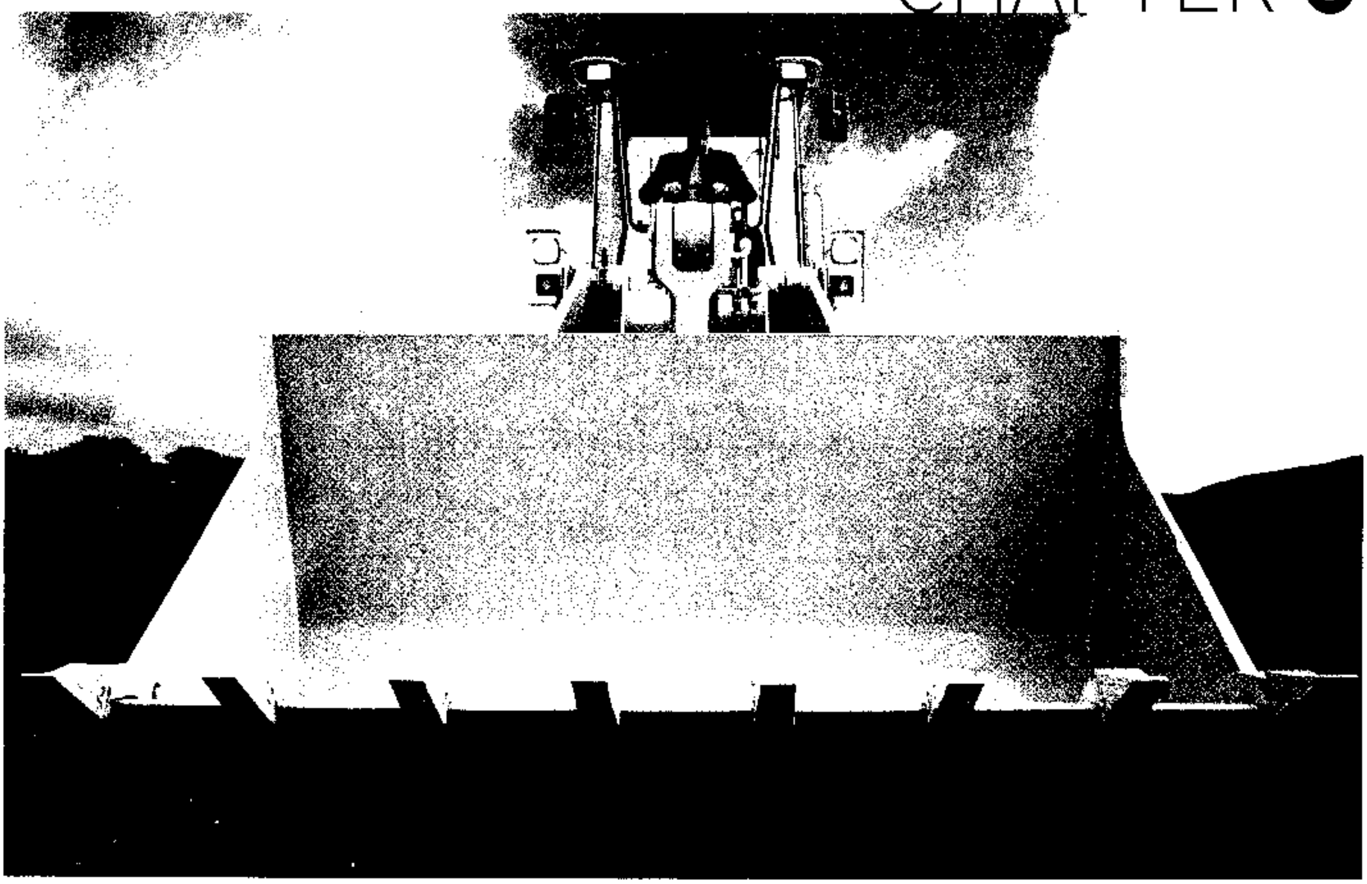
Improving Stock Appeal **Q:** If a perpetual system keeps track of inventory on a daily basis, why do companies ever need to do a physical count? **A:** A perpetual system keeps track of all sales and purchases on a continuous basis. This provides a constant record of the number of units in the inventory. 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.

The Point of No Return? **Q:** If a company expects significant returns, what are the implications for revenue recognition? **A:** If a company expects significant returns, it should make an adjusting entry at the end of the year to increase Sales Returns and Allowances by the estimated amount of sales returns. This is necessary to not overstate the amount of revenue recognized in the period.

Selling Green **Q:** What do you think is meant by "monetize environmental sustainability"? **A:** Through its sustainability efforts, not only does REI help the environment in the long run, but it also leads to long-term profitability as well. In other words, sound sustainability practices are good business and lead to sound financial results.

Disclosing More Details **Q:** Why have investors and analysts demanded more accuracy in isolating "Other gains and losses" from operating items? **A:** Greater accuracy in the classification of operating versus nonoperating ("Other gains and losses") items permits investors and analysts to judge the real operating margin, the results of continuing operations, and management's ability to control operating expenses.

CHAPTER 6



James Porter/Stone/Getty Images

Reporting and Analyzing Inventory

Chapter Preview

We previously 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 balance sheet date and the cost of goods sold.

Feature Story

"Where Is That Spare Bulldozer Blade?"

Let's talk inventory—big, bulldozer-size inventory. **Caterpillar Inc.** is the world's largest manufacturer of construction and mining equipment, diesel and natural gas engines, and industrial gas turbines. It sells its products in over 200 countries, making it one of the most successful U.S. exporters. More than 70% of its productive assets are located domestically, and nearly 50% of its sales are foreign.

A big part of Caterpillar's success turnaround can be attributed to effective management of its inventory. Imagine what it costs Caterpillar to have too many bulldozers sitting around in inventory—a situation the company definitely wants to avoid. Yet Caterpillar must also make sure it has enough inventory to meet demand.

At one time during a 7-year period, Caterpillar's sales increased by 100% while its inventory increased by only 50%. To achieve this dramatic reduction in the amount of resources tied up in inventory while continuing to meet customers' needs, Caterpillar used a two-pronged approach. First, it completed a factory modernization program, which greatly increased its production efficiency. The program reduced by 60% the amount of inventory the company processes at any one time. It also reduced by an incredible 75% the time it takes to manufacture a part.

Second, Caterpillar dramatically improved its parts distribution system. It ships more than 100,000 items daily from its 23 distribution centers strategically located around the world (10 million square feet of warehouse space—remember, we're talking bulldozers). The company can virtually guarantee that it can get any part to anywhere in the world within 24 hours.

These changes led to record exports, profits, and revenues for Caterpillar. It would have seemed that things could not be better. But the company's managers thought otherwise. Management undertook another major overhaul of inventory production and inventory management processes. The goal: to cut the number of repairs in half, increase productivity by 20%, and increase inventory turnover by 40%.

In short, Caterpillar's ability to manage its inventory has been a key reason for its past success and will very likely play a huge part in its future profitability.

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Discuss how to classify and determine inventory.	• Classifying inventory • Determining inventory quantities	**DO IT! 1** Rules of Ownership
LO 2 Apply inventory cost flow methods and discuss their financial effects.	• Specific identification • Cost flow assumptions • Financial statement and tax effects • Using inventory cost flow methods consistently	**DO IT! 2a** Cost Flow Methods—FIFO **2b** Cost Flow Methods—LIFO **2c** Cost Flow Methods—Average-Cost **2d** Cost Flow Methods—All
LO 3 Explain the statement presentation and analysis of inventory.	• Presentation • Lower-of-cost-or-net realizable value • Financial analysis and data analytics • Adjustments for LIFO reserve	**DO IT! 3a** LCNRV **3b** Inventory Turnover

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.
Visit Wiley Course Resources for additional tutorials and practice opportunities.

6.1 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 as follows.

1. The classification of inventory based on its degree of completeness.
2. The determination of inventory amounts.

Classifying Inventory

How a company classifies its inventory depends on whether the firm is a merchandiser or a manufacturer. The basic difference between a manufacturer and a merchandiser is that manufacturers make products, and merchandisers buy those products to sell to consumers.

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.
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: raw materials, work in process, and finished goods.

- **Raw materials** are the basic goods that will be used in production but have not yet been placed into production.
- **Work in process** is that portion of manufactured inventory that has been placed into the production process but is not yet complete.
- **Finished goods inventory** is manufactured items that are completed and ready for sale.

For example, **Caterpillar** classifies the steel, glass, tires, and other components that are on hand waiting to be used in the production of tractors as **raw materials.** It classifies the tractors on the assembly line in various stages of production as **work in process.** It classifies earth-moving tractors completed and ready for sale as **finished goods** (see **Helpful Hint**). **Illustration 6.1** shows an adapted excerpt from Note 8 of Caterpillar's annual report.

HELPFUL HINT

Regardless of the classification, companies report all inventories under Current Assets on the balance sheet.

ILLUSTRATION 6.1

Composition of Caterpillar's inventory

	December 31		
(millions of dollars)	**2019**	**2018**	**2017**
Raw materials	$ 4,263	$ 3,382	$ 2,802
Work in process	1,147	2,674	2,254
Finished goods	5,598	5,241	4,761
Other	258	232	201
Total inventories	**$11,266**	**$11,529**	**$10,018**

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.

- 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.
- 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. **Dell** became famous for making computers in response to individual customer requests. Even though it made each computer to meet each customer's particular specifications, Dell was 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 was 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. Additional issues specific to manufacturing companies are discussed in managerial accounting courses.

Accounting Across the Organization

New Africa/Shutterstock.com

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 can't make a car without them. As a result, the automakers were forced to shut down production for a few days—a loss of tens of thousands of cars.

Similarly, the COVID-19 pandemic has affected supply chains in nearly all industries. The high-tech industry is among the hardest hit by the coronavirus. **HP**, **Qualcomm**, **Huawei**, **Samsung**, and many other high-tech companies are looking at disruptions to their supply chains given their emphasis on JIT shipments.

Another result of the pandemic was increased demand in certain products. According to a **Dell** spokesperson, the company "is looking for alternative supply sources to deal with bottlenecks, and has experienced increased orders resulting from individuals working from home." The pandemic has led many companies to rethink their JIT approach to inventory management. In a time of crisis, relying on the efficiency of JIT may not work, and a more resilient form of inventory management may be needed.

Sources: Steve Banker, "Global High-Tech Supply Chains Disrupted by the Coronavirus," *Forbes* (February 10, 2020); and Sarah Needleman and Aaron Tilley, "Store Shelves Stripped of Laptops as Coronavirus Increases Working from Home," *Wall Street Journal* (March 18, 2020).

What steps might the companies take to avoid such a serious disruption in the future? (Answer is available at the end of the chapter.)

Determining Inventory Quantities

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 (see **Ethics Note**). If using a perpetual system, companies might take a physical inventory at other times during the accounting period for the following reasons:

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.

1. To check the accuracy of their perpetual inventory records.
2. To determine the amount of inventory lost due to "shrinkage," that is, wasted raw materials, shoplifting, or employee theft. When **Amazon.com** acquired **Whole Foods**, Amazon demanded that Whole Foods take steps to improve its internal controls to reduce its shrinkage.

Companies using a periodic inventory system take a physical inventory for **two different purposes**: to determine the inventory on hand at the balance sheet 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

In many companies, taking an inventory is a formidable task. Retailers such as **Target**, **TJ Maxx**, or **Home Depot** 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. **Walmart Inc.**, for example, has a year-end of January 31. TJ Maxx defines its year-end as the Saturday nearest to the last day in January.

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:

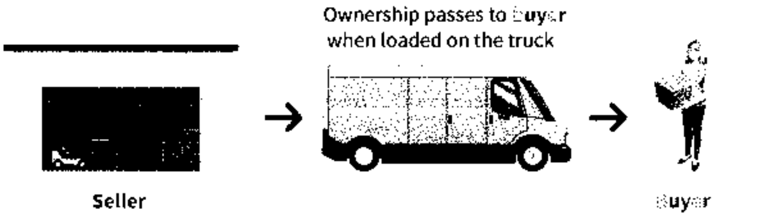
1. Do all of the goods included in the count belong to the company?
2. Does the company own any goods that were not included in the count?

Goods in Transit To determine inventory ownership at the end of the period, a company must consider **goods in transit** (on board a truck, train, ship, or plane). 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 its customer. To arrive at an accurate count, the company must determine ownership of these goods.

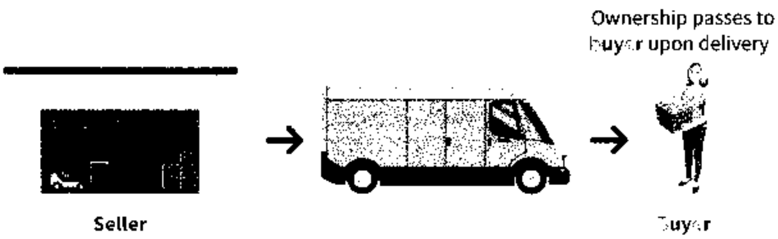
Goods in transit should be included in the inventory of the company that has legal title to the goods. Legal title (ownership) is determined by the terms of the sale, as shown in **Illustration 6.2** and described below.

ILLUSTRATION 6.2
Terms of sale

FOB Shipping Point: Buyer Pays Freight Costs



FOB Destination: Seller Pays Freight Costs



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).

Ethics Insight Logitech


Zixp@ck/Adobe Stock Photos

Falsifying Inventory to Boost Income

Executives at **Logitech** were accused of inflating the company's operating income because the company failed "to write down the value of its inventory to avoid the financial consequences of disappointing sales," according to the director of the SEC's Division of Enforcement.

In another case, executives at **Craig Electronics** 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, Craig either did not own the shipments or the shipments did not exist.

What effect does an overstatement of inventory have on a company's financial statements? (Answer is available at the end of the chapter.)

As we will see later in the chapter, inaccurate inventory counts affect not only the inventory amount shown on the balance sheet 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, 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. A used-car 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 because the dealer does not own it.

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. Some merchandisers and manufacturers enter into consignment agreements with suppliers in order to keep inventory levels low. For example, prior to filing bankruptcy, **Sports Authority Inc.** became embroiled in lawsuits with suppliers over goods that it was holding on consignment. A judge ruled that Sports Authority had to comply with the suppliers' wishes since the consigned goods belonged to the suppliers.

Anatomy of a Fraud

Ted Nickerson, CEO of clock manufacturer Dally Industries, had expensive tastes. To support this habit, Ted took out large loans, which he collateralized with his shares of Dally Industries stock. If the price of Dally's stock fell, he was required to provide the bank with more shares of stock. To achieve target net income figures and thus maintain the stock 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.

ACTION PLAN

- **Apply the rules of ownership to goods held on consignment.**
- **Apply the rules of ownership to goods in transit.**

DO IT! 1 | Rules of Ownership

Hasbeen Company completed its inventory count. It arrived at a total inventory value of \$200,000. As a new member of Hasbeen's accounting department, you have been given the information listed below. Discuss how this information affects the reported cost of inventory.

1. Hasbeen 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).

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 reported at \$195,000 (\$200,000 − \$15,000 + \$10,000).

Related exercise material: BE6.1, BE6.2, DO IT! 6.1, E6.1, E6.2, E6.3, and E6.4.

6.2 Inventory Methods and Financial Effects

LEARNING OBJECTIVE 2

Apply inventory cost flow methods and discuss their financial effects.

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 is 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 with different costs.

For example, assume that Crivitz TV Company purchased three identical 50-inch TVs on different dates at costs of $700, $750, and $800. During the year, Crivitz sold two TVs at $1,200 each. These facts are summarized in Illustration 6.3.

ILLUSTRATION 6.3
Data for inventory costing example

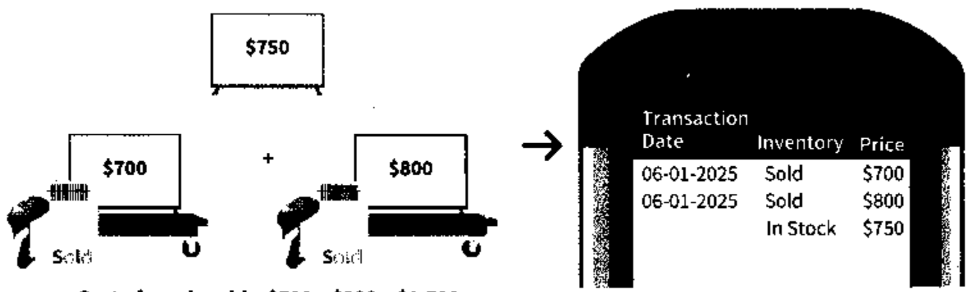
Purchases			
February 3	1 TV	at	$700
March 5	1 TV	at	$750
May 22	1 TV	at	$800
Sales			
June 1	2 TVs	for	$2,400 ($1,200 × 2)

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



Cost of goods sold = $700 + $800 = $1,500
Ending inventory = $750

Specific identification requires that companies keep records of the original cost of each individual inventory item. Historically, specific identification was possible only when

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.

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 (see Ethics Note).

Today, bar coding, electronic product codes, and radio frequency identification make it theoretically possible to apply 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.

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 three assumed cost flow methods:

1. First-in, first-out (FIFO).
2. Last-in, first-out (LIFO).
3. 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 be used for accounting purposes.

To demonstrate the three cost flow methods, we will use a **periodic** inventory system. We assume a periodic system because **very few companies use perpetual LIFO, 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, LIFO, or average-cost** as shown in this chapter and adjust cost of goods sold to this recalculated number.[1] The cost of goods sold formula in a periodic system is as follows.

Beginning Inventory	+	Cost of Goods Purchased	−	Ending Inventory	=	Cost of Goods Sold

To illustrate the three inventory cost flow methods, we will use the data for Houston Electronics' Astro condensers, shown in Illustration 6.5.

ILLUSTRATION 6.5
Data for Houston Electronics

Houston Electronics
Astro Condensers

Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	100	$10	$ 1,000
Apr. 15	Purchase	200	11	2,200
Aug. 24	Purchase	300	12	3,600
Nov. 27	Purchase	400	13	5,200
	Total units available for sale	1,000		$12,000
	Units in ending inventory	(450)		
	Units sold	550		

[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. In addition, firms that employ LIFO tend to use **dollar-value LIFO**, a method discussed in upper-level courses. 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 recordkeeping. 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.

Houston Electronics had a total of 1,000 units available to sell during the period (beginning inventory plus purchases). The total cost of these 1,000 units is $12,000, referred to as **cost of goods available for sale.** A physical inventory taken at December 31 determined that there were 450 units in ending inventory. Therefore, Houston sold 550 units (1,000 – 450) during the period.

To determine the cost of the 550 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 **depends 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, $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. (However, the actual physical flow does not dictate that a company must choose FIFO or LIFO.)
- Under the FIFO method, 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. (If a store shelf is full of boxes of pencils, for example, no one really knows, nor would it matter, which pencils are sold first.)

Illustration 6.6 shows the allocation of the cost of goods available for sale at Houston Electronics under FIFO (see **Helpful Hint**).

ILLUSTRATION 6.6
Allocation of costs—FIFO method

Cost of Goods Available for Sale

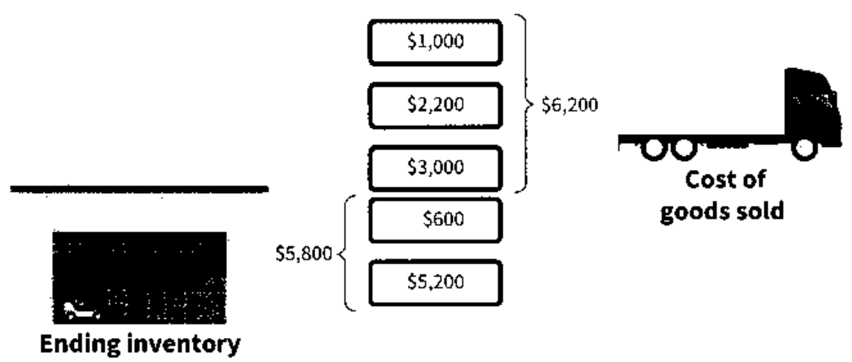
Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	100	$10	$ 1,000
Apr. 15	Purchase	200	11	2,200
Aug. 24	Purchase	300	12	3,600
Nov. 27	Purchase	400	13	5,200
	Total	1,000		$12,000

Step 1: Ending Inventory

Date	Units	Unit Cost	Total Cost
Nov. 27	400	$13	$5,200
Aug. 24	50	12	600
Total	450		$5,800

Step 2: Cost of Goods Sold

Cost of goods available for sale	$12,000
Less: Ending inventory	5,800
Cost of goods sold	$ 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 costs of the most recent units purchased (see Helpful Hint). **Under FIFO, companies determine 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 **Step 1**, Houston Electronics accounts for the 450 units of ending inventory using the **most recent** costs. The last purchase was 400 units at $13 on November 27. The remaining 50 units use the unit cost of the second most recent purchase, $12, on August 24.
- In **Step 2**, Houston 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 Houston can also calculate the cost of the 550 units sold by using the costs of the first 550 units acquired.

- Note that of the 300 units purchased on August 24, only 250 units are assumed sold.
- This agrees with our calculation of the cost of ending inventory, where 50 of these units were assumed unsold and thus included in ending inventory.

ILLUSTRATION 6.7

Proof of cost of goods sold—FIFO method

Date	Units	Unit Cost	Total Cost
Jan. 1	100	$10	$1,000
Apr. 15	200	11	2,200
Aug. 24	250	12	3,000
Total	550		$6,200

ACTION PLAN

- **Understand the periodic inventory system.**
- **Allocate costs between goods sold and goods on hand (ending inventory) for the FIFO method.**
- **Compute cost of goods sold for the FIFO method.**

DO IT! 2a Cost Flow Methods—FIFO Method

The accounting records of Shumway Ag Implements 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 the FIFO 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

Cost of goods sold FIFO: $36,000 – (3,000 × $4) = $24,000

Related exercise material: BE6.3, BE6.4, BE6.5, BE6.6, DO IT! 6.2, E6.5, E.6.6, E6.7, and E6.8.

Last-In, First-Out (LIFO)

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.) However, the actual physical flow does not dictate that a company must chose FIFO or LIFO.
- Under the LIFO method, the **costs** of the latest goods purchased are the first to be recognized in determining cost of goods sold.

Illustration 6.8 shows the allocation of the cost of goods available for sale at Houston Electronics under LIFO.

ILLUSTRATION 6.8

Allocation of costs—LIFO method

Cost of Goods Available for Sale

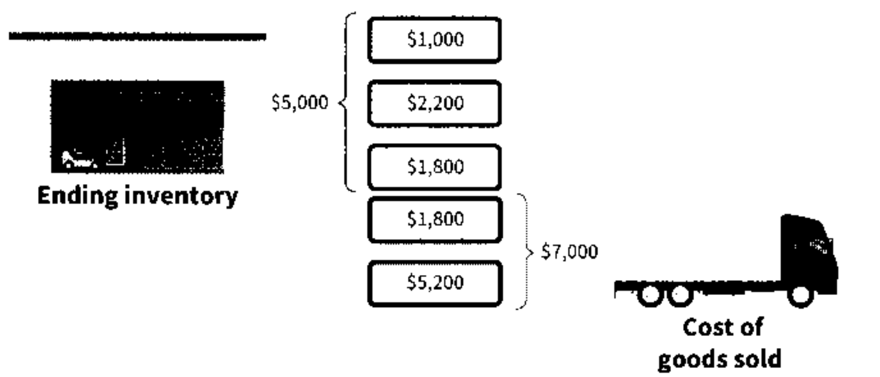
Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	100	$10	$ 1,000
Apr. 15	Purchase	200	11	2,200
Aug. 24	Purchase	300	12	3,600
Nov. 27	Purchase	400	13	5,200
	Total	1,000		$12,000

Step 1: Ending Inventory

Date	Units	Unit Cost	Total Cost
Jan. 1	100	$10	$1,000
Apr. 15	200	11	2,200
Aug. 24	150	12	1,800
Total	450		$5,000

Step 2: Cost of Goods Sold

Cost of goods available for sale	$12,000
Less: Ending inventory	5,000
Cost of goods sold	$ 7,000



Under LIFO, since it is assumed that the first goods sold were those that were most recently purchased, ending inventory is based on the costs of the oldest units purchased (see Helpful Hint). **Under LIFO, companies determine 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.**

HELPFUL HINT

Another way of thinking about the calculation of LIFO ending inventory is the FISH assumption—first in still here.

- In **Step 1**, Houston Electronics accounts for the 450 units of ending inventory using the **earliest** costs. The first purchase was 100 units at $10 in the January 1 beginning inventory. Then, 200 units were purchased at $11. The remaining 150 units needed have a $12 per unit cost (August 24 purchase).
- In **Step 2**, Houston 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 6.9 demonstrates that Houston can also calculate the cost of the 550 units sold by using the costs of the last 550 units acquired.

- Note that of the 300 units purchased on August 24, only 150 units are assumed sold.
- This agrees with our calculation of the cost of ending inventory, where 150 of these units were assumed unsold and thus included in ending inventory.

ILLUSTRATION 6.9

Proof of cost of goods sold—LIFO method

Date	Units	Unit Cost	Total Cost
Nov. 27	400	$13	$5,200
Aug. 24	150	12	1,800
Total	550		$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.**

ACTION PLAN

- **Understand the periodic inventory system.**
- **Allocate costs between goods sold and goods on hand (ending inventory) for the LIFO method.**
- **Compute cost of goods sold for the LIFO method.**

DO IT! 2b Cost Flow Methods—LIFO Method

The accounting records of Shumway Ag Implements 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 the LIFO 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

Cost of goods sold LIFO: $36,000 – (3,000 × $3) = $27,000

Related exercise material: BE6.3, BE6.4, BE6.5, BE6.6, DO IT! 6.2, E6.5, E6.6, E6.7, and E6.8.

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 **weighted-average unit cost** is the average cost that is weighted by the number of units purchased at each unit cost.
- The average-cost method assumes that goods are similar in nature.

Illustration 6.10 presents the formula and a sample computation of the weighted-average unit cost.

ILLUSTRATION 6.10
Formula for weighted-average unit cost

Cost of Goods Available for Sale	÷	Total Units Available for Sale	=	Weighted-Average Unit Cost
$12,000	÷	1,000	=	$12

The company then applies the weighted-average unit cost to the units on hand to determine the cost of the ending inventory. **Illustration 6.11** shows the allocation of the cost of goods available for sale at Houston Electronics using average-cost.

ILLUSTRATION 6.11
Allocation of costs—average-cost method

Cost of Goods Available for Sale

Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	100	$10	$ 1,000
Apr. 15	Purchase	200	11	2,200
Aug. 24	Purchase	300	12	3,600
Nov. 27	Purchase	400	13	5,200
	Total	1,000		$12,000

Step 1: Ending Inventory

Total Cost	÷	Total Units	=	Weighted-Average Unit Cost
$12,000	÷	1,000	=	$12

Ending Inventory Units	Unit Cost	Total Cost
450	$12	$5,400

Step 2: Cost of Goods Sold

Cost of goods available for sale	$12,000
Less: Ending inventory	5,400
Cost of goods sold	$ 6,600

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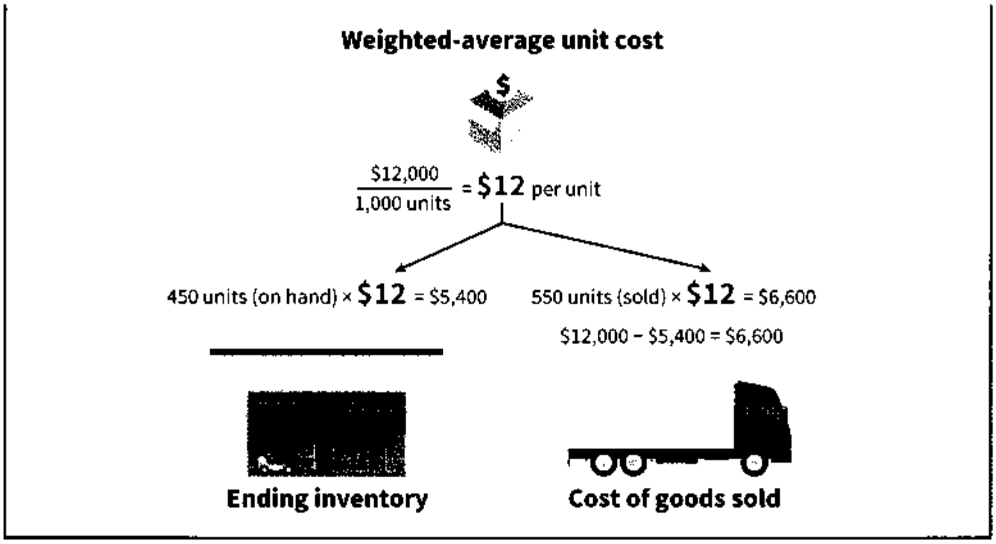


ILLUSTRATION 6.11
(continued)

We can verify the cost of goods sold under this method by multiplying the units sold by the weighted-average unit cost (550 × $12 = $6,600).

- Note that this method does **not** use the average of the unit costs. That average is $11.50 ($10 + $11 + $12 + $13 = $46; $46 ÷ 4).
- The average-cost method instead uses the average **weighted by** the quantities purchased at each unit cost.

DO IT! 2c Cost Flow Methods—Average-Cost Method

The accounting records of Shumway Ag Implements 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 the average-cost 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

Weighted-average unit cost: [(4,000 @ $3) + (6,000 @ $4)] ÷ 10,000 = $3.60
Cost of goods sold average-cost: $36,000 − (3,000 × $3.60) = $25,200

Related exercise material: BE6.3, BE6.4, BE6.5, BE6.6, DO IT! 6.2, E6.5, E6.6, E6.7, and E6.8.

ACTION PLAN

- **Understand the periodic inventory system.**
- **Allocate costs between goods sold and goods on hand (ending inventory) for the average-cost method.**
- **Compute cost of goods sold for the average-cost method.**

Financial Statement and Tax Effects of Cost Flow Methods

Each of the three assumed cost flow methods is acceptable under GAAP. For example, **Under Armour** and **Amazon.com** use the FIFO method of inventory costing. **Target Corporation** uses LIFO for its inventory. **Starbucks** and **Microsoft** use the average-cost method.

In fact, a company may also use more than one cost flow method at the same time for different types of inventory. **Walmart**, for example, uses LIFO for domestic inventories and FIFO for foreign inventories. **Illustration 6.12** shows the use of the three cost flow methods in 500 large U.S. companies.

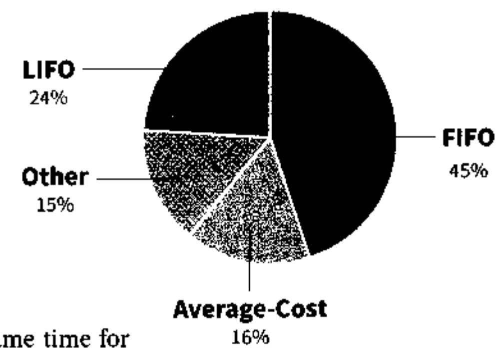


ILLUSTRATION 6.12
Use of cost flow methods in major U.S. companies

> **Decision Tools**
>
> Analyzing financial statement and tax effects helps users determine which inventory costing method best meets the company's objectives.

The reasons companies adopt different inventory cost flow methods are varied, but they usually involve one of three factors:

1. Income statement effects.
2. Balance sheet effects.
3. Tax effects.

Analyzing financial statement and tax effects helps users determine which inventory costing method best meets the company's objectives (see **Decision Tools**).

Income Statement Effects

To understand why companies might choose a particular cost flow method, let's examine the effects of the different cost flow assumptions on the financial statements of Houston Electronics. The condensed income statements in **Illustration 6.13** assume that Houston sold its 550 units for $18,500, had operating expenses of $9,000, and is subject to an income tax rate of 20%.

ILLUSTRATION 6.13
Comparative effects of cost flow methods

Houston Electronics
Condensed Income Statements

	FIFO	LIFO	Average-Cost
Sales revenue	$18,500	$18,500	$18,500
Beginning inventory	1,000	1,000	1,000
Purchases	11,000	11,000	11,000
Cost of goods available for sale	12,000	12,000	12,000
Ending inventory	5,800	5,000	5,400
Cost of goods sold	6,200	7,000	6,600
Gross profit	12,300	11,500	11,900
Operating expenses	9,000	9,000	9,000
Income before income taxes*	3,300	2,500	2,900
Income tax expense (20%)	660	500	580
Net income	$ 2,640	$ 2,000	$ 2,320

*We are assuming that Houston Electronics is a corporation, and corporations are required to pay income taxes.

In this example, which assumes equal beginning inventories, the cost of goods available for sale ($12,000) is the same under each of the three inventory cost flow methods. 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 Houston, an $800 difference exists between FIFO and LIFO cost of goods sold.

In periods when costs change, the cost flow assumption can have significant impacts both on income and on evaluations of income, such as the following.

1. In a period of inflation, **FIFO produces a higher net income** because lower unit costs of the first units purchased are matched against revenue.
2. In a period of inflation, **LIFO produces a lower net income** because higher unit costs of the last goods purchased are matched against revenue.
3. If costs are falling, the results from the use of FIFO and LIFO are reversed. FIFO will report the lowest net income and LIFO the highest.
4. Regardless of whether costs are rising or falling, average-cost produces cost of goods sold and net income between FIFO and LIFO.

As shown in the Houston example (Illustration 6.13), in a period of rising costs, FIFO reports the highest net income ($2,640) and LIFO the lowest ($2,000); average-cost falls between these two amounts ($2,320). See **Illustration 6.14**.

ILLUSTRATION 6.14
Impacts on cost flow assumptions when costs change

		Net Income
Costs are RISING	FIFO	Higher
	LIFO	Lower
Costs are FALLING	FIFO	Lower
	LIFO	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 costs are rising (which is usually the case), companies tend to prefer FIFO because it results in higher net income.

Others believe that LIFO presents a more realistic net income number. That is, LIFO matches the more recent costs against current revenues to provide a better measure of net income. During periods of inflation, many challenge the quality of non-LIFO earnings, noting that failing to match current costs against current revenues leads to an understatement of cost of goods sold and an overstatement of net income. As some indicate, additional net income computed using FIFO creates **"paper or phantom profits"**—that is, earnings that do not really exist.

Balance Sheet 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 Houston Electronics, 400 of the 450 units in the ending inventory are costed under FIFO at the higher November 27 unit cost of $13.

Conversely, a major shortcoming of the LIFO method is that in a period of inflation, the costs allocated to ending inventory may be significantly 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. For example, **Caterpillar** has used LIFO for more than 50 years. Its balance sheet shows ending inventory of $9,700 million. But the inventory's actual current cost if FIFO had been used is $12,189 million.

HELPFUL HINT

A tax rule, often referred to as the LIFO conformity rule, requires that if companies use LIFO for tax purposes they must also use it for financial reporting purposes. This means that if a company chooses the LIFO method to reduce its tax bills, it will also have to report lower net income in its financial statements.

Tax Effects

We have seen that both inventory on the balance sheet and net income on the income statement are higher when companies use FIFO in a period of inflation. Yet, many companies have selected LIFO. Why? The reason is that LIFO results in the lowest income taxes (because of lower net income) during times of rising costs (see **Helpful Hint**). For example, at Houston Electronics, income taxes are $500 under LIFO, compared to $660 under FIFO. The tax savings of $160 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 LIFO 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. **Illustration 6.15** shows a typical disclosure, using information from recent financial statements of **General Electric (GE)**.

ILLUSTRATION 6.15
Disclosure of change in cost flow method

Real World

General Electric Company
Notes to the Financial Statements

Effective January 1, we voluntarily changed the cost method of the GE U.S. inventories that were previously measured on a last-in, first-out (LIFO) basis to first-in, first-out (FIFO) basis. We believe the FIFO method is a preferable measure for our inventories as it is expected to better reflect the current value of inventory reported in our consolidated Statement of Financial Position, improve the matching of costs of goods sold with related revenue, and provide for greater consistency and uniformity across our operations with respect to the method of inventory valuation.

International Insight ExxonMobil Corporation

Mike Fuentes/Bloomberg/ Getty Images

Is LIFO Fair?

ExxonMobil Corporation, like many U.S. companies, uses LIFO to value its inventory for financial reporting and tax purposes. In one 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 Congress looks for more sources of tax revenue, some lawmakers have favored 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 and Royal Dutch Shell are not directly comparable to U.S. companies, which can make analysis difficult.

What are the arguments for and against the use of LIFO? (Answer is available at the end of the chapter.)

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.**

DO IT! 2d Cost Flow Methods—All

London Company sold 600 units of inventory in April. In addition, the following information is available.

April 1 inventory	250	$10	$ 2,500
April 15 purchases	400	12	4,800
April 23 purchases	350	13	4,550
	1,000		$11,850

Determine the cost of goods sold during the period under a periodic inventory system using (a) the FIFO method, (b) the LIFO method, and (c) the average-cost method.

Solution

Cost of goods available for sale = $11,850
Ending inventory = 1,000 – 600 = 400 units

a. FIFO: $11,850 – $4,550 (350 × $13) – $600 (50 × $12) = $6,700
b. LIFO: $11,850 – $2,500 (250 × $10) – $1,800 (150 × $12) = $7,550
c. Weighted-average unit cost: $11,850 ($2,500 + $4,800 + $4,550) ÷ 1,000 = $11.85
Average-cost: $11,850 – (400 × $11.85) = $7,110

Related exercise material: BE6.3, BE6.4, BE6.5, BE6.6, DO IT! 6.2, E6.5, E6.6, E6.7, E6.8, E6.9, and E6.10.

6.3 Inventory Presentation and Analysis

LEARNING OBJECTIVE 3

Explain the statement presentation and analysis of inventory.

Presentation

Recall that inventory is classified in the balance sheet as a current asset immediately below receivables. In a multiple-step income statement, cost of goods sold is subtracted from net 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).
3. The cost method (FIFO, LIFO, or average-cost).

Walmart, for example, in a recent balance sheet reported inventories of $44,435 million under current assets. The accompanying notes to the financial statements disclosed the information shown in **Illustration 6.16**.

ILLUSTRATION 6.16
Inventory disclosures by Walmart

Real World

Walmart Inc.
Notes to the Financial Statements

Note 1. Summary of Significant Accounting Policies

Inventories

The Company values inventories at the lower of cost or market as determined primarily by the retail method of accounting, using the last-in, first-out ("LIFO") method for substantially all of the Walmart U.S. segment's inventories. The inventory for the Walmart International segment is valued primarily by the retail inventory method of accounting, using the first-in, first-out ("FIFO") method. The retail method of accounting results in inventory being valued at the lower of cost or market, since permanent markdowns are immediately recorded as a reduction of the retail value of inventory. The inventory at the Sam's Club segment is valued using the weighted-average cost LIFO method.

Lower-of-Cost-or-Net Realizable Value

The value of inventory for companies selling high-technology or fashion goods can drop very quickly due to continual changes in technology or fashion. These circumstances sometimes call for inventory valuation methods other than those presented so far.

For example, consider what happened at Ford when purchasing managers 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 cost of palladium had plummeted. Ford's inventory was then worth $1 billion less than its original cost. Do you think Ford's inventory should have been stated at cost, in accordance with the historical cost principle, or at its lower 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 cost decline occurs.

- 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.

LCNRV is an example of accounting **conservatism**. Conservatism means that accountants select a method of reporting that is least likely to overstate assets and net income. Critics of accounting conservatism argue that it introduces bias into accounting numbers. This can reduce the representational faithfulness as well as the relevance of financial reports.

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 Ken Tuckie Electronics has the following lines of merchandise with costs and net realizable values as indicated. LCNRV produces the results shown in Illustration 6.17. Note that the amounts shown in the final column are the lower-of-cost-or-net realizable value amounts for each item.

ILLUSTRATION 6.17

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	$600	$550	$ 55,000	($550 × 100)
Wireless speakers	500	90	104	45,000	($90 × 500)
Bluetooth headphones	850	50	48	40,800	($48 × 850)
Smart watch accessories	3,000	5	6	15,000	($5 × 3,000)
Total inventory				$155,800	

Companies that use the LIFO method or the retail inventory method (shown in Illustration 6.16) are not required to use lower-of-cost-or-net realizable value for inventory valuation. Instead, they use a lower-of-cost-or-market approach which is a more complex calculation. The computation for the lower-of-cost-or-market method is discussed in more advanced accounting courses.

DO IT! 3a LCNRV

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	$ 84,000	$ 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 $79,000, wood $250,000, and pellet $101,000. The total inventory value is the sum of these amounts, $430,000.

Related exercise material: BE6.9, DO IT! 6.3a, E6.10, and E6.11.

Financial Analysis and Data Analytics

Managing inventory levels is a critical task.

- Having too much inventory on hand costs the company money in storage costs, interest cost (on funds tied up in inventory), and costs associated with the obsolescence of technical goods (e.g., computer chips) or shifts in fashion (e.g., clothes).
- Having too little inventory on hand results in lost sales.

Inventory Turnover

Inventory turnover is calculated as cost of goods sold divided by average inventory.

- It indicates the liquidity of inventory by measuring the number of times the average inventory "turns over" (is sold) during the year.
- Inventory turnover can be divided into 365 days to compute **days in inventory**, which indicates the average number of days inventory is held (see **Decision Tools**).
- High inventory turnover (low days in inventory) indicates the company has minimal funds tied up in inventory—that it has a minimal amount of inventory on hand at any one time. Although minimizing the funds tied up in inventory is efficient, too high an inventory turnover may indicate that the company is losing sales opportunities because of inventory shortages.

Decision Tools

Inventory turnover and days in inventory help users determine how long an item is in inventory.

For example, investment analysts at one time suggested that **Office Depot** had gone too far in reducing its inventory—they said they were seeing too many empty shelves. Thus, management should closely monitor this ratio to achieve the best balance between too much and too little inventory.

We have previously discussed the increasingly competitive environment of retailers, such as **Walmart** and **Target**. Walmart has implemented **just-in-time inventory procedures** as well as many technological innovations to improve the efficiency of its inventory management. The following data were reported by Walmart.

	(in millions)
Beginning inventory	$ 44,269
Ending inventory	44,435
Cost of goods sold	394,605

Illustration 6.18 presents the inventory turnovers and days in inventory for Walmart and Target, using recent data from the financial statements of those corporations.

ILLUSTRATION 6.18
Inventory turnovers and days in inventory

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

$$\text{Days in Inventory} = \frac{365}{\text{Inventory Turnover}}$$

Ratio	Walmart ($ in millions)	Target
Inventory turnover	$\frac{\$394,605}{(\$44,269 + \$44,435) \div 2} = 8.9$ times	5.9 times
Days in inventory	$\frac{365 \text{ days}}{8.9} = 41.0$ days	61.9 days

The calculations in Illustration 6.18 show that Walmart turns its inventory more frequently than Target (8.9 times for Walmart versus 5.9 times for Target). Consequently, the average time an item spends on a Walmart shelf is shorter (41.0 days for Walmart versus 61.9 days for Target).

This analysis suggests that Walmart is more efficient than Target in its inventory management. Walmart's sophisticated inventory tracking and distribution system allows it to keep minimum amounts of inventory on hand, while still keeping the shelves full of what customers are looking for.

Data Analytics

Inventory management benefits greatly from data analytics. Companies such as **Walmart** collect massive amounts of data about every inventory item and every customer. They analyze customer habits, buying patterns, and sales trends. Using sophisticated models that incorporate economic variables, weather patterns, and many other factors, companies strive to optimize inventory levels to maximize sales while minimizing inventory holding costs.

For example, companies can use data analytics when determining if the net realizable value of certain products exceeds their costs. Furthermore, analytics can identify the last time a company sold a particular product, allowing the company to assess if that product is obsolete or damaged. By analyzing search histories on their websites and by examining sales order data, companies can track and anticipate changes in the demand for their products.

- This type of predictive analysis uses data to project expected sales.
- This, in turn, allows companies to plan future inventory purchasing decisions and to determine minimum and maximum desired quantities of inventory on hand at different times during the year.

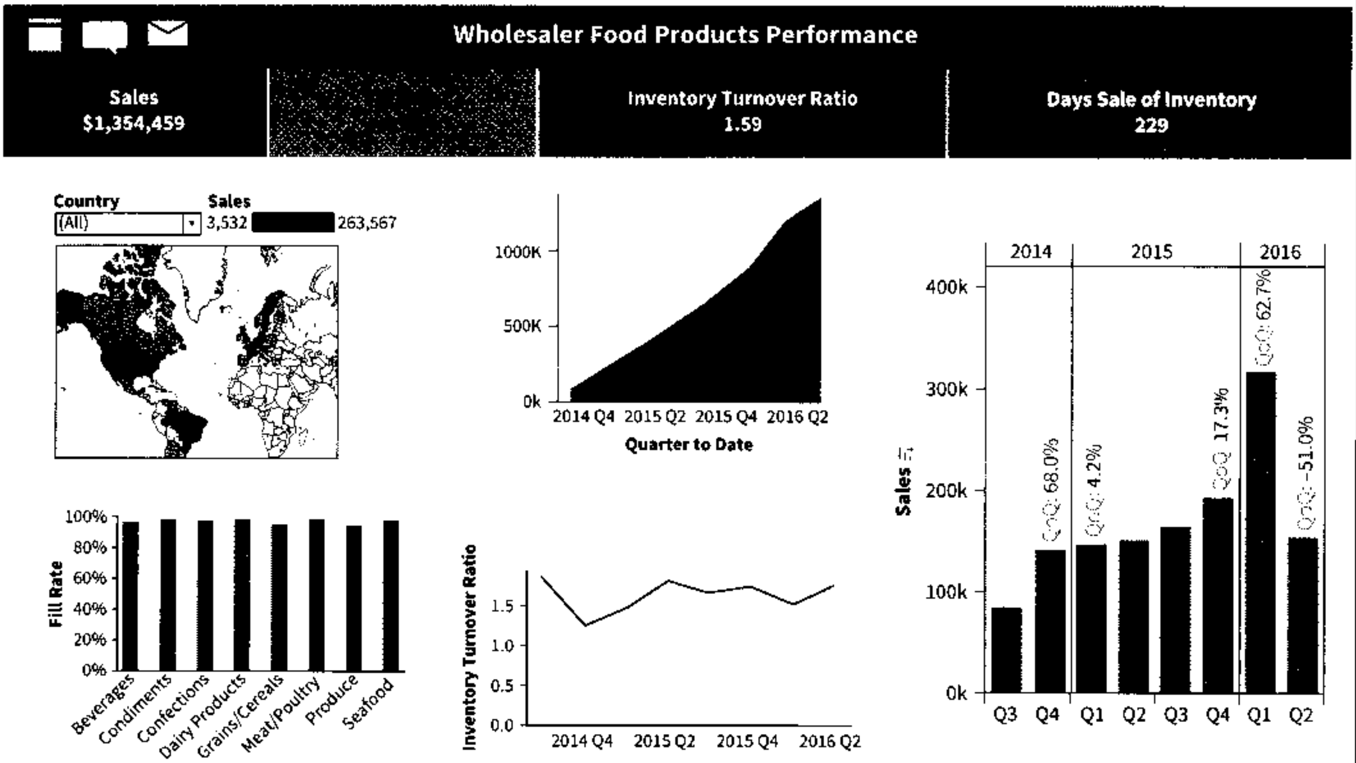
Companies can also use other data analytics tools to ensure that the inventory on hand remains in optimal condition. For example, agribusiness companies are using data analytics to ensure that grain inventories are being stored in the best conditions possible. These systems

Data Analytics Insight Dashboards: Seeing Is Believing

Dashboards are a commonly employed tool for data analytics. Dashboards represent a collection of a variety of views of key measures that managers desire to monitor. If you have ever seen one, you know that a dashboard often consists of a number of worksheets. And because each worksheet is "live," the manager can manipulate variables or views.

For example, consider the Tableau dashboard shown here. Using this dashboard, the manager can evaluate how well the company is meeting customer demand by evaluating the fill rate (which shows the frequency of stock-outs). The manager can also easily see how efficiently the company is managing its inventory by evaluating the inventory turnover and days in inventory. This information can be evaluated by region, over time, and by product line.

What benefits does a dashboard such as this one provide to a manager for making decisions regarding inventory? (Answer is available at the end of the chapter.)



Source: Tableau Public website.

use sensors to track the moisture and temperature of grain bins. Using weather data, these systems adjust the fan and air-circulation settings within the grain bins to ensure the grain is kept in optimal condition.

Adjustments for LIFO Reserve

Earlier, we noted that using LIFO rather than FIFO can result in significant differences in the results reported in the balance sheet and the income statement. With increasing prices, FIFO will result in higher income than LIFO. On the balance sheet, FIFO will result in higher reported inventory. The financial statement differences from using LIFO normally increase the longer a company uses LIFO.

Use of different inventory cost flow assumptions complicates analysts' attempts to compare companies' results.

- Fortunately, companies using LIFO are required to report the difference between inventory reported using LIFO and inventory using FIFO.
- This amount is referred to as the **LIFO reserve**.

Decision Tools

Adjusting inventory from LIFO to FIFO helps users analyze the impact of LIFO on the company's reported income.

Reporting the LIFO reserve enables analysts to make adjustments to compare companies that use different cost flow methods (see **Decision Tools**).

For example, **Caterpillar** has used LIFO for over 50 years. Thus, the cumulative difference between LIFO and FIFO reflected in the Inventory account is very large. In fact, a recent LIFO reserve of $2,086 million is 18.5% of the reported inventory of $11,266 million. Such a huge difference would clearly distort any comparisons you might try to make with one of Caterpillar's competitors that used FIFO.

To adjust Caterpillar's inventory balance, we add the LIFO reserve to reported inventory, as shown in **Illustration 6.19**. That is, if Caterpillar had used FIFO all along, its inventory would be $13,352 million, rather than $11,266 million.

ILLUSTRATION 6.19

Conversion of inventory from LIFO to FIFO

	(in millions)
Inventory using LIFO	$ 11,266
LIFO reserve	2,086
Inventory assuming FIFO	**$13,352**

The LIFO reserve can have a significant effect on ratios that analysts commonly use. Using the LIFO reserve adjustment, **Illustration 6.20** calculates the value of the current ratio (current assets ÷ current liabilities) for Caterpillar under both the LIFO and FIFO cost flow assumptions.

ILLUSTRATION 6.20

Impact of LIFO reserve on ratios

($ in millions)	LIFO	FIFO
Current ratio	$\frac{\$39,193}{\$26,621} = 1.47:1$	$\frac{\$39,193 + \$2,086}{\$26,621} = 1.55:1$

As Illustration 6.20 shows, if Caterpillar used FIFO, its current ratio would be 1.55:1 rather than 1.47:1 under LIFO. Thus, Caterpillar's liquidity appears stronger if a FIFO assumption were used in valuing inventories.

CNH Global, a competitor of Caterpillar, uses FIFO to account for its inventory. Comparing Caterpillar to CNH without converting Caterpillar's inventory to FIFO could lead to distortions and potentially erroneous decisions.

Accounting Across the Organization Sony

Auris/Getty Images

Too Many TVs or Too Few?

Financial analysts closely monitor the inventory management practices of companies. Companies such as Sony, which makes electronics such as game consoles, wireless speakers, and TVs, must have enough inventory to meet demand for trendy products. At the same time, these companies are susceptible to obsolescence and economic swings.

For example, some analysts following Sony expressed concern because the company built up its inventory of televisions in an attempt to sell 25 million liquid crystal display (LCD) TVs—a 60% increase over the prior year. A year earlier, Sony had cut its inventory levels so that its quarterly days in inventory was down to 38 days, compared to 61 days for the same quarter a year before that. But in the next year, as a result of its inventory build-up, days in inventory rose to 59 days.

Management said that it didn't think that Sony's inventory levels were too high. However, analysts were concerned that the company would have to engage in very heavy discounting in order to sell off its inventory. Analysts noted that the losses from discounting can be "punishing."

Sources: Daisuke Wakabayashi, "Sony Pledges to Corral Inventory," *Wall Street Journal Online* (November 2, 2010); and Jacky Wong, "Sony Looks Well Placed to Benefit from Next Console War," *Wall Street Journal* (October 28, 2020).

For Sony, what are the advantages and disadvantages of having a low days in inventory measure? (Answer is available at the end of the chapter.)

DO IT! 3b Inventory Turnover

Early in 2025, Westmoreland Company switched to a just-in-time inventory system. Its sales revenue, cost of goods sold, and inventory amounts for 2024 and 2025 are shown below.

	2024	2025
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 2024 and 2025. 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.**

Solution

	2024	2025
Inventory turnover	$\frac{\$1{,}000{,}000}{(\$290{,}000 + \$210{,}000) \div 2} = 4$	$\frac{\$910{,}000}{(\$210{,}000 + \$50{,}000) \div 2} = 7$
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: BE6.10, DO IT! 6.3b, E6.12, E6.13, and E6.14.

USING THE DECISION TOOLS | Eastman Chemical

Eastman Chemical is a global specialty materials company that produces a broad range of products found in items people use every day. Eastman employs approximately 14,500 people around the world and serves customers in more than 100 countries. The company is headquartered in Kingsport, Tennessee. Here is the inventory note taken from recent financial statements.

Eastman Chemical Company
Notes to the Financial Statements

Inventories: The components of inventories are summarized as follows:

(in millions)	
Inventories—gross:	
Raw materials	$ 576
Work in process	220
Finished goods	1,114
Total inventories—at FIFO or average cost	1,910
Less: LIFO reserve	248
Inventories—net (as reported on balance sheet)	$1,662

Eastman determines the cost of most raw materials, work in process, and finished goods inventories in the United States and Switzerland by the LIFO method. The cost of all other inventories is determined by the average-cost method, which approximates the FIFO method.

Additional facts (amounts in millions):

Current liabilities	$1,789
Current assets (as reported)	3,321
Cost of goods sold	7,039
Beginning inventory	1,583

Instructions

Answer the following questions.

a. Why does the company report its inventory in three components?

b. Why might the company use three methods (LIFO, FIFO and average-cost) to account for its inventory?

c. Perform each of the following.

1. Calculate the inventory turnover and days in inventory using the LIFO inventory.
2. Calculate the current ratio using LIFO and the current ratio using FIFO. Discuss the difference.

Solution

a. Eastern Chemical is a manufacturer, so it purchases raw materials and makes them into finished products. At the end of each period, it has some goods that have been started but are not yet complete (work in process).

By reporting all three components of inventory, a company reveals important information about its inventory position. For example, if amounts of raw materials have increased significantly compared to the previous year, we might assume the company is planning to step up production. On the other hand, if levels of finished goods have increased relative to last year and raw materials have declined, we might conclude that sales are slowing down—that the company has too much inventory on hand and is cutting back production.

b. Companies are free to choose different cost flow assumptions for different types of inventory. A company might choose to use FIFO for a product that is expected to decrease in price over time. One common reason for choosing a method other than LIFO is that many foreign countries do not allow LIFO; thus, the company cannot use LIFO for its foreign operations.

c. 1. Inventory turnover $= \dfrac{\text{Cost of goods sold}}{\text{Average inventory}} = \dfrac{\$7{,}039}{(\$1{,}583 + \$1{,}662) \div 2} = 4.3$ times

$\text{Days in inventory} = \dfrac{365}{\text{Inventory turnover}} = \dfrac{365}{4.3} = 84.9$ days

2. Current ratio

LIFO

$\dfrac{\text{Current assets}}{\text{Current liabilities}} = \dfrac{\$3{,}321}{\$1{,}789} = 1.86{:}1$

FIFO

$\dfrac{\$3{,}321 + \$248}{\$1{,}789} = 1.99{:}1$

This represents a 7% increase in the current ratio [(1.99 − 1.86) ÷ 1.86].

Appendix 6A Inventory Cost Flow Methods in Perpetual Inventory Systems

LEARNING OBJECTIVE *4

Apply the inventory cost flow methods to perpetual inventory records.

What inventory cost flow methods can companies employ if they use a perpetual inventory system? Simple—they can use any of the inventory cost flow methods described in the chapter. To illustrate the application of the three assumed cost flow methods (FIFO, LIFO, and average-cost), we will use the data shown in **Illustration 6A.1** and in this chapter for Houston Electronics' Astro condensers.

ILLUSTRATION 6A.1
Inventoriable units and costs

Houston Electronics
Astro Condensers

Date	Explanation	Units	Unit Cost	Total Cost	Balance in Units
1/1	Beginning inventory	100	$10	$ 1,000	100
4/15	Purchases	200	11	2,200	300
8/24	Purchases	300	12	3,600	600
9/10	Sale	550			50
11/27	Purchases	400	13	5,200	450
				$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	Inventory Balance (in units and cost)	
January 1				(100 @ $10)	$1,000
April 15	(200 @ $11)	$2,200		(100 @ $10) (200 @ $11)	$3,200
August 24	(300 @ $12)	$3,600		(100 @ $10) (200 @ $11) (300 @ $12)	$6,800
September 10			(100 @ $10) (200 @ $11) (250 @ $12)	(50 @ $12)	$ 600
			$6,200 ← Cost of goods sold		
November 27	(400 @ $13)	$5,200		(50 @ $12) (400 @ $13)	$5,800 ← Ending inventory

The ending inventory in this situation is $5,800, and the cost of goods sold is $6,200 [(100 @ $10) + (200 @ $11) + (250 @ $12)].

Compare Illustrations 6.6 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 $5,800 and cost of goods sold is $6,200.

- The observation is always true: the FIFO method yields the same results for both the periodic and perpetual systems.
- Regardless of the system, the first costs in are the costs assigned to cost of goods sold.

Last-In, First-Out (LIFO)

Under the LIFO method using a perpetual system, the company charges to cost of goods sold the cost of the most recent purchases **prior** to the sale. Therefore, the cost of the goods sold on September 10 consists of all the units from the August 24 and April 15 purchases plus 50 of the units in beginning inventory. Illustration 6A.3 shows the computation of the ending inventory under the LIFO method.

ILLUSTRATION 6A.3
Perpetual system—LIFO

Date	Purchases		Cost of Goods Sold	Inventory Balance (in units and cost)	
January 1				(100 @ $10)	$1,000
April 15	(200 @ $11)	$2,200		(100 @ $10) (200 @ $11)	$3,200
August 24	(300 @ $12)	$3,600		(100 @ $10) (200 @ $11) (300 @ $12)	$6,800
September 10			(300 @ $12) (200 @ $11) (50 @ $10)	(50 @ $10)	$ 500
			$6,300 ← Cost of goods sold		
November 27	(400 @ $13)	$5,200		(50 @ $10) (400 @ $13)	$5,700 ← Ending inventory

The use of LIFO in a perpetual system will usually produce cost allocations that differ from those using LIFO in a periodic system.

- In a perpetual system, the latest units purchased **prior to each sale** are allocated to cost of goods sold.
- In a periodic system, the latest units purchased **during the period** are allocated to cost of goods sold.

Thus, when a purchase is made after the last sale, the LIFO method under the periodic system will apply this purchase to the period's sales. See Illustration 6.9, which shows the proof that the 400 units at $13 purchased on November 27 applied to the sale of 550 units on September 10.

Under the LIFO perpetual system in Illustration 6A.3, the 400 units at $13 purchased on November 27 are all allocated to the ending inventory. The ending inventory in this LIFO perpetual illustration is $5,700, and cost of goods sold is $6,300, as compared to the LIFO periodic Illustration 6.8, where the ending inventory is $5,000 and cost of goods sold is $7,000.

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 weighted-average unit cost **after each purchase**, by dividing the cost of goods available for sale by the units on hand.
- The weighted-average unit 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 cost.

Illustration 6A.4 shows the application of the moving-average cost method by Houston Electronics (computations of the moving-average unit cost are shown after Illustration 6A.4).

ILLUSTRATION 6A.4
Perpetual system—moving-average method

	Date	Purchases		Cost of Goods Sold	Inventory Balance* (in units and cost)	
	January 1				(100 @ $10)	$1,000
	April 15	(200 @ $11)	$2,200		(300 @ $10.667**)	$3,200
	August 24	(300 @ $12)	$3,600		(600 @ $11.333)	$6,800
	September 10			(550 @ $11.333**)	(50 @ $11.333)	$ 567
Cost of goods sold				$6,233		
Ending inventory	November 27	(400 @ $13)	$5,200		(450 @ $12.816)	$5,767

* Totals are rounded to the nearest dollar.
** Unit cost computations are rounded to three decimals.

As indicated, Houston Electronics computes **a new weighted-average unit cost each time it makes a purchase**.

1. On April 15, after Houston buys 200 units for $2,200, a total of 300 units costing $3,200 ($1,000 + $2,200) are on hand. The weighted-average unit cost is $10.667 ($3,200 ÷ 300).
2. On August 24, after Houston buys 300 units for $3,600, a total of 600 units costing $6,800 ($1,000 + $2,200 + $3,600) are on hand. The weighted-average unit cost is $11.333 ($6,800 ÷ 600).
3. On September 10, to compute cost of goods sold, Houston uses this unit cost of $11.333 in costing the units sold until it makes another purchase, at which time the company computes a new unit cost. Accordingly, the unit cost of the 550 units sold on September 10 is $11.333, and the total cost of goods sold is $6,233.
4. On November 27, following the purchase of 400 units for $5,200, there are 450 units on hand costing $5,767 ($567 + $5,200) with a new weighted-average unit cost of $12.816 ($5,767 ÷ 450).

Compare this moving-average cost under the perpetual inventory system to Illustration 6.11, which shows the average-cost method under a periodic inventory system.

Appendix 6B Effects of 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 balance sheet.

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 6B.1** and then substituting the correct data.

ETHICS NOTE

Inventory fraud increases during recessions. Such fraud includes pricing 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.

ILLUSTRATION 6B.1 **Formula for cost of goods sold**

Beginning Inventory	+	Cost of Goods Purchased	−	Ending Inventory	=	Cost of Goods Sold

If **beginning** inventory is understated, cost of goods sold will be understated. If **ending** inventory is understated, cost of goods sold will be overstated. **Illustration 6B.2** shows the effects of inventory errors on the current year's income statement (see **Ethics Note**).

ILLUSTRATION 6B.2

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

An error in the ending inventory of the current period will have a **reverse effect on net income of the next accounting period. Illustration 6B.3** shows this effect. Note that the understatement of ending inventory in 2024 results in an understatement of beginning inventory in 2025 and an overstatement of net income in 2025.

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 balance sheet date under any inventory system.

ILLUSTRATION 6B.3 Effects of inventory errors on two years' income statements

Veronique Unique Inc.
Condensed Income Statements

	2024				2025			
	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.

Balance Sheet Effects

Companies can determine the effect of ending inventory errors on the balance sheet by using the basic accounting equation: Assets = Liabilities + Stockholders' Equity. Errors in the ending inventory have the effects shown in **Illustration 6B.4**.

The effect of an error in ending inventory on the subsequent period was shown in Illustration 6B.3. Note that if the error is not corrected, the combined total net income for the two periods would be correct. Thus, total stockholders' equity reported on the balance sheet at the end of 2025 will also be correct.

ILLUSTRATION 6B.4
Effects of ending inventory errors on balance sheet

Ending Inventory Error	Assets	Liabilities	Stockholders' Equity
Overstated	Overstated	No effect	Overstated
Understated	Understated	No effect	Understated

Review and Practice

Learning Objectives Review

1 Discuss how to classify and determine inventory.

Merchandisers need only one inventory classification, merchandise inventory, to describe the different items that make up total inventory. Manufacturers, on the other hand, usually classify inventory into three categories: finished goods, work in process, and raw materials. To determine inventory quantities, companies (1) take a physical inventory of goods on hand and (2) determine the ownership of goods in transit or on consignment.

2 Apply inventory cost flow methods and discuss their financial effects.

The primary basis of accounting for inventories is cost. Cost includes all expenditures necessary to acquire goods and place them in a condition ready for sale. 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 three assumed cost flow methods—FIFO, LIFO, and average-cost.

The cost of goods available for sale may be allocated 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 the average-cost and the last-in, first-out (LIFO) methods. The reverse is true when prices are falling. In the balance sheet, FIFO results in an ending inventory that is closest to current value, whereas the inventory under LIFO is the farthest from current value. LIFO results in the lowest income taxes when prices are rising (because of lower taxable income).

3 Explain the statement presentation and analysis of inventory.

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.

Inventory turnover is calculated as cost of goods sold divided by average inventory. It can be converted to average days in inventory by dividing 365 days by the inventory turnover. A higher inventory turnover or lower average days in inventory suggests that management is trying to keep inventory levels low relative to its sales level.

The LIFO reserve represents the difference between ending inventory using LIFO and ending inventory if FIFO were employed instead. For some companies this difference can be significant, and ignoring it can lead to inappropriate conclusions when using the current ratio or inventory turnover.

***4 Apply inventory cost flow methods to perpetual inventory records.**

Under FIFO, the cost of the earliest goods on hand prior to each sale is charged to cost of goods sold. Under LIFO, the cost of the most recent purchases prior to sale is charged to cost of goods sold. Under the average-cost method, a new average cost is computed after each purchase.

***5 Indicate the effects of inventory errors on the financial statements.**

In the income statement of the current year: (1) An error in beginning inventory will have a reverse effect on net income (e.g., overstatement of inventory results in understatement of net income, and vice versa). (2) An error in ending inventory will have a similar effect on net income (e.g., overstatement of inventory results in overstatement of net income). If ending inventory errors are not corrected in the following period, their effect on net income for that period is reversed, and total net income for the two years will be correct.

In the balance sheet: Ending inventory errors will have the same effect on total assets and total stockholders' equity and no effect on liabilities.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Which inventory costing method should be used?	Are prices increasing, or are they decreasing?	Income statement, balance sheet, and tax effects	Depends on objective. In a period of rising prices, income and inventory are higher and cash flow is lower under FIFO. LIFO provides opposite results. Average-cost can moderate the impact of changing prices.
How long is an item in inventory?	Cost of goods sold; beginning and ending inventory	$\text{Inventory turnover} = \dfrac{\text{Cost of goods sold}}{\text{Average inventory}}$ $\text{Days in inventory} = \dfrac{365 \text{ days}}{\text{Inventory turnover}}$	A higher inventory turnover or lower average days in inventory suggests that management is reducing the amount of inventory on hand, relative to cost of goods sold.
What is the impact of LIFO on the company's reported inventory?	LIFO reserve, cost of goods sold, ending inventory, current assets, current liabilities	$\text{LIFO inventory} + \text{LIFO reserve} = \text{FIFO inventory}$	If these adjustments are material, they can significantly affect such measures as the current ratio and the inventory turnover.

Glossary Review

Average-cost method An inventory costing method that uses the weighted-average unit cost to allocate the cost of goods available for sale to ending inventory and cost of goods sold. (p. 6-12).

Consigned goods Goods held for sale by one party although ownership of the goods is retained by another party. (p. 6-6).

Consistency concept Companies use the same accounting principles and methods from year to year. (p. 6-15).

Days in inventory Measure of the average number of days inventory is held; calculated as 365 divided by inventory turnover. (p. 6-19).

Finished goods inventory Manufactured items that are completed and ready for sale. (p. 6-3).

First-in, first-out (FIFO) method An inventory costing method that assumes that the earliest goods purchased are the first to be sold. (p. 6-9).

FOB (free on board) destination Freight terms indicating that ownership of goods remains with the seller until the goods reach the buyer. (p. 6-5).

FOB (free on board) shipping point Freight terms indicating that ownership of goods passes to the buyer when the public carrier accepts the goods from the seller. (p. 6-5).

Inventory turnover A ratio that indicates the liquidity of inventory by measuring the number of times average inventory is sold during the year; computed by dividing cost of goods sold by the average inventory. (p. 6-19).

Just-in-time (JIT) inventory Inventory system in which companies manufacture or purchase goods only when needed. (p. 6-3).

Last-in, first-out (LIFO) method An inventory costing method that assumes that the latest goods purchased are the first to be sold. (p. 6-10).

LIFO reserve For a company using LIFO, the difference between inventory reported using LIFO and inventory using FIFO. (p. 6-21).

Lower-of-cost-or-net realizable value (LCNRV) A basis whereby inventory is stated at the lower of either its cost or its net realizable value. (p. 6-17).

***Moving-average method** Perpetual inventory method where the company computes a new average cost after each purchase by dividing the cost of goods available for sale by the units on hand. (p. 6-26).

Net realizable value The estimated selling price in the normal course of business, less estimated costs to complete and sell. (p. 6-17).

Raw materials Basic goods that will be used in production but have not yet been placed in production. (p. 6-3).

Specific identification method An actual physical-flow costing method in which particular items sold and items still in inventory are specifically costed to arrive at cost of goods sold and ending inventory. (p. 6-7).

Weighted-average unit cost Average cost that is weighted by the number of units purchased at each unit cost. (p. 6-12).

Work in process That portion of manufactured inventory that has begun the production process but is not yet complete. (p. 6-3).

Practice Multiple-Choice Questions

1. **(LO 1)** When is a physical inventory usually taken?
   - **a.** When the company has its greatest amount of inventory.
   - **b.** When a limited number of goods are being sold or received.
   - **c.** At the end of the company's fiscal year.
   - **d.** Both when a limited number of goods are being sold or received, and at the end of the company's fiscal year.

2. **(LO 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.** None of the answer choices is correct.

3. **(LO 1)** As a result of a thorough physical inventory, Railway Company determined that it had inventory worth $180,000 at December 31, 2025. 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. **c.** $228,000.
   b. $215,000. **d.** $193,000.

4. **(LO 2)** Kam Company has the following units and costs.

	Units	Unit Cost
Inventory, Jan. 1	8,000	$11
Purchase, June 19	13,000	12
Purchase, Nov. 8	5,000	13

If 9,000 units are on hand at December 31, what is the cost of the ending inventory under FIFO?

a. $99,000. **c.** $113,000.
b. $108,000. **d.** $117,000.

5. **(LO 2)** From the data in Question 4, what is the cost of the ending inventory under LIFO?

   a. $113,000. **c.** $99,000.
   b. $108,000. **d.** $100,000.

6. **(LO 2)** 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.

7. **(LO 2)** In periods of rising prices, LIFO will produce:
   - **a.** higher net income than FIFO.
   - **b.** the same net income as FIFO.
   - **c.** lower net income than FIFO.
   - **d.** higher net income than average-cost.

8. **(LO 2)** Cost of goods available for sale consists of two elements: beginning inventory and:
   - **a.** ending inventory.
   - **b.** cost of goods purchased.
   - **c.** cost of goods sold.
   - **d.** All of the answer choices are correct.

9. (LO 2) Considerations that affect the selection of an inventory costing method do **not** include:

a. tax effects.

b. balance sheet effects.

c. income statement effects.

d. perpetual versus periodic inventory system.

10. (LO 3) The lower-of-cost-or-net realizable value rule for inventory is an example of the application of:

a. the conservatism convention.

b. the historical cost principle.

c. the materiality concept.

d. the economic entity assumption.

11. (LO 3) Which of these would cause inventory turnover to increase the most?

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. (LO 3) Carlos Company had beginning inventory of $80,000, ending inventory of $110,000, cost of goods sold of $285,000, and sales of $475,000. Carlos's days in inventory is:

a. 73 days. c. 102.5 days.

b. 121.7 days. d. 84.5 days.

13. (LO 3) Norton Company purchased 1,000 widgets and has 200 widgets in its ending inventory at a cost of $91 each and a net realizable value of $80 each. The ending inventory under lower-of-cost-or-net realizable value is:

a. $91,000. c. $18,200.

b. $80,000. d. $16,000.

14. (LO 3) The LIFO reserve is:

a. the difference between the value of the inventory under LIFO and the value under FIFO.

b. an amount used to adjust inventory to the lower-of-cost-or-net realizable value.

c. the difference between the value of the inventory under LIFO and the value under average-cost.

d. an amount used to adjust inventory to historical cost.

*15. (LO 4) In a perpetual inventory system:

a. LIFO cost of goods sold will be the same as in a periodic inventory system.

b. average costs are based entirely on unit-cost simple averages.

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.

*16. (LO 5) Fran Company's ending inventory is understated by $4,000. The effects of this error on the current year's cost of goods sold and net income, respectively, are:

a. understated and overstated.

b. overstated and understated.

c. overstated and overstated.

d. understated and understated.

*17. (LO 5) Harold Company overstated its inventory by $15,000 at December 31, 2024. It did not correct the error in 2024 or 2025. As a result, Harold's stockholders' equity was:

a. overstated at December 31, 2024, and understated at December 31, 2025.

b. overstated at December 31, 2024, and properly stated at December 31, 2025.

c. understated at December 31, 2024, and understated at December 31, 2025.

d. overstated at December 31, 2024, and overstated at December 31, 2025.

Solutions

1. **d.** A physical inventory is usually taken when a limited number of goods are being sold or received, and at the end of the company's fiscal year. Choice (a) is incorrect because a physical inventory count is usually taken when the company has the least, not greatest, amount of inventory. Choices (b) and (c) are correct, but (d) is the better answer.

2. **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 because (a) is not included in the physical inventory.

3. **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.

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 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.

6. **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.

7. **c.** In periods of rising prices, LIFO will produce lower net income than FIFO, not (a) higher than FIFO or (b) the same as FIFO. Choice (d) is incorrect because in periods of rising prices, LIFO will produce lower net income than average-cost. LIFO charges the highest inventory cost against revenues in a period of rising prices.

8. **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.

9. **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) balance sheet effects, and (c) income statement effects all affect the selection of an inventory costing method.

10. **a.** Conservatism means that the best choice among accounting alternatives is the method that is least likely to overstate assets and net income. The other choices are incorrect because (b) historical cost means that companies value assets at the original cost, (c) materiality means that an amount is large enough to affect a decision-maker, and (d) economic entity means to keep the company's transactions separate from the transactions of other entities.

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 turnover 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's 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. **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 × $80 each = $16,000, not (a) $91,000, (b) $80,000, or (c) $18,200.

14. **a.** The LIFO reserve is the difference in ending inventory value under LIFO and FIFO. The other choices are therefore incorrect.

*15. **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) LIFO cost of goods sold is not the same under a periodic and a perpetual inventory system; (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.

*16. **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.

*17. **b.** Stockholders' equity is overstated by $15,000 at December 31, 2024, and is properly stated at December 31, 2025. 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 stockholders' equity (a) is properly stated, not understated, at December 31, 2025; (c) is overstated, not understated, by $15,000 at December 31, 2024, and is properly stated, not understated, at December 31, 2025; and (d) is properly stated at December 31, 2025, not overstated.

Practice Brief Exercises

Determine ending inventory amount.

1. **(LO 1)** Fylus Company took a physical inventory on December 31 and determined that goods costing $180,000 were on hand. Not included in the physical count were $18,000 of goods purchased from Rake Corporation, FOB destination, and $27,000 of goods sold to Shovel Company for $40,000, FOB destination. Both the Rake purchase and the Shovel sale were in transit year-end. What amount should Fylus report as its December 31 inventory?

Solution

1. Physical inventory	$180,000
Add: Goods sold to Shovel	27,000
Fylus ending inventory	$207,000

The $18,000 of goods purchased from Rake are excluded from ending inventory because the terms are FOB destination which means Fylus takes title at the time the goods are received. Goods sold to Shovel FOB destination means that the goods are still Fylus's until delivered.

Compute ending inventory using FIFO and LIFO.

2. **(LO 2)** In its first month of operations, Moncada Company made three purchases of merchandise in the following sequence: (1) 200 units at $7, (2) 300 units at $8, and (3) 150 units at $9. Assuming there are 220 units on hand, compute the cost of the ending inventory under the (a) FIFO method and (b) LIFO method. Moncada use a periodic inventory system.

Solution

2. **a.** The ending inventory under FIFO consists of (150 units at \$9) + (70 units at \$8) for a total allocation of \$1,910 (\$1,350 + \$560).

   b. The ending inventory under LIFO consists of (200 units at \$7) + (20 units at \$8) for a total allocation of \$1,560 (\$1,400 + \$160).

3. **(LO 3)** At December 31, 2025, the following information was available for Garcia Company: ending inventory \$30,000, beginning inventory \$42,000, cost of goods sold \$240,000, and sales revenue \$400,000. Calculate inventory turnover and days in inventory for Garcia Company.

Compute inventory turnover and days in inventory.

Solution

3. Inventory turnover: $\dfrac{\$240{,}000}{(\$30{,}000 + \$42{,}000) \div 2} = \dfrac{\$240{,}000}{\$36{,}000} = 6.67$

   Days in inventory: $\dfrac{365}{6.67} = 54.7$ days

Practice Exercises

1. **(LO 1)** Mika Sorbino, an auditor with Martinez CPAs, 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.

Determine the correct inventory 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 for Bosnia.	(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: GAAP 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

*$60,000 − $8,000

Determine LCNRV valuation.

2. **(LO 3)** Creve Couer Camera Inc. uses the lower-of-cost-or-net realizable value basis for its inventory. The following data are available at December 31.

	Units	Cost per Unit	Net Realizable Value per Unit
Cameras:			
Minolta	5	$160	$156
Canon	7	145	153
Light Meters:			
Vivitar	12	120	114
Kodak	10	130	142

Instructions

What amount should be reported on Creve Couer Camera's financial statements, assuming the lower-of-cost-or-net realizable value rule is applied?

Solution

2.

	Cost per Unit	Net Realizable Value per Unit	Lower-of-Cost-or-Net Realizable Value	Units	Inventory at Lower-of-Cost-or-Net Realizable Value
Cameras:					
Minolta	$160	$156	$156	5	$ 780
Canon	145	153	145	7	1,015
Light Meters:					
Vivitar	120	114	114	12	1,368
Kodak	130	142	130	10	1,300
Total					$4,463

Practice Problems

Compute inventory and cost of goods sold using three cost flow methods in a periodic inventory system.

1. **(LO 2)** 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) the first-in, first-out (FIFO) method; (b) the last-in, first-out (LIFO) method; and (c) the average-cost method. (For average-cost, carry cost per unit to three decimal places.)

Solution

1. The cost of goods available for sale is $6,450:

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 cost of goods available for sale		$6,450

a. **FIFO Method**

Ending inventory:

Date	Units	Unit Cost	Total Cost	
Mar. 30	300	$5.00	$1,500	
Mar. 20	200	4.75	950	$2,450
Cost of goods sold: $6,450 − $2,450 =				$4,000

b. **LIFO Method**

Ending inventory:

Date	Units	Unit Cost	Total Cost	
Mar. 1	200	$4.00	$ 800	
Mar. 10	300	4.50	1,350	$2,150
Cost of goods sold: $6,450 − $2,150 =				$4,300

c. **Average-Cost Method**

Weighted-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

*2. (LO 4) The solution to **Practice Problem 1** showed cost of goods sold computations under a periodic inventory system. Now let's assume that 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:

Compute inventory and cost of goods sold using three cost flow methods in a perpetual inventory system.

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, (b) LIFO, and (c) moving-average cost.

Solution

2. The cost of goods available for sale is $6,450, as follows.

Inventory:		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. **LIFO 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			(500 @ $4.50)	$2,250	(200 @ $4.00)	$ 800
March 20	(400 @ $4.75)	$1,900			(200 @ $4.00) (400 @ $4.75)	$2,700
March 25			(400 @ $4.75)	$1,900	(200 @ $4.00)	$ 800
March 30	(300 @ $5.00)	$1,500			(200 @ $4.00) (300 @ $5.00)	$2,300
	Ending inventory	$2,300	Cost of goods sold: $2,250 + $1,900 =			$4,150

c. **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

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Note: All 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. What is just-in-time inventory management? What are its potential advantages?

4. Your friend Will Juritz has been hired to help take the physical inventory in Byrd's Hardware Store. Explain to Will what this job will entail.

5. **a.** Bonita Company ships merchandise to Myan Corporation on December 30. The merchandise reaches the buyer on January 5. Indicate the terms of sale that will result in the goods being included in (1) Bonita's December 31 inventory and (2) Myan's December 31 inventory.

   b. Under what circumstances should Bonita Company include consigned goods in its inventory?

6. Nona Hat Shop received a shipment of hats for which it paid the wholesaler $2,940. The price of the hats was $3,000, but Nona was given a $60 cash discount and required to pay freight charges of $75. What amount should Nona include in inventory? Why?

7. What is the primary basis of accounting for inventories?

8. Ken McCall believes that the allocation of cost of goods available for sale should be based on the actual physical flow of the goods. Explain to Ken why this may be both impractical and inappropriate.

9. What is the major advantage and major disadvantage of the specific identification method of inventory costing?

10. "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?

11. Which assumed inventory cost flow method:

    a. usually parallels the actual physical flow of merchandise?

    b. divides cost of goods available for sale by total units available for sale to determine a unit cost?

    c. assumes that the latest units purchased are the first to be sold?

12. In a period of rising prices, the inventory reported in Short Company's balance sheet is close to the current cost of the inventory, whereas King Company's inventory is considerably below its current cost. Identify the inventory cost flow method used by each company. Which company probably has been reporting the higher gross profit?

13. Mamosa Corporation has been using the FIFO cost flow method during a prolonged period of inflation. During the same time period, Mamosa has been paying out all of its net income as dividends. What adverse effects may result from this policy?

14. Oscar Geer, a mid-level product manager for Theresa's Shoes, thinks his company should switch from LIFO to FIFO. He says, "My bonus is based on net income. If we switch it will increase net income and increase my bonus. The company would be better off and so would I." Is he correct? Explain.

15. Discuss the impact the use of LIFO has on taxes paid, cash flows, and the quality of earnings ratio relative to the impact of FIFO when prices are increasing.

16. Hank Artisan is studying for the next accounting midterm examination. What should Hank 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?

17. Jackson Music Center has five TVs on hand at the balance sheet date that cost $400 each. The net realizable value is $350 per unit. Under the lower-of-cost-or-net realizable value basis of accounting for inventories, what value should Jackson report for the TVs on the balance sheet? Why?

18. What cost flow assumption may be used under the lower-of-cost-or-net realizable value basis of accounting for inventories?

19. Why is it inappropriate for a company to include freight-out expense in the Cost of Goods Sold account?

20. Tilton Company's balance sheet shows Inventory $162,800. What additional disclosures should be made?

21. Under what circumstances might inventory turnover be too high—that is, what possible negative consequences might occur?

22. What is the LIFO reserve? What are the consequences of ignoring a large LIFO reserve when analyzing a company?

*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. How does the average-cost method of inventory costing differ between a perpetual inventory system and a periodic inventory system?

*25. Albert Company discovers in 2025 that its ending inventory at December 31, 2024, was $5,000 understated. What effect will this error have on (a) 2024 net income, (b) 2025 net income, and (c) the combined net income for the 2 years?

Brief Exercises

BE6.1 (LO 1), C Peete Company identifies the following items for possible inclusion in the 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.

a. 900 units of inventory shipped on consignment by Peete to another company.

b. 3,000 units of inventory in transit from a supplier shipped FOB destination.

c. 1,200 units of inventory sold but being held for customer pickup.

d. 500 units of inventory held on consignment from another company.

BE6.2 (LO 1), AN 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

Determine ending inventory amount.

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?

Compute ending inventory using FIFO and LIFO.

BE6.3 (LO 2), AP In its first month of operations, McLanie Company made three purchases of merchandise in the following sequence: (1) 300 units at $6, (2) 400 units at $8, and (3) 500 units at $9. Assuming there are 200 units on hand at the end of the period, compute the cost of the ending inventory under (a) the FIFO method and (b) the LIFO method. McLanie uses a periodic inventory system.

Compute the ending inventory using average-cost.

BE6.4 (LO 2), AP Data for McLanie Company are presented in BE6.3. Compute the cost of the ending inventory under the average-cost method. (Round the cost per unit to three decimal places.)

Compute cost of goods sold using FIFO, LIFO, and average-cost.

BE6.5 (LO 2), AP Sunnyside Marine Products began the year with 10 units of marine floats at a cost of $11 each. During the year, it made the following purchases: May 5, 30 units at $16; July 16, 15 units at $19; and December 7, 20 units at $23. Assuming there are 25 units on hand at the end of the period, determine the cost of goods sold under (a) FIFO, (b) LIFO, and (c) average-cost. Sunnyside uses the periodic approach.

Explain the financial statement effect of inventory cost flow assumptions.

BE6.6 (LO 2), C The management of Milque Corp. is considering the effects of various inventory-costing methods on its financial statements and its income tax expense. Assuming that the cost the company pays for inventory is increasing, which method will:

a. provide the highest net income?

b. provide the highest ending inventory?

c. result in the lowest income tax expense?

d. result in the most stable earnings over a number of years?

Explain the financial statement effect of inventory cost flow assumptions.

BE6.7 (LO 2), AP In its first month of operation, Hoffman Company purchased 100 units of inventory for $6, then 200 units for $7, and finally 140 units for $8. At the end of the month, 180 units remained. Compute the amount of phantom profit that would result if the company used FIFO rather than LIFO. Explain why this amount is referred to as phantom profit. The company uses the periodic method.

Identify the impact of LIFO versus FIFO.

BE6.8 (LO 2), C For each of the following cases, state whether the statement is true for LIFO or for FIFO. Assume that prices are rising.

a. Results in a higher quality of earnings ratio.

b. Results in higher phantom profits.

c. Results in higher net income.

d. Results in lower taxes.

e. Results in lower net cash provided by operating activities.

Determine the LCNRV valuation.

BE6.9 (LO 3), AP Wahlowitz Video Center accumulates the following cost and net realizable value data at December 31.

Inventory Categories	Cost	Net Realizable Value
Cameras	$12,500	$13,400
Camcorders	9,000	9,500
DVDs	13,000	12,200

Compute the lower-of-cost-or-net realizable value for the company's inventory.

Compute inventory turnover and days in inventory.

BE6.10 (LO 3), AP Suppose at December 31 of a recent year, the following information (in thousands) was available for sunglasses manufacturer **Oakley, Inc.**: ending inventory $155,377, beginning inventory $119,035, cost of goods sold $349,114, and sales revenue $761,865. Calculate the inventory turnover and days in inventory for Oakley, Inc. (Round inventory turnover to two decimal places.)

Determine ending inventory using LIFO reserve.

BE6.11 (LO 3), AP Winnebago Industries, Inc. is a leading manufacturer of motor homes. Suppose Winnebago reported ending inventory at August 29, 2025, of $46,850,000 under the LIFO inventory method. In the notes to its financial statements, assume Winnebago reported a LIFO reserve of $30,346,000 at August 29, 2025. What would Winnebago Industries' ending inventory have been if it had used FIFO?

Apply cost flow methods to perpetual inventory records.

***BE6.12 (LO 4), AP** Loggins Department Store uses a perpetual inventory system. Data for product E2-D2 include the following purchases.

Date	Number of Units	Unit Price
May 7	50	$10
July 28	30	15

On June 1, Loggins sold 25 units, and on August 27, 30 more units. Compute the cost of goods sold using (a) FIFO, (b) LIFO, and (c) average-cost. (Round the cost per unit to three decimal places.)

*BE6.13 **(LO 5), AN** Fennick Company reports net income of $92,000 in 2025. However, ending inventory was understated by $7,000. What is the correct net income for 2025? What effect, if any, will this error have on total assets as reported in the balance sheet at December 31, 2025?

Determine correct financial statement amount.

DO IT! Exercises

DO IT! 6.1 (LO 1), AN Sheldon Company just took its physical inventory on December 31. The count of inventory items on hand at the company's business locations resulted in a total inventory cost of $300,000. In reviewing the details of the count and related inventory transactions, you have discovered the following items that had not been considered.

Apply rules of ownership to determine inventory cost.

1. Sheldon has sent inventory costing $28,000 on consignment to Richfield Company. All of this inventory was at Richfield's showrooms on December 31.
2. The company did not include in the count inventory (cost, $20,000) that was sold on December 28, terms FOB shipping point. The goods were in transit on December 31.
3. The company did not include in the count inventory (cost, $13,000) that was purchased with terms of FOB shipping point. The goods were in transit on December 31.

Compute the correct December 31 inventory.

DO IT! 6.2 (LO 2), AP The accounting records of Ohm Electronics show the following data.

Compute cost of goods sold under different cost flow methods.

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, (b) the LIFO method, and (c) the average-cost method. (Round unit cost to three decimal places.)

DO IT! 6.3a (LO 3), AP Jeri Company 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.

	Cost	Net Realizable Value
Small	$ 64,000	$ 61,000
Medium	290,000	260,000
Large	152,000	167,000

Determine the value of the company's inventory under the lower-of-cost-or-net realizable value approach.

DO IT! 6.3b (LO 3), AN Early in 2025, Fedor Company switched to a just-in-time inventory system. Its sales and inventory amounts for 2024 and 2025 are shown below.

Compute inventory turnover and assess inventory level.

	2024	2025
Sales revenue	$3,120,000	$3,713,000
Cost of goods sold	1,200,000	1,425,000
Beginning inventory	170,000	210,000
Ending inventory	210,000	90,000

Determine the inventory turnover and days in inventory for 2024 and 2025. Discuss the changes in the amount of inventory, the inventory turnover and days in inventory, and the amount of sales across the 2 years.

Exercises

E6.1 (LO 1), AN Umatilla Bank and Trust is considering giving Pohl Company a loan. Before doing so, it decides that further discussions with Pohl's accountant may be desirable. One area of particular concern is the Inventory account, which has a year-end balance of $275,000. Discussions with the accountant reveal the following.

Determine the correct inventory amount.

1. Pohl shipped goods costing $55,000 to Hemlock Company FOB shipping point on December 28. The goods are not expected to reach Hemlock 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 $95,000 that were shipped to Pohl FOB destination on December 27 and were still in transit at year-end.
3. Pohl received goods costing $25,000 on January 2. The goods were shipped FOB shipping point on December 26 by Yanice Co. The goods were not included in the physical count.
4. Pohl shipped goods costing $51,000 to Ehler of Canada FOB destination on December 30. The goods were received in Canada on January 8. They were not included in Pohl's physical inventory.
5. Pohl received goods costing $42,000 on January 2 that were shipped FOB destination 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 $275,000.

Instructions

Determine the correct inventory amount on December 31.

Determine the correct inventory amount.

E6.2 **(LO 1), AN** Farley Bains, an auditor with Nolls CPAs, is performing a review of Ryder Company's Inventory account. Ryder 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 $228,000 that the company is holding on consignment. The goods belong to Nader Corporation.
2. The physical count did not include goods purchased by Ryder with a cost of $40,000 that were shipped FOB shipping point on December 28 and did not arrive at Ryder'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 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 $29,000. The goods were not included in the count because they were sitting on the dock.
5. Included in the count was $50,000 of goods that were parts for a machine that the company no longer made. Given the high-tech nature of Ryder'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, stating why you did or did not make an adjustment for each item.

Identify items in inventory.

E6.3 **(LO 1), K** Gato Inc. had the following inventory situations to consider at January 31, its year-end.

a. Goods held on consignment for Steele Corp. since December 12.
b. Goods shipped on consignment to Logan Holdings Inc. on January 5.
c. Goods shipped to a customer, FOB destination, on January 29 that are still in transit.
d. Goods shipped to a customer, FOB shipping point, on January 29 that are still in transit.
e. Goods purchased FOB destination from a supplier on January 25 that are still in transit.
f. Goods purchased FOB shipping point from a supplier on January 25 that are still in transit.
g. Office supplies on hand at January 31.

Instructions

Identify which of the preceding items should be included in inventory. If the item should not be included in inventory, state in what account, if any, it should have been recorded.

Determine the correct inventory amount.

E6.4 **(LO 1), AN** Bean Company is concerned about the accuracy of its year-end inventory balance. Inventory shows a year-end balance of $326,000. Discussions with the company accountant reveal the following.

1. Bean received goods costing $49,000 on January 2 that were shipped FOB destination on December 29. The shipment was a rush order that was supposed to arrive on December 31. This purchase was included in the ending inventory of $326,000.
2. Bean sold goods costing $41,000 to Cusa Company, FOB shipping point, on December 28 for $65,000. The goods are not expected to arrive at Cusa until January 12. The goods were not included in the physical inventory because they were not in the warehouse.
3. The physical count of the inventory did not include goods costing $89,000 that were shipped FOB destination to Bean on December 27 and were still in transit at year-end.
4. Bean received goods costing $27,000 on January 2. The goods were shipped FOB shipping point on December 26 by Noble Co. The goods were not included in the physical count.
5. Bean sold goods costing $38,000 to Limerick Co. for $55,000. The goods were shipped FOB destination on December 30. The goods were received by Limerick on January 8 and were not included in Bean's physical inventory.

Instructions

a. Determine Bean's correct inventory amount on December 31.

b. What correcting entry would have to be made for item 4?

Compute inventory and cost of goods sold using periodic FIFO, LIFO, and average-cost.

E6.5 **(LO 2), AP** REI sells snowboards. Assume the following information relates to REI's purchases of snowboards during September. During the same month, 102 snowboards were sold. REI uses a periodic inventory system.

Date	Explanation	Units	Unit Cost	Total Cost
Sept. 1	Inventory	12	$100	$ 1,200
Sept. 12	Purchases	45	103	4,635
Sept. 19	Purchases	50	104	5,200
Sept. 26	Purchases	20	105	2,100
	Totals	127		$13,135

Instructions

a. Compute the ending inventory at September 30 using FIFO, LIFO, and average-cost.

b. Compute the cost of goods sold for the month using the FIFO, LIFO, and average-cost methods. (For average-cost, round the average unit cost to three decimal places.)

Calculate inventory and cost of goods sold using FIFO, average-cost, and LIFO in a periodic inventory system.

E6.6 **(LO 2), AP** Rusthe Inc. uses a periodic inventory system. Its records show the following for the month of May, in which 74 units were sold.

Date	Explanation	Units	Unit Cost	Total Cost
May 1	Inventory	30	$ 9	$270
15	Purchase	25	10	250
24	Purchase	38	11	418
	Total	93		$938

Instructions

Calculate the ending inventory at May 31 using the (a) FIFO, (b) LIFO, and (c) average-cost methods. (For average-cost, round the average unit cost to three decimal places.)

Calculate cost of goods sold using specific identification and FIFO periodic.

E6.7 **(LO 2), AN** Suppose that on December 1 Amazon.com has three wireless speakers left in stock. All are identical, all are priced to sell at $85. One of the three wireless speakers left in stock, with serial #1012, was purchased on June 1 at a cost of $52. Another, with serial #1045, was purchased on November 1 for $48. The last wireless speaker, serial #1056, was purchased on November 30 for $40.

Instructions

a. Calculate the cost of goods sold using the FIFO periodic inventory method, assuming that two of the three wireless speakers were sold by the end of December, Amazon's year-end.

b. If Amazon used the specific identification method instead of the FIFO method, how might it alter its earnings by "selectively choosing" which particular wireless speakers to sell to the two customers? What would be Amazon's cost of goods sold if the company wished to minimize earnings? Maximize earnings?

c. Which inventory method, FIFO or specific identification, do you recommend that Amazon use? Explain why.

Compute inventory and cost of goods sold using periodic FIFO, LIFO, and average-cost.

E6.8 (LO 2), AP Jeters Company uses a periodic inventory system and reports the following for the month of June.

Date	Explanation	Units	Unit Cost	Total Cost
June 1	Inventory	120	$5	$ 600
12	Purchase	370	6	2,220
23	Purchase	200	7	1,400
30	Inventory	230		

Instructions

a. Compute the cost of the ending inventory and the cost of goods sold under (1) FIFO, (2) LIFO, and (3) average-cost. (Round average unit cost to three decimal places.)

b. Which costing method gives the highest ending inventory? The highest cost of goods sold? Why?

c. How do the average-cost values for ending inventory and cost of goods sold relate to ending inventory and cost of goods sold for FIFO and LIFO?

d. Explain why the average cost is not $6.

Evaluate impact of LIFO and FIFO on cash flows and earnings quality.

E6.9 (LO 2), AP The following comparative information is available for Rose Company for 2025.

	LIFO	FIFO
Sales revenue	$86,000	$86,000
Cost of goods sold	38,000	29,000
Operating expenses (including depreciation)	27,000	27,000
Depreciation	10,000	10,000
Cash paid for inventory purchases	32,000	32,000

Instructions

a. Determine net income under each approach. Assume a 20% tax rate.

b. Determine net cash provided by operating activities under each approach. Assume that all sales were on a cash basis and that income taxes and operating expenses, other than depreciation, were on a cash basis.

c. Calculate the quality of earnings ratio under each approach and explain your findings. (Round answer to two decimal places.)

Determine LCNRV valuation.

E6.10 (LO 3), AP Best Buy uses the lower-of-cost-or-net realizable value basis for its inventory. The following data are available at December 31.

	Units	Cost per Unit	Net Realizable Value per Unit
Cameras			
Minolta	5	$170	$158
Canon	7	145	152
Light Meters			
Vivitar	12	125	114
Kodak	10	120	135

Instructions

What amount should be reported on Best Buy's financial statements, assuming the lower-of-cost-or-net realizable value rule is applied?

Determine LCNRV valuation.

E6.11 (LO 3), AP Starbucks sells coffee beans, which are sensitive to price fluctuations. Suppose the following inventory information is available for this product at December 31, 2025.

Coffee Bean	Units	Unit Cost	Net Realizable Value
Caffeinated			
Coffea arabica	13,000 bags	$5.60	$5.55
Coffea robusta	5,000 bags	3.40	3.50
Decaffeinated			
Coffea arabica	11,000 bags	6.20	6.40
Coffea robusta	4,000 bags	4.80	4.50

Instructions

Calculate Starbucks' inventory by applying the lower-of-cost-or-net realizable value basis.

E6.12 **(LO 3), AP** Suppose this information is available for **PepsiCo, Inc.** for 2025, 2024, and 2023.

Compute inventory turnover, days in inventory, and gross profit rate.

(in millions)	2025	2024	2023
Beginning inventory	$ 2,522	$ 2,290	$ 1,926
Ending inventory	2,618	2,522	2,290
Cost of goods sold	20,099	20,351	18,038
Sales revenue	43,232	43,251	39,474

Instructions

a. Calculate the inventory turnover for 2023, 2024, and 2025. (Round to one decimal place.)

b. Calculate the days in inventory for 2023, 2024, and 2025.

c. Calculate the gross profit rate for 2023, 2024, and 2025.

d. Comment on any trends observed in your answers to parts (a), (b), and (c).

E6.13 **(LO 3), AP** The following information is available for Zoe's Activewear Inc. for three recent fiscal years.

Calculate inventory turnover, days in inventory, and gross profit rate.

	2025	2024	2023
Inventory	$ 553,000	$ 568,000	$ 332,000
Net sales	1,948,000	1,725,000	1,311,000
Cost of goods sold	1,552,000	1,288,000	947,000

Instructions

a. Calculate the inventory turnover, days in inventory, and gross profit rate for 2025 and 2024.

b. Based on the ratios calculated in part (a), did Zoe's liquidity and profitability improve or deteriorate in 2025?

E6.14 **(LO 3), AP** **Deere & Company** is a global manufacturer and distributor of agricultural, construction, and forestry equipment. The company reports inventory and cost of goods sold using the LIFO method. Suppose it reported the following information in its 2025 annual report.

Compute inventory turnover and determine the effect of the LIFO reserve on current ratio.

(in millions)	2025	2024
Inventories (LIFO)	$ 2,397	$3,042
Current assets	30,857	
Current liabilities	12,753	
LIFO reserve	1,367	
Cost of goods sold	16,255	

Instructions

a. Compute Deere's inventory turnover and days in inventory for 2025. (Round inventory turnover to 2 decimal places.)

b. Compute Deere's current ratio using the 2025 data as presented, and then again after adjusting for the LIFO reserve.

c. Comment on how ignoring the LIFO reserve might affect your evaluation of Deere's liquidity.

E6.15 **(LO 2, 3), AN** Wisconsin Trading Company uses a periodic inventory system and has a beginning inventory as of April 1 of 150 tents. This consists of 150 tents purchased in February at a cost of $210 each. During April, the company had the following purchases and sales of tents.

Compute inventory and cost of goods sold using period FIFO, LIFO, and average-cost, and evaluate impact on gross profit.

	Purchases		Sales	
Date	Units	Unit Cost	Units	Unit Price
April 3			75	$400
10	200	$250		
17			250	400
24	300	270		
30			200	400

Instructions

a. Determine the April cost of goods sold and the cost of the April 30 ending inventory using FIFO, LIFO, and average-cost.

b. Calculate Wisconsin Trading's gross profit and gross profit margin for the month of April under each method.

c. Discuss the results of parts (a) and (b), providing an explanation of the cause of the results.

Calculate inventory and cost of goods sold using three cost flow methods in a perpetual inventory system.

*E6.16 (LO 4), AP Inventory data for Jeters Company are presented in E6.8.

Instructions

a. Calculate the cost of the ending inventory and the cost of goods sold for each cost flow assumption, using a perpetual inventory system. Assume a sale of 410 units occurred on June 15 for a selling price of $8 and a sale of 50 units on June 27 for $9. (*Note:* For the moving-average method, round unit cost to three decimal places.)

b. How do the results differ from E6.8?

c. Why is the average unit cost not $6 [($5 + $6 + $7) ÷ 3 = $6]?

Apply cost flow methods to perpetual records.

*E6.17 (LO 4), AP Information about REI is presented in E6.5. Additional data regarding the company's sales of snowboards are provided below. Assume that REI uses a perpetual inventory system.

Date		Units
Sept. 5	Sale	8
Sept. 16	Sale	48
Sept. 29	Sale	46
	Totals	102

Instructions

Compute ending inventory at September 30 using FIFO, LIFO, and moving-average. (*Note:* For moving-average, round unit cost to three decimal places.)

Determine effects of inventory errors.

*E6.18 (LO 5), AN Dowell Hardware reported cost of goods sold as follows.

	2025	2024
Beginning inventory	$ 30,000	$ 20,000
Cost of goods purchased	175,000	164,000
Cost of goods available for sale	205,000	184,000
Less: Ending inventory	37,000	30,000
Cost of goods sold	$168,000	$154,000

Dowell made two errors:

1. 2024 ending inventory was overstated by $2,000.
2. 2025 ending inventory was understated by $5,000.

Instructions

Compute the correct cost of goods sold for each year.

Prepare correct income statements.

*E6.19 (LO 5), AN **Writing** Sheen Company reported these income statement data for a 2-year period.

	2025	2024
Sales revenue	$250,000	$210,000
Beginning inventory	40,000	32,000
Cost of goods purchased	202,000	173,000
Cost of goods available for sale	242,000	205,000
Less: Ending inventory	55,000	40,000
Cost of goods sold	187,000	165,000
Gross profit	$ 63,000	$ 45,000

Sheen Company uses a periodic inventory system. The inventories at January 1, 2024, and December 31, 2025, are correct. However, the ending inventory at December 31, 2024, is overstated by $8,000.

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 Sheen Company what has happened—that is, the nature of the error and its effect on the financial statements.

Problems

P6.1 (LO 1), AN Pitt Limited is trying to determine the value of its ending inventory as of February 28, 2025, 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.

Determine items and amounts to be recorded in inventory.

a. On February 26, Pitt 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, Martine Inc. shipped goods to Pitt FOB destination. The invoice price was $350 plus $25 for freight. The receiving report indicates that the goods were received by Pitt on March 2.

c. Pitt had $500 of inventory at a customer's warehouse "on approval." The customer was going to let Pitt know whether it wanted the merchandise by the end of the week, March 4.

d. Pitt also had $400 of inventory at a Belle craft shop, on consignment from Pitt.

e. On February 26, Pitt ordered goods costing $750. The goods were shipped FOB shipping point on February 27. Pitt received the goods on March 1.

f. On February 28, Pitt packaged goods and had them ready for shipping to a customer FOB destination. The invoice price was $350 plus $25 for freight; the cost of the items was $280. The receiving report indicates that the goods were received by the customer on March 2.

g. Pitt had damaged goods set aside in the warehouse because they are no longer saleable. These goods originally cost $400 and, originally, Pitt expected to sell these items for $600.

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. 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.

P6.2 (LO 2), AP Mullins Distribution markets CDs of numerous performing artists. At the beginning of March, Mullins had in beginning inventory 2,500 CDs with a unit cost of $6.50. During March, Mullins made the following purchases of CDs.

Determine cost of goods sold and ending inventory using FIFO, LIFO, and average-cost with analysis.

Excel

March 5	2,000 @ $8	March 21	5,000 @ $10
March 13	3,500 @ $9	March 26	2,000 @ $11

During March 12,000 units were sold. Mullins 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 each of the assumed cost flow methods (FIFO, LIFO, and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and LIFO methods. (*Note:* For average-cost, round cost per unit to three decimal places.)

c. Which cost flow method results in (1) the highest inventory amount for the balance sheet and (2) the highest cost of goods sold for the income statement?

b. Cost of goods sold:

FIFO	$103,750
LIFO	$115,500
Average	$1[illegible]

P6.3 (LO 2), AP Vista Company Inc. had a beginning inventory of 100 units of Product RST at a cost of $8 per unit. During the year, purchases were:

Determine cost of goods sold and ending inventory using FIFO, LIFO, and average-cost in a periodic inventory system and assess financial statement effects.

Excel

Feb. 20	600 units at $ 9	Aug. 12	400 units at $11
May 5	500 units at $10	Dec. 8	100 units at $12

Vista Company uses a periodic inventory system. Sales totaled 1,500 units.

Instructions

a. Determine the cost of goods available for sale.

b. Determine the ending inventory and the cost of goods sold under each of the assumed cost flow methods (FIFO, LIFO, and average-cost). Prove the accuracy of the cost of goods sold under the FIFO and LIFO methods. (Round average unit cost to three decimal places.)

c. Which cost flow method results in the lowest inventory amount for the balance sheet? The lowest cost of goods sold for the income statement?

b. Cost of goods sold:

FIFO	$14,500
LIFO	$15,100
Average	$14,[illegible]24

Compute ending inventory, prepare income statements, and answer questions using FIFO and LIFO.

P6.4 (LO 2), AN Writing The management of National Inc. asks your help in determining the comparative effects of the FIFO and LIFO inventory cost flow methods. For 2025, the accounting records show these data.

Inventory, January 1 (10,000 units)	$ 35,000
Cost of 120,000 units purchased	468,500
Selling price of 98,000 units sold	750,000
Operating expenses	124,000

Units purchased consisted of 35,000 units at $3.70 on May 10, 60,000 units at $3.90 on August 15, and 25,000 units at $4.20 on November 20. Income taxes are 28%.

Instructions

a. Gross profit:
FIFO $375,800
LIFO $362,900

a. Prepare comparative condensed income statements for 2025 under FIFO and LIFO. (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 inventory amount that most closely approximates the amount that would have to be paid to replace the inventory? Why?
2. Which inventory cost flow method produces the net income amount that is a more likely indicator of next period's net income? Why?
3. Which inventory cost flow method is most likely to approximate the actual physical flow of the goods? Why?
4. How much more cash will be available under LIFO than under FIFO? Why?
5. How much of the gross profit under FIFO is illusionary in comparison with the gross profit under LIFO?

Calculate ending inventory, cost of goods sold, gross profit, and gross profit rate under periodic method; compare results.

P6.5 (LO 2), AP You have the following information for Van Gogh Inc. for the month ended October 31, 2025. Van Gogh uses a periodic method for inventory.

Date	Description	Units	Unit Cost or Selling Price
Oct. 1	Beginning inventory	60	$24
Oct. 9	Purchase	120	26
Oct. 11	Sale	100	35
Oct. 17	Purchase	100	27
Oct. 22	Sale	60	40
Oct. 25	Purchase	70	29
Oct. 29	Sale	110	40

Instructions

a. Gross profit:
LIFO $2,970
FIFO $3,310
Average $3,133

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. LIFO.
2. FIFO.
3. Average-cost. (Round cost per unit to three decimal places.)

b. Compare results for the three cost flow assumptions.

Compare specific identification, FIFO, and LIFO under periodic method; use cost flow assumption to influence earnings.

P6.6 (LO 2), AP You have the following information for Jewels Gems. Jewels 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 330 diamonds at a cost of $375 each.
March 25	Sold 390 diamonds for $650 each.

Instructions

a. Gross profit:
Maximum $162,500
Minimum $155,350

a. Assume that Jewels Gems uses the specific identification cost flow method.

1. Demonstrate how Jewels could maximize its gross profit for the month by specifically selecting which diamonds to sell on March 5 and March 25.
2. Demonstrate how Jewels could minimize its gross profit for the month by selecting which diamonds to sell on March 5 and March 25.

b. Assume Jewels uses the periodic method of accounting for inventory transactions and the FIFO cost flow assumption. Calculate cost of goods sold. How much gross profit would Jewels report under this cost flow assumption?

c. Assume Jewels uses the periodic method of accounting for inventory transactions and the LIFO cost flow assumption. Calculate cost of goods sold. How much gross profit would the company report under this cost flow assumption?

d. Which cost flow method should Jewels Gems select? Explain.

P6.7 (LO 3), AP Suppose this information (in millions) is available for the Automotive and Other Operations Divisions of **General Motors Corporation** for a recent year. General Motors uses the LIFO inventory method.

Compute inventory turnover and days in inventory; compute current ratio based on LIFO and after adjusting for LIFO reserve.

Beginning inventory	$ 13,921
Ending inventory	14,939
LIFO reserve	1,423
Current assets	60,135
Current liabilities	70,308
Cost of goods sold	166,259
Sales revenue	178,199

Instructions

a. Calculate the inventory turnover and days in inventory. (Round to one decimal place.)

b. Calculate the current ratio based on inventory as reported using LIFO.

c. Calculate the current ratio after adjusting for the LIFO reserve.

d. Comment on any difference between parts (b) and (c).

***P6.8 (LO 4), AP** Bieber Inc. is a retailer operating in Calgary, Alberta. Bieber uses the perpetual inventory method. Assume that there are no credit transactions; all amounts are settled in cash. You are provided with the following information for Bieber for the month of January 2025.

Calculate cost of goods sold, ending inventory, and gross profit for LIFO, FIFO, and moving-average under the perpetual system; compare results.

Date	Description	Quantity	Unit Cost or Selling Price
Dec. 31	Ending inventory	160	$20
Jan. 2	Purchase	100	22
Jan. 6	Sale	180	40
Jan. 9	Purchase	75	24
Jan. 10	Sale	50	45
Jan. 23	Purchase	100	25
Jan. 30	Sale	130	48

Instructions

a. For each of the following cost flow assumptions, calculate (i) cost of goods sold, (ii) ending inventory, and (iii) gross profit.

1. LIFO.
2. FIFO.
3. Moving-average. (Round cost per unit to three decimal places.)

b. Compare results for the three cost flow assumptions.

a. Gross profit:

LIFO	$7,490
FIFO	$7,865
Average	$7,763

***P6.9 (LO 4), AP** Lyon Center 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.

	Purchases		
Date	Units	Unit Cost	Sales Units
July 1	7	$62	
July 6			5
July 11	3	$66	
July 14			3
July 21	4	$71	
July 27			3

Instructions

a. Determine the ending inventory under a perpetual inventory system using (1) FIFO, (2) moving-average (round unit cost to three decimal places), and (3) LIFO.

b. Which costing method produces the highest ending inventory valuation?

a. FIFO $213
Average $207
LIFO $195

Continuing Case

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Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 through 5.)

CC6 Natalie 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. Natalie has decided to use a periodic inventory system and now must choose a cost flow assumption for her mixer inventory.

Go to Wiley Course Resources for complete case details and instructions.

Comprehensive Accounting Cycle Review

ACR6 On December 1, 2025, Waylon Company had the account balances shown below.

	Debit		Credit
Cash	$ 4,800	Accumulated Depreciation—Equipment	$ 1,500
Accounts Receivable	3,900	Accounts Payable	3,000
Inventory	1,800*	Common Stock	10,000
Equipment	21,000	Retained Earnings	17,000
	$31,500		$31,500

*(3,000 × $0.60)

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 $0.90 per unit. (Waylon sold 3,000 of the $0.60 units and 1,400 of the $0.72 units.)

7 Granted the December 5 customer $180 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 $0.80 each.

22 Sold 2,000 units of inventory on account for $0.95 per unit. (Waylon sold 2,000 of the $0.72 units.)

Adjustment data:

1. Accrued salaries and wages payable $400.
2. Depreciation on equipment $200 per month.
3. Income tax expense was $215, to be paid next year.

Instructions

a. Journalize the December transactions and adjusting entries, assuming Waylon 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: Income Taxes Payable, Salaries and Wages Payable, Sales Revenue, Sales Returns and Allowances, Cost of Goods Sold, Depreciation Expense, Salaries and Wages Expense, and Income Tax Expense.

c. Prepare an adjusted trial balance as of December 31, 2025.

d. Prepare an income statement for December 2025 and a classified balance sheet at December 31, 2025.

e. Compute ending inventory and cost of goods sold under FIFO, assuming Waylon Company uses the periodic inventory system.

f. Compute ending inventory and cost of goods sold under LIFO, assuming Waylon Company uses the periodic inventory system.

Data Analytics in Action

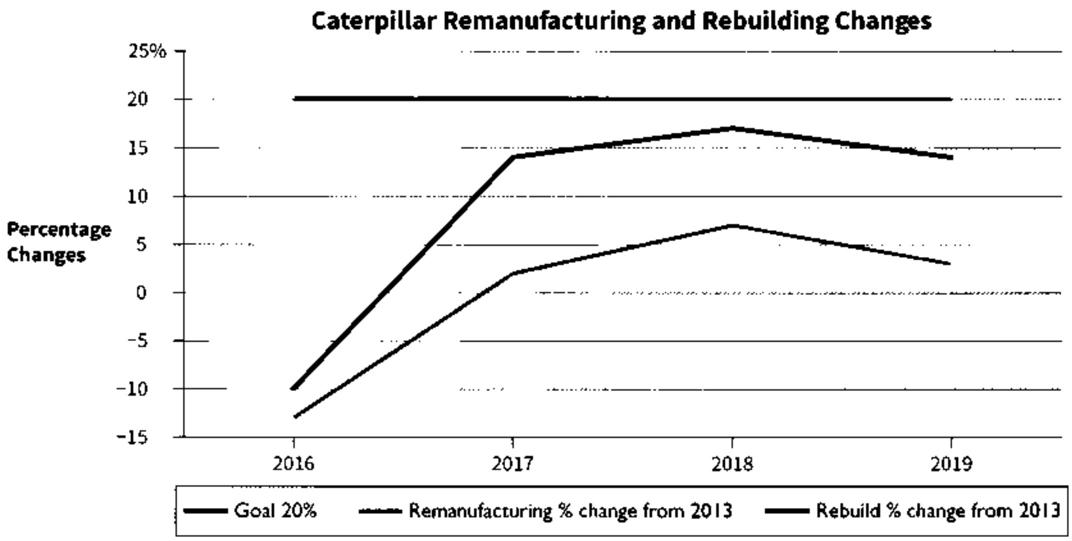
Using Data Visualization to Analyze Changes over Time

DA6.1 Data visualization can be used to analyze company changes over time.

Example: Recall the Feature Story "Where Is That Spare Bulldozer Blade?" presented in the chapter. Caterpillar continues to enhance its inventory management by improving its product sustainability in two ways. First, it is rebuilding used parts to like-new condition. Second, the company is remanufacturing usable inventory parts when customers trade-in or dispose of their used equipment. These actions not only reduce inventory costs but also enable Caterpillar to participate in the circular economy, where manufacturers take responsibility for their products at the end of the product lives. As noted in its 2019 sustainability report, Caterpillar has a goal of 20% growth in both rebuilding and remanufacturing.

Excel

Has Caterpillar reached this goal? A line chart can help you visualize the company's progress over time. What information can you obtain by examining the following chart?



Source: Data from "ESG Data Center," *Caterpillar 2019 Sustainability Report.*

The chart indicates that while Caterpillar's goal has remained at 20%, the remanufacturing and rebuilding businesses are growing. The biggest increase in the growth of rebuilding occurred from 2016 to 2017. There was a decline from 2018 to 2019 in these initiatives as Caterpillar may have reached a peak that is leveling off due to new production that is more sustainable.

For this case, you will look more closely at specific Caterpillar data regarding its end-of-life returned materials and the percentage usable for recycling. You will create and analyze a combination column and line chart to determine how Caterpillar can increase its gross profit as it relates to these end-of-life materials.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Analytics to Compare Companies' Inventory Turnover

DA6.2 Inventory turnover shows the number of times during the period a firm sells the entire dollar amount of its inventory. It is advantageous to turn over inventory more quickly to reduce the risk of obsolescence and spoilage. As such, companies often have a goal of increasing inventory turnover. For this case, you will use inventory turnover data for Costco, Walmart, Target, and Amazon to create and analyze scatter plots, as well as to calculate days' sales in inventory, to determine which company is managing its inventory levels most effectively.

Excel

Go to Wiley Course Resources for complete case details and instructions.

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT6.1 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 **Apple Inc.** in Appendix A. The complete annual report, including the notes to the financial statements, is available at the company's website.

Instructions

Answer the following questions. (Give the amounts in millions 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 26, 2020? At September 28, 2019?

b. Compute the dollar amount of change and the percentage change in inventories between 2019 and 2020. Compute inventory as a percentage of current assets for 2020.

c. What are the cost of sales (product) reported by Apple for 2020, 2019, and 2018? Compute the ratio of cost of sales to net sales in 2020 (*Hint*: Use "product" sales and "product" "cost info" rather than "total" in computing this ratio.).

Comparative Analysis Problem: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT6.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements for **Under Armour, Inc.** are presented in Appendix C.

Instructions

a. Based on the information in the financial statements, compute these values for each company for the most recent year.

1. Inventory turnover. (Use cost of goods sold or cost of sales and inventories.)
2. Days in inventory.

b. What conclusions concerning the management of the inventory can you draw from these data?

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT6.3 The financial statements of **Amazon.com, Inc.** are presented in Appendix D. Financial statements for **Walmart Inc.** are presented in Appendix E.

Instructions

a. Based on the information in the financial statements, compute these values for each company for the most recent year.

1. Inventory turnover. (Use cost of sales and inventories.)
2. Days in inventory.

b. What conclusions concerning the management of the inventory can you draw from these data?

Interpreting Financial Statements

CT6.4 Suppose the following information is from the 2025 annual report of **American Greetings Corporation** (all dollars in thousands).

	Feb. 28, 2025	Feb. 28, 2024
Inventories		
Finished goods	$232,893	$244,379
Work in process	7,068	10,516
Raw materials and supplies	49,937	43,861
	289,898	298,756
Less: LIFO reserve	86,025	82,085
Total (as reported)	$203,873	$216,671
Cost of goods sold	$809,956	$780,771
Current assets (as reported)	$561,395	$669,340
Current liabilities	$343,405	$432,321

The notes to the company's financial statements also include the following information.

> The last-in, first-out (LIFO) cost method is used for approximately 75% of the domestic inventories in 2025 and approximately 70% in 2024. The foreign subsidiaries principally use the first-in, first-out (FIFO) method. Display material and factory supplies are carried at average-cost.

Instructions

a. Define each of the following: finished goods, work in process, and raw materials.

b. What might be a possible explanation for why the company uses FIFO for its nondomestic inventories?

c. Calculate the company's inventory turnover and days in inventory for 2024 and 2025. (2023 inventory was $182,618.) Discuss the implications of any change in the ratios.

d. What percentage of total inventory does the 2025 LIFO reserve represent? If the company used FIFO in 2025, what would be the value of its inventory? Do you consider this difference a "material" amount from the perspective of an analyst? Which value accurately represents the value of the company's inventory?

e. Calculate the company's 2025 current ratio with the numbers as reported, then recalculate after adjusting for the LIFO reserve.

Real-World Focus

CT6.5 A company's annual report provides various information about inventory.

Instructions

Answer the following questions based on the current year's annual report available at Cisco's website.

a. At Cisco's fiscal year-end, what was the inventory on the balance sheet?

b. How has this changed from the previous fiscal year-end?

c. How much of the inventory was finished goods?

CT6.6 All companies should take steps to prevent inventory theft. This exercise reviews ways that companies can reduce inventory-related frauds.

Instructions

Search online for the article entitled "6 Ways to Prevent Inventory Fraud in Your Business" by Darin Styles. Read the article and then answer the following questions.

a. What are the six steps outlined in the article?

b. What does the author describe as "segregation of duties"? What was the example given in the article?

c. What examples were given for "incorporating the element of surprise"?

d. Describe the method employing data analytics discussed in the article.

e. The article mentions "bill and hold arrangements." What legitimate reason might a customer have for requesting to purchase something using a bill-and-hold arrangement? What are the related fraud risks to the selling company?

Decision-Making Across the Organization

CT6.7 Solar Electronics has enjoyed tremendous sales growth during the last 10 years. However, even though sales have steadily increased, the company's CEO, Dana Byrnes, is concerned about certain aspects of its performance. She has called a meeting with the corporate controller and the vice presidents of finance, operations, sales, and marketing to discuss the company's performance. Dana begins the meeting by making the following observations:

> We have been forced to take significant write-downs on inventory during each of the last three years because of obsolescence. In addition, inventory storage costs have soared. We rent four additional warehouses to store our increasingly diverse inventory. Five years ago inventory represented only 20% of the value of our total assets. It now exceeds 35%. Yet, even with all of this inventory, "stockouts" (measured by complaints by customers that the desired product is not available) have increased by 40% during the last three years. And worse yet, it seems that we constantly must discount merchandise that we have too much of.

Dana asks the group to review the following data and make suggestions as to how the company's performance might be improved.

(in millions)	2025	2024	2023	2022
Inventory				
Raw materials	$242	$198	$155	$128
Work in process	116	77	49	33
Finished goods	567	482	398	257
Total inventory	$925	$757	$602	$418
Current assets	$1,800	$1,423	$1,183	$841
Total assets	$2,643	$2,523	$2,408	$2,090
Current liabilities	$600	$590	$525	$420
Sales revenue	$9,428	$8,674	$7,536	$6,840
Cost of goods sold	$6,328	$5,474	$4,445	$3,557
Net income	$754	$987	$979	$958

Instructions

Using the information provided, answer the following questions.

a. Compute the current ratio, gross profit rate, profit margin, inventory turnover, and days in inventory for 2023, 2024, and 2025.

b. Discuss the trends and potential causes of the changes in the ratios in part (a).

c. Discuss potential remedies to any problems discussed in part (b).

d. What concerns might be raised by some members of management with regard to your suggestions in part (c)?

Communication Activities

CT6.8 In a discussion of dramatic increases in coffee-bean prices, a *Wall Street Journal* article noted the following fact about **Starbucks**.

> Before this year's bean-price hike, Starbucks added several defenses that analysts say could help it maintain earnings and revenue. The company last year began accounting for its coffee-bean purchases by taking the average price of all beans in inventory.

Prior to this change, the company was using FIFO.

Instructions

Your client, the CEO of Superior Coffee, Inc., read this article and sent you an e-mail message requesting that you explain why Starbucks might have taken this action. Your response should explain what impact this change in accounting method has on earnings, why the company might want to do this, and any possible disadvantages of such a change.

*CT6.9 You are the controller of Garton Inc. H. K. Logan, the president, recently mentioned to you that she found an error in the 2024 financial statements which she believes has corrected itself. She determined, in discussions with the purchasing department, that 2024 ending inventory was overstated by $1 million. H. K. says that the 2025 ending inventory is correct, and she assumes that 2025 income is correct. H. K. says to you, "What happened has happened—there's no point in worrying about it anymore."

Instructions

You conclude that H. K. is incorrect. Write a brief, tactful memo to her, clarifying the situation.

Ethics Case

CT6.10 Nixon Wholesale Corp. uses the LIFO cost flow method. In the current year, profit at Nixon is running unusually high. The corporate tax rate is also high this year, but it is scheduled to decline significantly next year. In an effort to lower the current year's net income and to take advantage of the changing income tax rate, the president of Nixon Wholesale instructs the plant accountant to recommend to the purchasing department a large purchase of inventory for delivery 3 days before the end of the year. The price of the inventory to be purchased has doubled during the year, and the purchase will represent a major portion of the ending inventory value.

Instructions

a. What is the effect of this transaction on this year's and next year's income statement and income tax expense? Why?

b. If Nixon Wholesale had been using the FIFO method of inventory costing, would the president give the same directive?

c. Should the plant accountant order the inventory purchase to lower income? What are the ethical implications of this order?

All About You

CT6.11 Some of the largest business frauds ever perpetrated have involved the misstatement of inventory. Two classics were at **Leslie Fay** and **McKesson Corporation.**

Instructions

There is considerable information regarding inventory frauds available on the Internet. Search for information about one of the two cases mentioned above, or inventory fraud at any other company, and prepare a short explanation of the nature of the inventory fraud.

FASB Codification Activity

CT6.12 If your school has a subscription to the FASB Codification, log in and prepare responses to the following.

a. The primary basis for accounting for inventories is cost. How is cost defined in the Codification?

b. What does the Codification state regarding the use of consistency in the selection or employment of a basis for inventory?

Considering People, Planet, and Profit

CT6.13 **Caterpillar** publishes an annual Sustainability Report to explain its position on sustainability, describe its goals, and report on its achievements.

Instructions

Access the most recent report by doing an Internet search of "Caterpillar Sustainability Report" and then answer the following questions.

a. The report describes the company's goals. What are some of these goals?

b. The report describes the company's results with regard to worker safety. Summarize the company's progress in this area.

c. The report describes the company's results regarding energy use. Explain how the company measures its progress, and comment on its results thus far.

Answers to Insight and Accounting Across the Organization Questions

A Big Hiccup **Q:** What steps might the companies take to avoid such a serious disruption in the future? **A:** The companies may need to consider more storage space to keep higher levels of inventory on hand to protect against future shortages. In addition, the companies might consider becoming less dependent on a single supplier in a single country.

Falsifying Inventory to Boost Income **Q:** What effect does an overstatement of inventory have on a company's financial statements? **A:** The balance sheet 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.

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 most foreign companies are not allowed to use LIFO, its use by U.S. companies reduces the ability of investors to compare U.S. companies with foreign companies.

Dashboards: Seeing Is Believing **Q:** What benefits does a dashboard such as this one provide to a manager for making decisions regarding inventory? **A:** Dashboards provide a collection of views of key performance indicators all in one place. Dashboards are often dynamic, allowing the manager to perform "what if" analysis. Also, the dashboard enables the manager to zoom out or in to look at the whole company, divisions, regions, or particular product lines.

Too Many TVs or Too Few? **Q:** For Sony, what are the advantages and disadvantages of having a low days in inventory measure? **A:** If Sony has a low days in inventory, it reduces the amount of cash it has tied up in inventory. It also minimizes the risk that it will be stuck with excess inventory that could force it to provide big discounts, resulting in punishing losses. Sony also faces the risk that the TVs will become obsolete before they are sold. However, Sony increases the risk that it will encounter "stockouts," that is, it will not have adequate inventory to meet customer demand.

CHAPTER 7

Fraud, Internal Control, and Cash

Chapter Preview

As the following Feature Story about recording cash sales at **Barriques** coffeehouse 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, Barriques 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.

Feature Story

Minding the Money in Madison

For many years, **Barriques** in Madison, Wisconsin, has been named the city's favorite coffeehouse. Barriques not only does a booming business in coffee but also has wonderful baked goods, delicious sandwiches, and a fine selection of wines.

"Our customer base ranges from college students to neighborhood residents as well as visitors to our capital city," says bookkeeper Kerry Stoppleworth, who joined the company shortly after it was founded in 1998. "We are unique because we have customers who come in early on their way to work for a cup of coffee and then will stop back after work to pick up a bottle of wine for dinner. We stay very busy throughout all three parts of the day."

Like most businesses where purchases are low-cost and high-volume, cash control has to be simple. "We use a computerized point-of-sale (POS) system to keep track of our inventory and allow us to efficiently ring through an order for a customer," explains Stoppleworth. "You can either scan a barcode for an item or enter in a code for items that don't have a barcode such as cups of coffee or bakery items." The POS system also automatically tracks sales by department and maintains an electronic journal of all the sales transactions that occur during the day.

"There are two POS stations at each store, and throughout the day any of the staff may operate them," says Stoppleworth. At the end of the day, each POS station is reconciled separately. The staff counts the cash in the drawer and enters this amount into the closing totals in the POS system. The POS system then compares the cash and credit amounts, less the cash being carried forward to the next day (the float), to the shift total in the electronic journal. If there are discrepancies, a recount is done and the journal is reviewed transaction by transaction to identify the problem. The staff then creates a deposit ticket for the cash less the float and puts this in a drop safe with the electronic journal summary report for the manager to review and take to the bank the next day. Ultimately, the bookkeeper reviews all of these documents as well as the deposit receipt that the bank produces to make sure they are all in agreement.

As Stoppleworth concludes, "We keep the closing process and accounting simple so that our staff can concentrate on taking care of our customers and making great coffee and food."

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Define fraud and the principles of internal control.	• Fraud • The Sarbanes-Oxley Act • Internal control • Principles of internal control activities • Data analytics and internal controls • Limitations of internal control	**DO IT! 1** Principles of Control Activities
LO 2 Apply internal control principles to cash.	• Cash receipts controls • Cash disbursements controls • Petty cash fund	**DO IT! 2** Control over Cash Receipts
LO 3 Identify the control features of a bank account.	• Electronic banking • Bank statements • Reconciling the bank account	**DO IT! 3** Bank Reconciliation
LO 4 Explain the reporting of cash and the basic principles of cash management.	• Cash equivalents • Restricted cash • Managing and monitoring cash • Cash budgeting	**DO IT! 4a** Reporting Cash **4b** Cash Budget

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.
Visit Wiley Course Resources for additional tutorials and practice opportunities.

7.1 Fraud and Internal Control

LEARNING OBJECTIVE 1

Define fraud and the principles of internal control.

The Feature Story describes many of the internal control procedures used by Barriques. 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 Wells Fargo 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**.

1. **Opportunity.** Opportunities to engage in fraud 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.
2. **Financial pressure.** Employees sometimes commit fraud because of personal financial problems caused by too much debt, or they may commit fraud because they want to lead a lifestyle they cannot afford on their current salary.
3. **Rationalization.** In order to justify their fraud, employees rationalize their dishonest actions by believing that they should be paid more. For example, employees sometimes justify fraud because they believe they are underpaid while the employer is making lots of money.

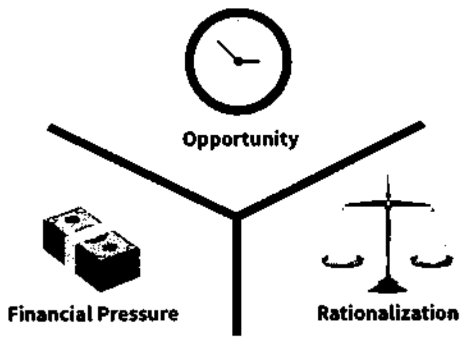


ILLUSTRATION 7.1 **Fraud triangle**

The Sarbanes-Oxley Act

What can be done to prevent or to detect fraud? After numerous corporate scandals came to light in the early 2000s, 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 (see **Helpful Hint**). Corporate executives and boards of directors must ensure that these controls are reliable and effective. In addition, independent outside auditors must attest to the adequacy of the internal control system. Companies that fail to comply are subject to fines, and company officers can be imprisoned. SOX also created the Public Company Accounting Oversight Board (PCAOB) to establish auditing standards and regulate auditor activity.

HELPFUL HINT

Sole proprietorships and partnerships are not subject to SOX regulations.

- One poll found that 60% of investors believe that SOX helps safeguard their stock investments. Many say they would be unlikely to invest in a company that fails to follow SOX requirements.
- Although some corporate executives have criticized the time and expense involved in following SOX requirements, SOX appears to work well.

For example, the chief accounting officer of **Eli Lilly** noted that SOX triggered a comprehensive review of how the company documents its controls. This review uncovered redundancies and pointed out controls that needed to be added.

Internal Control

Internal control is a process designed to provide reasonable assurance regarding the achievement of company objectives related to operations, reporting, and compliance. In more detail, the purposes of internal control are to safeguard assets, enhance the reliability of accounting records, increase efficiency of operations, and ensure compliance with laws and regulations. The **Committee on Sponsoring Organizations** (COSO) is an initiative among five leading accounting and finance organizations to provide frameworks and guidance on enterprise risk management, internal control, and fraud deterrence. According to COSO's *Internal Control—Integrated Framework*, internal control systems have five primary components:[1]

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."
2. **Risk assessment.** Companies must identify and analyze the various factors that create risk for the business and must determine how to manage these risks.
3. **Control activities.** To reduce the occurrence of fraud, management must design policies and procedures to address the specific risks faced by the company.
4. **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.
5. **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

iStock.com/Karl Dolenc

And the Controls Are . . .

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 helps 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 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.

Why is sustainability information important to investors? (Answer is available at the end of the chapter.)

[1]The Committee of Sponsoring Organizations of the Treadway Commission, "Internal Control—Integrated Framework," *www.coso.org/documents/990025P_Executive_Summary_final_may20.pdf*; and Stephen J. McNally, "The 2013 COSO Framework and Sox Compliance," *Strategic Finance* (June 2013).

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. 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.**

To illustrate, assume that the cash on hand at the end of the day in a **Whole Foods** store is $10 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.

Many retailers solve this problem by having registers with multiple drawers. This makes it possible for more than one person to operate a register but still allows identification of a particular employee with a specific drawer. Only the signed-in cashier has access to his or her drawer.

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 passcodes 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 passcodes enables the company to establish responsibility by identifying the particular employee who carried out the activity.

Transfer of cash drawers

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.

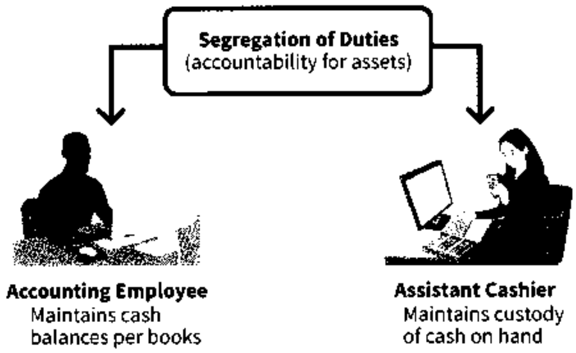
Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 61–70.

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 who design and program computerized systems should not be assigned duties related to day-to-day use of the systems. Otherwise, they could design the systems to benefit themselves 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.

Purchasing Activities Companies should, for example, assign related **purchasing activities** to different individuals. Related purchasing activities include ordering merchandise, approving orders, 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.

Sales Activities 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 activities:

- 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 used university funds to buy 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. 100–107.

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. Angela prepared and issued checks to vendors and reconciled bank statements. She 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.

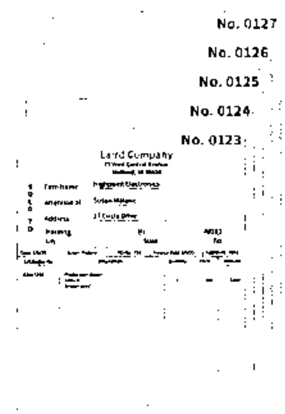
Documentation Procedures

Documents provide evidence that transactions and events have occurred. For example, point-of-sale terminals are networked with a company's computing and accounting records, which results in direct documentation.

Similarly, 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 two procedures for documents.

1. 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.
2. 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.



Prenumbered invoices

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, the credit card receipt provided when the credit card payment was 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

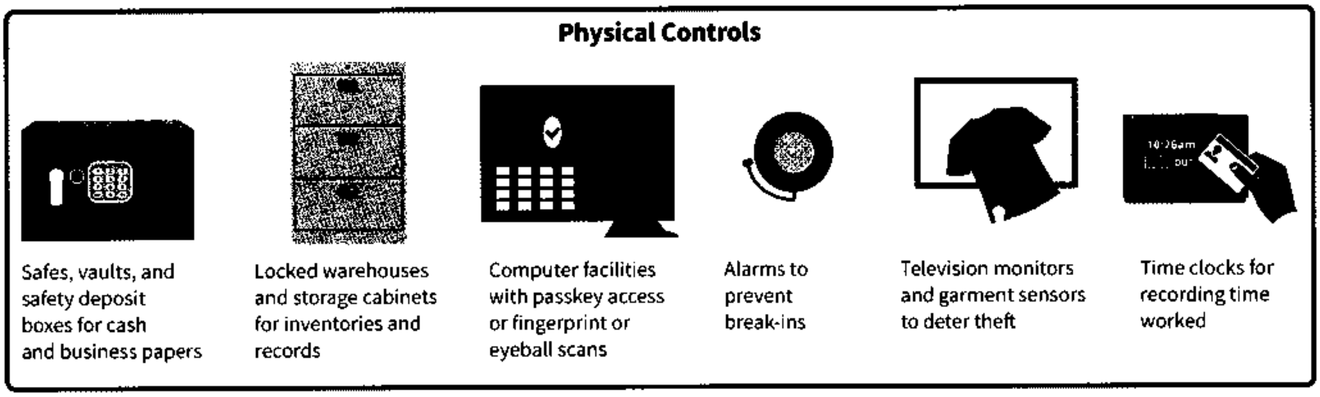
Documentation procedures. Mod Fashions should require the original, detailed receipt. It should not accept photocopies, and it should not accept credit card statements. In addition, documentation procedures could be further improved by requiring the use of a corporate credit card (rather than a personal 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**



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 nonbusiness 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 each other's passwords. 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 electronic journal with the cash in the point-of-sale terminal at **Barriques** 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.

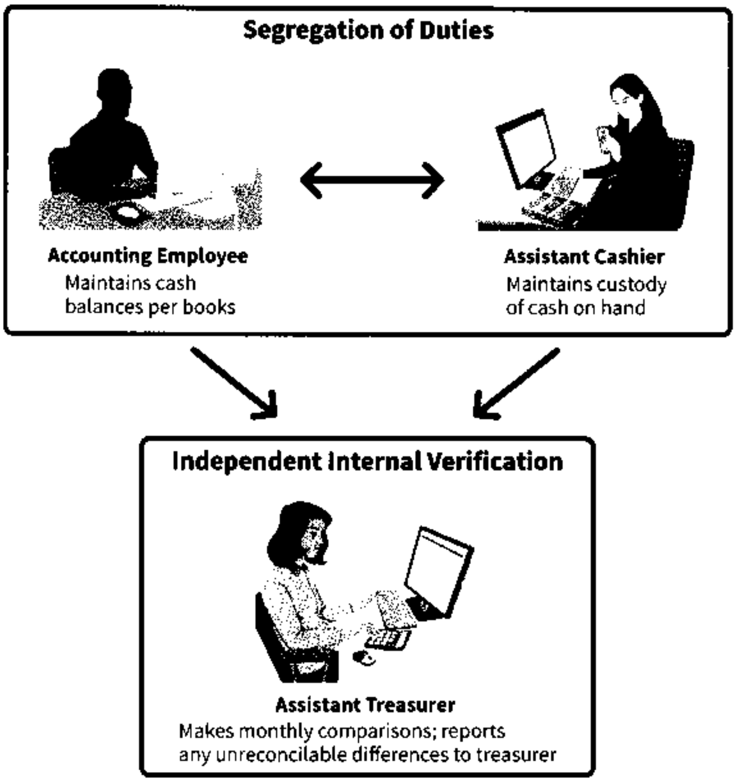


ILLUSTRATION 7.3

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 perpetrated 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.

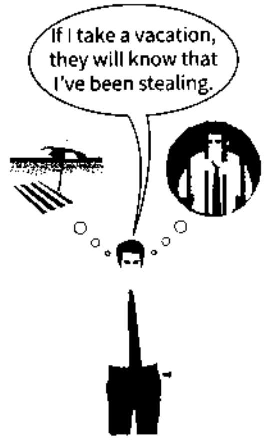
- **Internal auditors** are company employees who continuously evaluate the effectiveness of the company's internal control systems.
- They review the activities of departments and individuals to determine whether prescribed internal controls are being followed.
- They also recommend improvements when needed.

For example, **WorldCom** was at one time the second largest U.S. telecommunications company. The fraud that caused its bankruptcy (the largest ever when it occurred) involved billions of dollars. It 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 resource 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 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 guests 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


Stockbyte/Getty Images

SOX Boosts the Role of Human Resources

Under SOX, a company needs 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, the human resource department must refer the case to the company audit committee and possibly to its legal counsel.

Why would unsupervised employees or employees who report to each other represent potential internal control threats? (Answer is available at the end of the chapter.)

Data Analytics and Internal Controls

Data analytics has dramatically changed many aspects of internal control practices. In the past, internal and external auditors tended to rely heavily on investigations of period-end samples of transactions to identify potential violations. Now, rather than wait for a period-end sample, many companies employ continuous monitoring of virtually every transaction. As a result, spikes in certain types of activity or developing trends are more quickly identified and investigated.

- Many different aspects of journal entries can be monitored continuously. For example, systems can automatically identify who recorded a particular journal entry. This helps to ensure that the segregation of duties control principle is not violated.
- Large dollar amounts in risky areas can also be flagged and investigated quickly. Recipients of payments can be easily screened to ensure, for example, that bonus amounts are correctly determined based on results and bonus formulas, and that bonuses are only paid to employees who are designated for bonus payments.

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 (see **Helpful Hint**).

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.

No system of internal control is perfect. Generally, two major limitations are inherent in internal control systems.

> 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.**

1. **Human element.** 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.
2. **Size of business.** Small companies often find it difficult to segregate duties or to provide for independent internal verification.

A study by the Association of Certified Fraud Examiners indicates that businesses with fewer than 100 employees are most at risk for employee theft. In fact, 29% of frauds occurred at companies with fewer than 100 employees. The median loss at small companies was $154,000, which was nearly as high as the median fraud at companies with more than 10,000 employees ($160,000). A $154,000 loss can threaten the very existence of a small company.

DO IT! 1 Principles of Control Activities

Identify which principles of control activities are violated in each of the following situations, and explain how each 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 principles of control activities discussed.**
> - **Understand the nature of the frauds that each control activity is intended to address.**

Solution

1. Violates the segregation of duties control principle. 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 human resource control principle. 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 documentation procedures control principle. 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: BE7.1, BE7.2, BE7.3, BE7.4, DO IT! 7.1, E7.1, and E7.2.

7.2 Cash Controls

LEARNING OBJECTIVE 2

Apply internal control principles to cash.

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 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 business with over-the-counter, electronic and check receipts.

Over-the-Counter Receipts

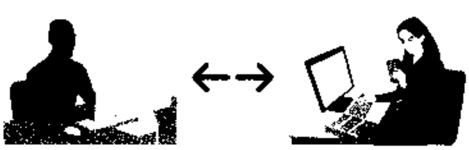
In retail businesses, control of over-the-counter receipts centers on cash registers. With the increase in cloud-based computing, point-of-sale (POS) cash register systems have become affordable even for many small businesses. Most retail businesses receive payment with cash, credit cards, or debit cards. Staff members who operate cash registers (physical control) are each given cash, called "float" (assignment of responsibility) to make change for customers who pay cash. All sales must be entered into the register through the POS software, which records the sale (documentation) at the proper price, often simply by scanning a bar code.

- A big advantage of POS systems is that they update inventory records at the time of sale if the company is using a perpetual inventory system.
- This increases the company's ability to decrease employee theft by frequently reconciling inventory records with the actual amount of inventory on shelves.

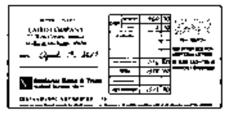
ILLUSTRATION 7.4 **Application of internal control principles to cash receipts**

Cash Receipts Controls

Establishment of Responsibility
Authorize only designated personnel to handle cash receipts (cashiers)



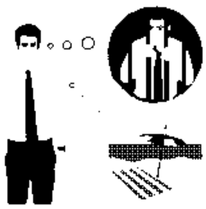
Segregation of Duties
Have different individuals handle cash and record cash receipts



Documentation Procedures
Use remittance advice (mail receipts), cash register tapes, point-of-sale (POS) system reports, and deposit slips or confirmations

Physical Controls
Store cash in safes with limited access; use cash registers or point-of-sale (POS) terminals; deposit cash daily

Independent Internal Verification
Supervisors count cash receipts daily; accountant compares total receipts to bank deposits daily



Human Resource Controls
Bond personnel who handle cash; require employees to take vacations; conduct background checks

At the end of a shift, staff members count the cash to ensure it agrees with the amount reported in the system, and then they report the count to a supervisor. A supervisor double-checks the amount (independent internal verification) and then prepares a deposit slip.

Access to the system should be restricted (physical control) so that cashiers cannot adjust the amount and type of sales recorded at the register to understate reported sales. Without these controls, the cashiers could hide the fact that they have taken cash. Employees must also ensure that the receipts are on-hand for sales made by debit or credit cards and that these match sales that were recorded with this type of payment.

In some instances, the amount deposited at the bank will not agree with the cash recorded in the accounting records.

- 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 sales, the company makes the following entry.

Cash	6,946.10	
Cash Over and Short	10.10	
Sales Revenue		6,956.20
(To record cash shortfall and cash sales)		

A	=	L	+	
+6,946.10				
				−10.10
				+6,956.20

Cash Flows
+6,946.10

Cash Over and Short is an income statement item. It is reported as miscellaneous expense when there is a cash shortfall (debit balance in Cash Over and Short), and as miscellaneous revenue when there is an overage (credit balance in Cash Over and Short). Clearly, the amount should be small. Any material amounts in this account should be investigated.

Electronic Receipts

Electronic funds transfer (EFT) uses wire, telephone, or computers to transfer funds from one location to another. Examples of EFTs include the following.

- Direct deposit of payroll amounts to employees.
- Online bill payments for utilities and loans.
- Use of a debit card at point-of-sale (POS) terminals.

Not only do many businesses rely on EFTs as an efficient way to manage their cash, they also depend on their banks to maintain strong internal controls to safeguard it.

Because EFT does not involve employees handling cash, it reduces some of the opportunities for employee theft. However, opportunities still exist, especially in businesses that lack proper controls. Without assignment of responsibility or segregation of duties, an employee might redirect funds into a personal account and hide the theft with fraudulent accounting entries.

Check Receipts

Although the use of checks by retail customers has diminished significantly, checks continue to be commonly used in business-to-business transactions. When a check is received at the time of sale, it will be included in the cash register and form part of an employee's reconciliation of daily sales to cash on hand.

- When a check is received in the mail, it is usually accompanied by a remittance advice, which is the detachable part of the invoice that customers are asked to send back with the check.
- Mailroom employees send the remittance advices to the accountants responsible for recording cash receipts, who then send the checks to another employee, who then deposits the checks at the bank (segregation of duties).
- The employee making the bank deposit should have no recordkeeping duties so that he or she is prevented from stealing the cash and covering up the theft by understating the value of cash receipt journal entries.

The person making the bank deposit will receive a bank-stamped deposit slip. Each day, an independent employee compares the amount of cash deposited per the deposit slip with the amount of cash receipts recorded that day to ensure the funds deposited were also recorded. If duties are segregated this way, no one employee would be able to steal and also be able to record the receipts to cover up the theft. The independent internal verification of the deposit slips further strengthens the controls over check receipts.

Cash Disbursements Controls

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 7.5** shows how principles of internal control apply to disbursements paid by check.

Today, more than half of business disbursements are made through EFT.

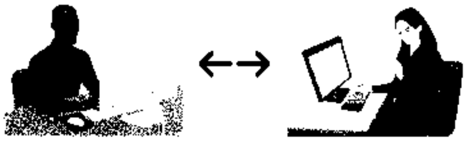
- When a company pays its employees' salaries using a direct deposit option, the cash is instantly transferred from the company's bank account to each employee's bank account.
- The basic principles shown in Illustration 7.5 for disbursements by check also apply to EFT payments.

[2] We explain the operation of a petty cash fund in Appendix 7A.

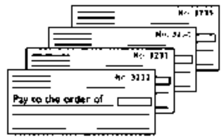
ILLUSTRATION 7.5 **Application of internal control principles to disbursements paid by check**

Cash Disbursements Controls

Establishment of Responsibility
Only designated personnel are authorized to sign checks (treasurer) and approve vendors



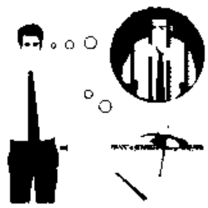
Segregation of Duties
Different individuals approve and make payments; check-signers do not record disbursements



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

For example, as we discussed in the cash receipts section, when supported by proper assignment of responsibility and segregation of duties, the use of EFT for disbursements results in better internal control than the use of checks.

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 liability related to 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 in the voucher register when the voucher is issued, and a second in the check register 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 in two ways.

1. The authorization process inherent in a voucher system establishes responsibility. Each individual has responsibility to review the underlying documentation to ensure that it is correct.
2. 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 earlier in the Anatomy of a Fraud box. 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

ETHICS NOTE

Petty cash funds are authorized and legitimate. In contrast, "slush" funds are unauthorized and hidden (under the table).

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 (see Ethics Note). The operation of a petty cash fund, often called an **imprest system**, involves:

1. Establishing the fund.
2. Making payments from the fund.
3. Replenishing the fund.[3]

We explain the operation of a petty cash fund in Appendix 7A.

Ethics Insight

Chris Fernig/iStockphoto

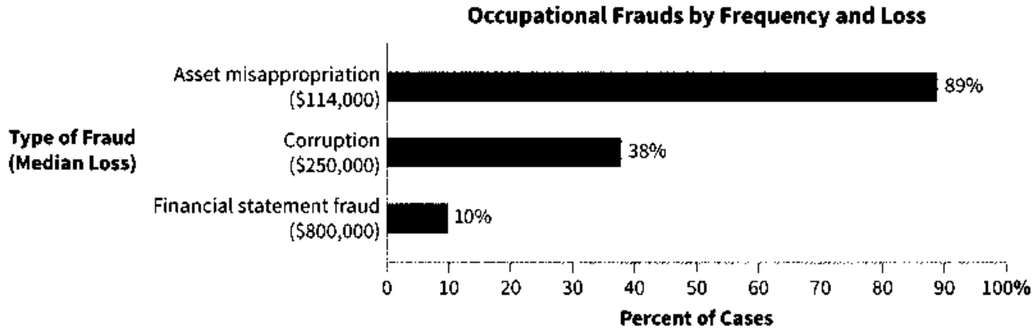
How Employees Steal

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 to 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 following graph shows the frequency and the median loss for each type of occupational fraud. (Note that the sum of percentages exceeds 100% because some cases of fraud involved more than one type.)

[3] The term "imprest" means an advance of money for a designated purpose.



Source: Based on *2018 Report to the Nations on Occupational Fraud and Abuse*, Association of Certified Fraud Examiners, p. 12.

How can companies reduce the likelihood of occupational fraud? (Answer is available at the end of the chapter.)

DO IT! 2 Control over Cash Receipts

L. R. Cortez is concerned about the control over cash receipts in his fast-food restaurant, 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) physical controls, and (3) independent internal verification.**
- **Design an effective system of internal control over cash receipts.**

Solution

Cortez should assign a separate cash register drawer 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 (or point-of-sale records) to be sure they agree. In addition, Cortez should install an automated point-of-sale system that would enable the company to compare orders entered in the register to orders processed by the kitchen.

Related exercise material: BE7.5, BE7.6, BE7.7, BE7.8, DO IT! 7.2, E7.3, E7.4, E7.5, E7.6, and E7.7.

7.3 Control Features of a Bank Account

LEARNING OBJECTIVE 3

Identify 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 clearinghouse for checks received and checks written.
- The use of a bank checking account minimizes the amount of cash that must be kept on hand.
- It also facilitates control of cash because a double record is maintained of all bank transactions—one by the business and the other by the bank.
- The asset account Cash maintained by the company is the "flipside" of the bank's liability account for that company.

A **bank reconciliation** is the process of comparing the bank's balance with the company's balance, and explaining the differences to make them agree.

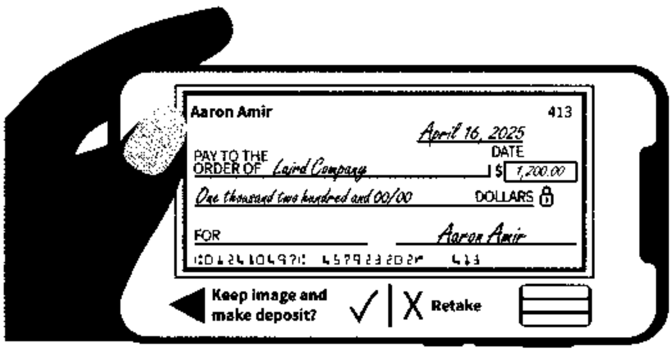
Many companies have more than one bank account. For efficiency of operations and better control, national retailers like **Walmart** and **Target** often have regional bank accounts. Similarly, a company such as **ExxonMobil** with more than 100,000 employees may have a payroll bank account as well as one or more general bank accounts. In addition, a company may maintain several bank accounts in order to have more than one source for short-term loans.

Electronic Banking

Most businesses today take advantage of electronic banking using a computer or mobile banking on a mobile device. Many banks have websites where customers can access their account information. Banks must ensure that these websites are secure and require users to have strong passwords and to change passwords frequently. Businesses must also incorporate strong internal controls, such as the following.

- Marking a check as deposited once a picture is taken and electronically submitted to the bank (called remote deposit capture) to ensure the check is not deposited twice (see **Illustration 7.6**).
- Safeguarding checks to ensure they are not stolen or misused.
- Documenting the use of the cash withdrawn from the ATM.

ILLUSTRATION 7.6
Mobile banking using a smart phone (check deposit)



Bank Statements

Each month, the company receives from the bank a **bank statement** showing its bank transactions and balances.[4] For example, the statement for Laird Company in **Illustration 7.7** shows the following:

1. Checks paid and other debits (such as debit card transactions or electronic funds transfers for bill payments) that reduce the balance in the depositor's account.
2. Deposits (by direct deposit, automated teller machine, or electronic funds transfer) and other credits that increase the balance in the depositor's account.
3. The account balance after each day's transactions.

[4]Our presentation assumes that a company makes all adjustments at the end of the month. In practice, a company may also make journal entries during the month as it reviews online information from the bank regarding its account.

ILLUSTRATION 7.7
Bank statement

National Bank & Trust
Midland, Michigan 48654 Member FDIC

Statement Date/Credit Line Closing Date
April 30, 2025

457923
ACCOUNT NUMBER

ACCOUNT STATEMENT
LAIRD COMPANY
77 WEST CENTRAL AVENUE
MIDLAND, MICHIGAN 48654

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

Amounts Deducted from Account (debits)			Amounts Added to Account (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
4-3	EFT	1,000.00	4-3	2,137.50	4-3	18,249.65
4-5	436	2,260.00	4-5 EFT	1,350.47	4-4	17,063.86
4-4	437	1,185.79	4-7	982.46	4-5	15,154.33
4-3	438	776.65	4-8	1,320.28	4-7	14,648.89
4-8	439	1,781.70	4-9 EFT	1,035.00	4-8	11,767.47
4-7	440	1,487.90	4-11	2,720.00	4-9	12,802.47
4-7	EFT	320.00	4-12 EFT	757.41	4-11	13,936.87
4-8	441	2,100.00	4-13	1,218.56	4-12	13,468.28
4-11	442	1,585.60				
4-12	443	1,226.00				
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	120.00	4-30	2,128.60	4-30	15,907.45
4-30	DM	30.00				
4-30	461	500.15				

Symbols: **CM** Credit Memo **EC** Error Correction **NSF** Not Sufficient Funds **EFT** Electronic Funds Transfer
DM Debit Memo **INT** Interest Earned **SC** Service Charge

Remember that **bank statements are prepared from the** ***bank's*** **perspective**. For example, **every deposit the bank receives is an increase in the bank's liabilities (an account payable to the depositor)**. Therefore, in Illustration 7.7, National Bank and Trust **credits** to Laird Company every deposit it received from Laird.

The reverse occurs when the bank "pays" a check issued by Laird Company on its checking account balance: Payment reduces the bank's liability and is therefore **debited** to Laird's account with the bank. As **Illustration 7.8** shows:

- The bank *credits* (increases) the customer's account for each deposit it receives.
- The bank *debits* (decreases) the customer's account for each check it receives.

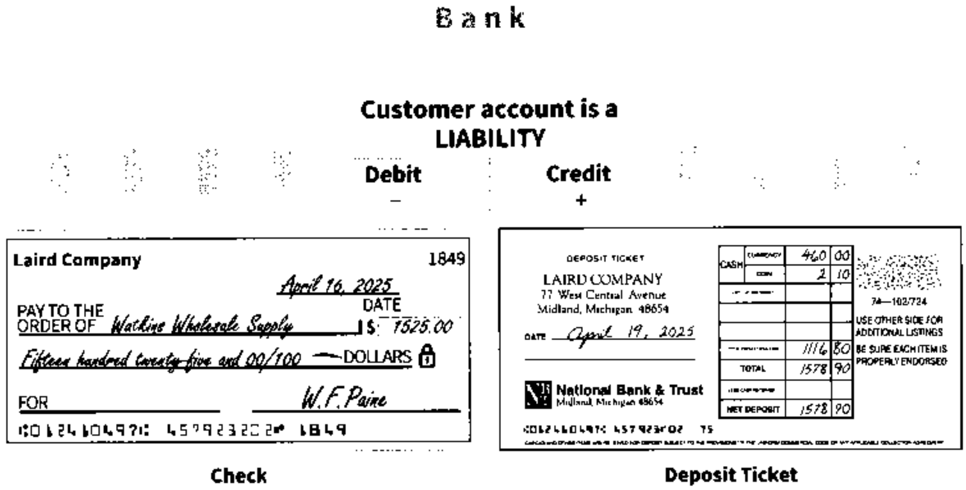
The bank statement lists in numerical sequence all paid checks along with the date the check was paid and its amount. Upon paying a check, the bank stamps the check "paid"; a paid check is sometimes referred to as a **canceled** check. In addition, the bank includes with the bank statement memoranda explaining other debits and credits it made to the depositor's account (see **Helpful Hint**).

HELPFUL HINT
Essentially, the bank statement is a copy of the bank's records sent to the customer or made available online for review.

A check that is not paid by a bank because of insufficient funds in a bank account is called an **NSF check** (not sufficient funds). The bank uses a debit memorandum when a previously deposited customer's check "bounces" because of insufficient funds. In such a case, the customer's bank marks the check NSF (not sufficient funds) and returns it to the depositor's bank. The bank then debits (decreases) the depositor's account, as shown by the symbol NSF in Illustration 7.7, and sends the NSF check and debit memorandum to the depositor as notification of the charge. The NSF check reestablishes an account receivable for the depositor and reduces its cash in the bank account.

ILLUSTRATION 7.8

How banks account for customer checks and deposits



Reconciling the Bank Account

Because the bank and the company maintain independent records of the company's cash account, you might 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.

- **Book balance**. This is the cash balance that the company has in the accounting records for the checking account.
- **Bank balance**. This is the cash balance according to the monthly bank statement.

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 reconciliation has two causes:

1. **Time lags** that prevent one of the parties from recording the transaction in the same period.
2. **Errors** by either party in recording transactions.

Time lags occur frequently. For example, several days may elapse between the time a company pays by check and the date the bank pays the check. Similarly, when a company uses the bank's night depository to make its deposits, there will be a difference of one day between the time the company records the receipts and the time the bank does so. A time lag also occurs whenever the bank mails a debit or credit memorandum to the company.

While most individuals today write few checks for personal purchases, the use of checks is still quite common in business-to-business transactions. However, even if a company never writes checks (for example, if a small company uses only a debit card or electronic funds transfers), **the possibility of errors or fraud still necessitates periodic reconciliation.** The incidence of errors or fraud depends on the effectiveness of the internal controls maintained by the company 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 drawn by C. D. Berg to the account of C. D. Burg.

Reconciliation Procedure

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. **To obtain maximum benefit**

from a bank reconciliation, an employee who has no other responsibilities (either handling or reporting) related to cash should prepare the reconciliation. When companies do not follow the internal control principle of independent internal verification in preparing the reconciliation, cash embezzlements may escape unnoticed. For example, in the Anatomy of a Fraud box about Aggasiz Construction Company presented earlier, a bank reconciliation by someone other than Angela Bauer might have exposed her embezzlement.

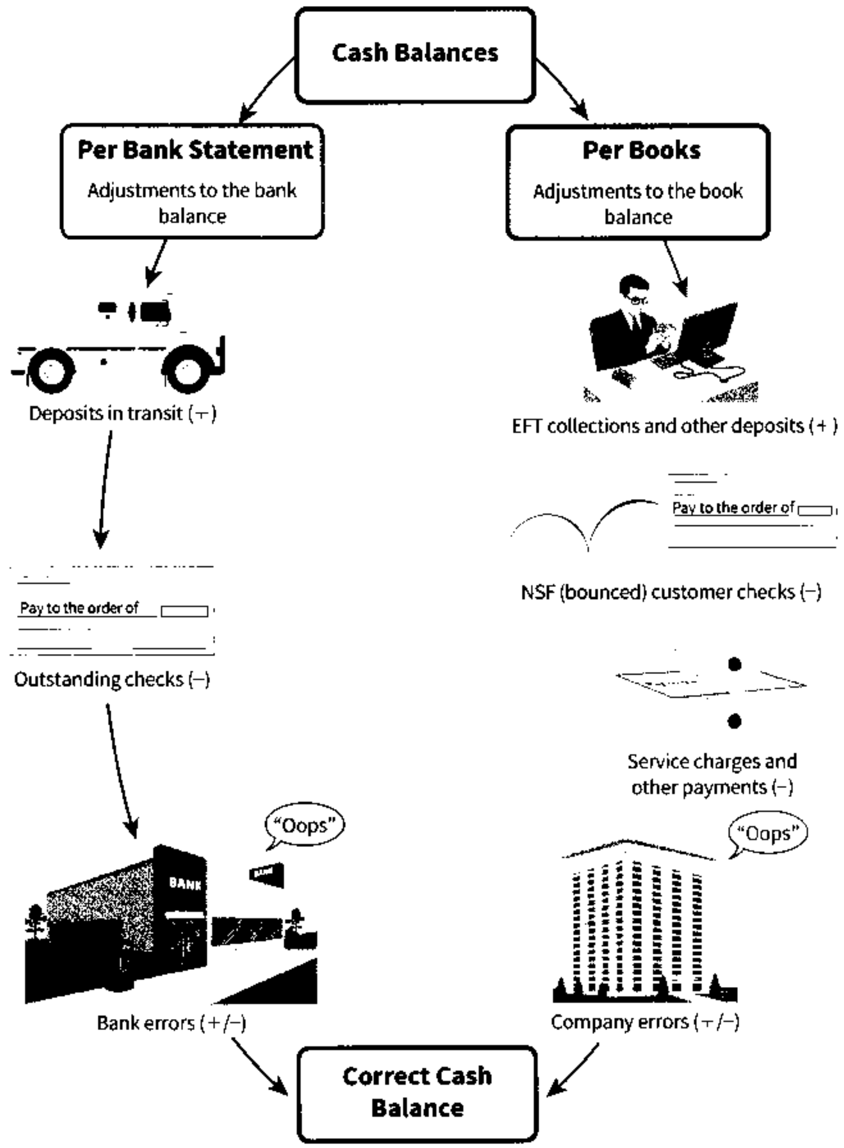
Illustration 7.9 shows the reconciliation process (see **Helpful Hint**). The starting point in preparing the reconciliation is to enter the balance per bank statement and balance per books on a schedule. The following steps should reveal all the reconciling items that cause the difference between the two balances.

HELPFUL HINT

Deposits in transit and outstanding checks are reconciling items because of time lags.

ILLUSTRATION 7.9

Bank reconciliation process



Reconciling Items per Bank On the bank side of the reconciliation, the items to reconcile are deposits in transit (amounts added), outstanding checks (amounts deducted), and bank errors (if any). By adjusting the bank balance for these items, a company brings that balance up to date.

Step 1 Deposits in transit (+). Compare the individual deposits on the bank statement with the deposits in transit from the preceding bank reconciliation and with the deposits per company records or copies of duplicate deposit slips for the current period. Deposits recorded by the depositor that have not been recorded by the bank represent **deposits in transit**. Add these deposits to the balance per bank.

Step 2 Outstanding checks (−). The process of determining outstanding checks is shown in **Illustration 7.10**. Compare the paid checks shown on the bank statement or the paid checks returned with the bank statement with (a) checks outstanding from the preceding bank reconciliation, and (b) checks issued by the company recorded as cash payments in the current period. Issued checks recorded by the company that have not been paid by the bank represent **outstanding checks**. Deduct outstanding checks from the balance per bank.

ILLUSTRATION 7.10
Determining outstanding checks at end of period

Checks that could have been processed				Checks that were processed		Checks yet to be processed
Outstanding checks at beginning of period	+	Checks recorded in company's books this period	−	Checks recorded on this period's bank statement	=	Outstanding checks at end of period

Step 3 Bank errors (+/−). Note any errors made by the bank that were discovered in the previous steps. For example, if the bank processed a deposit of $1,693 as $1,639 in error, the difference of $54 ($1,693 − $1,639) is added to the balance per bank on the bank reconciliation. All errors made by the bank are reconciling items in determining the adjusted cash balance per the bank.

Reconciling Items per Books Reconciling items on the book side relate to amounts not yet recorded on the company's books but recognized on the bank records. They include adjustments from deposits and other amounts added, payments and other amounts deducted, and company errors (if any).

Step 1 Other deposits (+). Compare the other deposits on the bank statement with the company records. Any unrecorded amounts should be added to the balance per books. For example, if the bank statement shows electronic funds transfers from customers paying their accounts online, these amounts should be added to the balance per books on the bank reconciliation to update the company's records unless they had previously been recorded by the company.

Step 2 Other payments (−). Similarly, any unrecorded other payments should be deducted from the balance per books. For example, if the bank statement shows service charges (such as debit and credit card fees and other bank service charges), this amount is deducted from the balance per books on the bank reconciliation to make the company's records agree with the bank's records. **Normally, the company will already have recorded electronic payments.** However, if this has not been the case then these payments must be deducted from the balance per books on the bank reconciliation to make the company's records agree with the bank's records.

HELPFUL HINT
Note in the bank statement in Illustration 7.7 that the bank has paid checks No. 459 and 461, but check No. 460 is not listed. Thus, this check is outstanding. If a complete bank statement were provided, checks No. 453 and 457 also would not be listed. Laird obtains the amounts for these three checks from its cash payments records.

Step 3 Book errors (+/−). Note any errors made by the depositor that have been discovered in the previous steps. For example, say the company wrote check No. 443 to a supplier in the amount of $1,226 on April 12, but the accounting clerk recorded the check amount as $1,262. The error of $36 ($1,262 − $1,226) is added to the balance per books because the company reduced the balance per books by $36 too much when it recorded the check as $1,262 instead of $1,226. Only errors made by the company, not the bank, are included as reconciling items in determining the adjusted cash balance per books.

Bank Reconciliation Illustrated

Illustration 7.7 presented the bank statement for Laird Company, which the company accessed online (see **Helpful Hint**). It shows a balance per bank of $15,907.45 on April 30, 2025. On this date the balance of cash per books is $11,709.45.

From the foregoing steps, Laird determines the following reconciling items for the bank.

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	**Bank errors (+/−):** None.	

Reconciling items per books are as follows.

Step 1	**Other deposits (+):** Unrecorded electronic receipt from customer on account on April 9 determined from the bank statement.	$1,035.00
Step 2	**Other payments (−):** The electronic payments on April 3 and 7 were previously recorded by the company when they were initiated. Unrecorded charges determined from the bank statement are as follows.	
	Returned NSF check on April 29	425.60
	Debit and credit card fees on April 30	120.00
	Bank service charges on April 30	30.00
Step 3	**Company errors (+):** Check No. 443 was correctly written by Laird for $1,226 and was correctly paid by the bank on April 12. However, it was recorded as $1,262 on Laird's books.	36.00

Illustration 7.11 shows Laird's bank reconciliation (see **Alternative Terminology**).

ILLUSTRATION 7.11
Bank reconciliation

Laird Company
Bank Reconciliation
April 30, 2025

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		$11,709.45
Add: Electronic funds transfer received	$1,035.00	
Error in recording check No. 443	36.00	1,071.00
		12,780.45
Less: NSF check	425.60	
Debit and credit card fees	120.00	
Bank service charge	30.00	575.60
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.

Entries from Bank Reconciliation

The depositor (that is, the company) next must record 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. The adjusting entries for the Laird Company bank reconciliation on April 30 are as follows. Note that every entry involves cash.

Collection of Electronic Funds Transfer A payment of an account by a customer is recorded in the same way, whether the cash is received through the mail or electronically. The entry is as follows.

A	=	L	+	SE
+1,035				
−1,035				

Cash Flows
+1,035

Apr. 30	Cash	1,035	
	Accounts Receivable		1,035
	(To record receipt of electronic funds transfer)		

Book Error An examination of the cash disbursements journal shows that check No. 443 was a payment on account to Andrea Company, a supplier. The correcting entry is as follows.

A	=	L	+	SE
+36				
		+36		

Cash Flows
+36

Apr. 30	Cash	36	
	Accounts Payable		36
	(To correct error in recording check No. 443)		

NSF Check As indicated earlier, an NSF check becomes an accounts receivable to the depositor. The entry is as follows.

A	=	L	+	SE
+425.60				
−425.60				

Cash Flows
−425.60

Apr. 30	Accounts Receivable	425.60	
	Cash		425.60
	(To record NSF check)		

Bank Charge Expense Fees for processing debit and credit card transactions are normally debited to the Bank Charge Expense account, as are bank service charges. We have chosen to combine and record these in one journal entry, as shown below, although they also could be journalized separately.

A	=	L	+	SE
				−150 Exp
−150				

Cash Flows
−150

Apr. 30	Bank Charge Expense	150	
	Cash		150
	(To record charges for debit and credit card fees of \$120 and bank service charges of \$30)		

After Laird posts the entries, the Cash account will appear as in **Illustration 7.12**. The adjusted cash balance in the ledger should agree with the adjusted cash balance per books in the bank reconciliation in Illustration 7.11.

ILLUSTRATION 7.12
Adjusted balance in Cash account

Cash

Apr. 30 Bal.	11,709.45	Apr. 30	425.60
30	1,035.00	30	150.00
30	36.00		
Apr. 30 Bal.	**12,204.85**		

What entries does the bank make? If the company discovers any bank errors in preparing the reconciliation, it should notify the bank so the bank can make the necessary corrections on 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.

Today, many companies use robotic process automation (RPA) software as part of their bank reconciliation process. Any business process that is time-intensive, repetitive in nature, and requires little human judgment can be automated. As long as the "bot" is programmed correctly, utilizing RPA can help to standardize processes and improve internal controls.

Investor Insight


AP Images/Mary Altaffer

Madoff's Ponzi Scheme

Perhaps no fraud in recent memory has generated more notoriety 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 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. A competing fund manager warned the SEC a number of times over a nearly 10-year period that he thought Madoff was engaged in fraud. The 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.

How was Madoff able to conceal such a giant fraud? (Answer is available at the end of the chapter.)

DO IT! 3 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 an electronic funds transfer from one of the company's customers received by the bank, (3) outstanding checks, and (4) a deposit in transit.

ACTION PLAN

- **Understand the items on 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. Electronic funds transfer received by bank: 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: BE7.10, BE7.11, BE7.12, BE7.13, DO IT! 7.3, E7.8, E7.9, E7.11, E7.12, E7.13, and E7.14.

7.4 Reporting Cash

LEARNING OBJECTIVE 4

Explain the reporting of cash and the basic principles of cash management.

Cash consists of coins, currency (paper money), checks, money orders, and money on hand or on deposit in a bank or similar financial institution.

Companies report cash in two different statements:

1. The balance sheet reports the amount of cash available at a given point in time.
2. 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 12.)

In this section, we discuss some important points regarding the presentation of cash in the balance sheet.

When presented in a balance sheet, 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 first in the current assets section of the balance sheet.

Cash Equivalents

Many companies use the designation "Cash and cash equivalents" in reporting cash. (See **Illustration 7.13** 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. (Generally, only investments with maturities of three months or less qualify under this definition.)

ILLUSTRATION 7.13
Balance sheet presentation of cash
Real World

Delta Air Lines, Inc. Balance Sheet (partial) (in millions)	
Assets	
Current assets	
Cash and cash equivalents	$2,844
Short-term investments	959
Restricted cash	122

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 (see Ethics Note).

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.

Occasionally, a company will have a net negative balance in its bank account. In this case, the company should report the negative balance among current liabilities. For example, farm equipment manufacturer **Ag-Chem** at one time reported "Checks outstanding in excess of cash balances" of $2,145,000 among its current liabilities.

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. **McKesson Corp.** 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 balance sheet 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 noncurrent asset.

The FASB now requires that restricted cash be included with cash and cash equivalents when reconciling the beginning and ending amounts on a statement of cash flows (see **Decision Tools**).

Decision Tools
Reporting restricted cash separately helps users determine the amount of cash available for a company's general use.

Illustration 7.13 shows restricted cash reported in the financial statements of **Delta Air Lines**. The company is required to maintain restricted cash as collateral to support insurance obligations related to workers' compensation claims. Delta does not have access to these funds for general use, and so it must report them separately, rather than as part of cash and cash equivalents.

DO IT! 4a Reporting Cash

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

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 noncurrent asset, depending on the circumstances.
3. A company may have a negative balance in its bank account. In this case, it should offset this negative balance against cash and cash equivalents on the balance sheet.
4. Because cash and cash equivalents often includes short-term investments, accounts receivable should be reported as the first item on the balance sheet.

ACTION PLAN

- **Understand how companies present cash and restricted cash on the balance sheet.**
- **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. **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 and therefore are reported before accounts receivable on the balance sheet.

Related exercise material: BE7.15, DO IT! 7.4a, and E7.15.

Managing and Monitoring Cash

Many companies struggle, not because they fail to generate sales, but because they cannot manage their cash. A real-life example of this is a clothing manufacturing company owned by Sharon McCollick. McCollick gave up a stable, high-paying marketing job with **Intel Corporation** to start her own company. Soon she had more orders from stores such as **Dayton Hudson** (now **Target**) than she could fill. Yet, she found herself on the brink of financial disaster, owing three mortgage payments on her house and $2,000 to the IRS. Her company could generate sales, but it was not collecting cash fast enough to support its operations. The bottom line is that a business must have cash.[5]

A merchandising company's operating cycle is generally shorter than that of a manufacturing company. **Illustration 7.14** shows the cash to cash operating cycle of a merchandising operation.

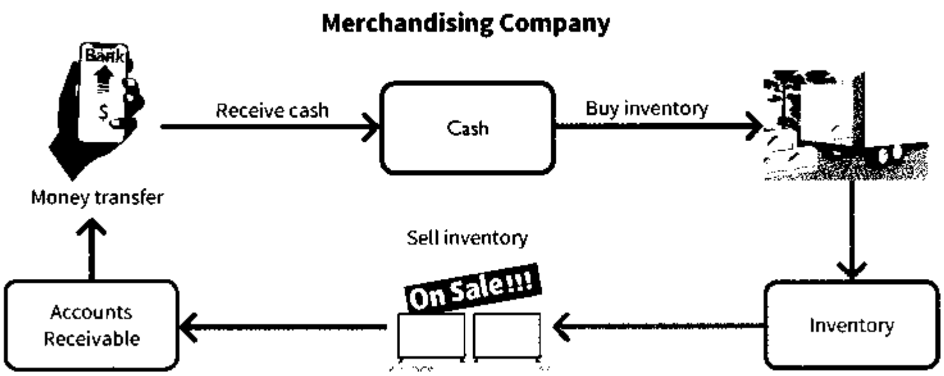


ILLUSTRATION 7.14
Operating cycle of a merchandising company

[5]Adapted from T. Petzinger, Jr., "The Front Lines—Sharon McCollick Got Mad and Tore Down a Bank's Barriers," *Wall Street Journal* (May 19, 1995), p. B1.

To understand cash management, consider the operating cycle of Sharon McCollick's clothing manufacturing company as follows.

1. The company purchases cloth. Let's assume that it purchases the cloth on credit provided by the supplier, so the company owes its supplier money.
2. Employees convert the cloth to clothing. Now the company also owes its employees money.
3. It sells the clothing to retailers, on credit. McCollick's company will have no money to repay suppliers or employees until it receives payments from customers.

In a manufacturing operation, there may be a significant lag between the original purchase of raw materials and the ultimate receipt of cash from customers.

Managing the often-precarious balance created by the ebb and flow of cash during the operating cycle is one of a company's greatest challenges. The objective is to ensure that a company has sufficient cash to meet payments as they come due, yet minimize the amount of non-revenue-generating cash on hand.

Basic Principles of Cash Management

Management of cash is the responsibility of the company treasurer. Any company can improve its chances of having adequate cash by following five basic principles of cash management.

1. **Increase the speed of receivables collection.** Money owed Sharon McCollick by her customers is money that she cannot use. The more quickly customers pay her, the more quickly she can use those funds. Thus, rather than have an average collection period of 30 days, she may want an average collection period of 15 days. However, she must carefully weigh any attempt to force her customers to pay earlier against the possibility that she may anger or alienate them. Perhaps her competitors are willing to provide a 30-day grace period. As noted in Chapter 5, one common way to encourage customers to pay more quickly is to offer cash discounts for early payment under such terms as 2/10, n/30.
2. **Keep inventory levels low.** Maintaining a large inventory of cloth and finished clothing is costly. It ties up large amounts of cash, as well as warehouse space. Increasingly, companies are using techniques to reduce the inventory on hand, thus conserving their cash. Of course, if Sharon McCollick has inadequate inventory, she will lose sales. The proper level of inventory is an important decision.
3. **Monitor payment of liabilities.** Sharon McCollick should monitor when her bills are due, so she avoids paying them too early. Let's say her supplier allows 30 days for payment. If she pays in 10 days, she has lost the use of that cash for 20 days. Therefore, she should use the full payment period. But, she should not pay late. This could damage her credit rating (and future borrowing ability). Also, late payments to suppliers can damage important supplier relationships and may even threaten a supplier's viability. McCollick's company also should conserve cash by taking cash discounts offered by suppliers, when possible (see **International Note**).
4. **Plan the timing of major expenditures.** To maintain operations or to grow, all companies must make major expenditures. These often require some form of outside financing. To increase the likelihood of obtaining outside financing, Sharon McCollick should carefully consider the timing of major expenditures in light of her company's operating cycle. If at all possible, she should make any major expenditure when the company normally has excess cash—usually during the off-season.
5. **Invest idle cash.** Cash on hand earns nothing. An important part of the treasurer's job is to ensure that the company invests any excess cash, even if it is only overnight. Many businesses, such as Sharon McCollick's clothing company, are seasonal. During her slow season, when she has excess cash, she should invest it.

To avoid a cash crisis, it is very important that investments of idle cash be highly liquid and risk-free. A **liquid investment** is one with a market in which someone is

International Note

International sales complicate cash management. For example, if **Nike** must repay a Japanese supplier 30 days from today in Japanese yen, Nike will be concerned about how the exchange rate of U.S. dollars for yen might change during those 30 days. Often, corporate treasurers make investments known as *hedges* to lock in an exchange rate to reduce the company's exposure to exchange-rate fluctuation.

always willing to buy or sell the investment. A **risk-free investment** means there is no concern that the party will default on its promise to pay its principal and interest. For example, using excess cash to purchase stock in a small company because you heard that it was probably going to increase in value in the near term is totally inappropriate. First, the stock of small companies is often illiquid. Second, if the stock suddenly decreases in value, you might be forced to sell the stock at a loss in order to pay your bills as they come due. The most common form of liquid investments is interest-paying U.S. government securities.

Illustration 7.15 summarizes these five principles of cash management.

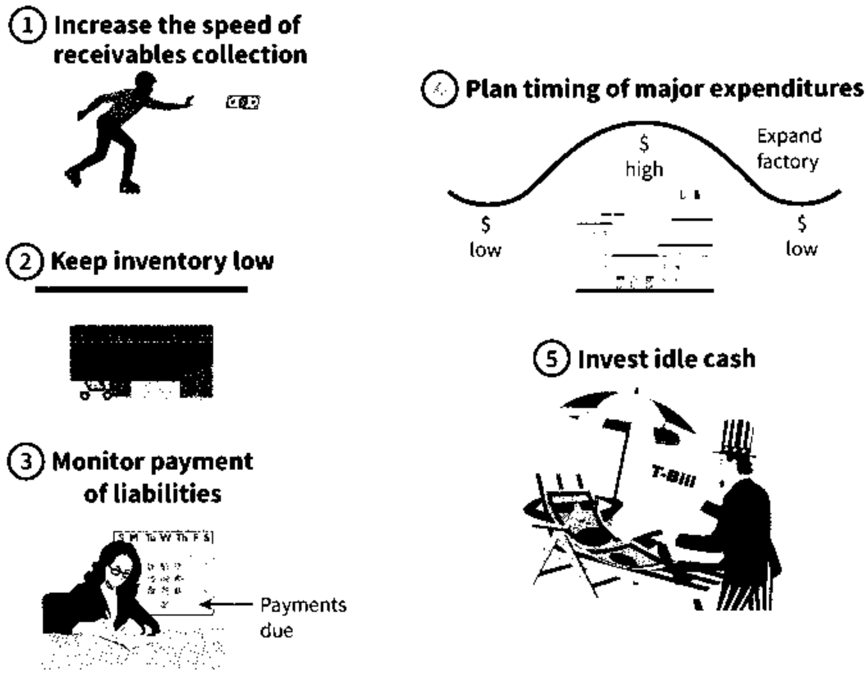


ILLUSTRATION 7.15
Five principles of sound cash management

Cash Budgeting

Because cash is so vital to a company, **planning the company's cash needs** is a key business activity. It enables the company to plan ahead to cover possible cash shortfalls and to make investments of idle funds. The **cash budget** shows anticipated cash flows, usually over a one- to two-year period (see Decision Tools). In this section, we introduce the basics of cash budgeting. More advanced discussion of cash budgets and budgets in general is provided in managerial accounting texts.

As shown in Illustration 7.16, the cash budget contains three sections—cash receipts, cash disbursements, and financing—and the beginning and ending cash balances.

> **Decision Tools**
> The cash budget helps users determine if the company will be able to meet its projected cash needs.

ILLUSTRATION 7.16
Basic form of cash budget

Any Company
Cash Budget
For the Period Ending

Beginning cash balance	$X,XXX
Add: **Cash receipts** (itemized)	X,XXX
Total available cash	X,XXX
Less: **Cash disbursements** (itemized)	X,XXX
Excess (deficiency) of available cash over cash disbursements	X,XXX
Financing	
Add: Borrowings	X,XXX
Less: Repayments	X,XXX
Ending cash balance	$X,XXX

The **Cash receipts** section includes expected receipts from the company's principal source(s) of cash, such as cash sales and collections from customers on credit sales. This section also shows anticipated receipts of interest and dividends, and proceeds from planned sales of investments, plant assets, and the company's capital stock.

The **Cash disbursements** section shows expected payments for inventory, labor, overhead, and selling and administrative expenses. It also includes projected payments for income taxes, dividends, investments, and plant assets. Note that it does not include depreciation since depreciation expense does not use cash.

The **Financing** section shows expected borrowings and repayments of borrowed funds plus interest. Financing is needed when there is a cash deficiency or when the cash balance is less than management's minimum required balance.

- Companies must prepare multi-period cash budgets in sequence because the ending cash balance of one period becomes the beginning cash balance for the next period.
- In practice, companies often prepare cash budgets for the next 12 months on a monthly basis.

To minimize detail, we will assume that Hayes Company prepares an annual cash budget by quarters. Preparing a cash budget requires making some assumptions. For example, Hayes makes assumptions regarding collection of accounts receivable, sales of securities, payments for materials and salaries, and purchases of property, plant, and equipment. The accuracy of the cash budget is very dependent on the accuracy of these assumptions.

In **Illustration** 7.17, we present the cash budget for Hayes. The budget indicates that the company will need $3,000 of financing in the second quarter to maintain a minimum cash balance of $15,000. Since there is an excess of available cash over disbursements of $22,500 at the end of the third quarter, Hayes will repay the borrowing, plus $100 interest, in that quarter.

ILLUSTRATION 7.17
Sample cash budget

Hayes Company
Cash Budget
For the Year Ending December 31, 2025

	Quarter			
	1	2	3	4
Beginning cash balance	$ 38,000	$ 25,500	$ 15,000	$ 19,400
Add: **Cash receipts**				
Collections from customers	168,000	198,000	228,000	258,000
Sale of securities	2,000	0	0	0
Total receipts	170,000	198,000	228,000	258,000
Total available cash	208,000	223,500	243,000	277,400
Less: **Cash disbursements**				
Inventory	23,200	27,200	31,200	35,200
Salaries	62,000	72,000	82,000	92,000
Selling and administrative expenses (excluding depreciation)	94,300	99,300	104,300	109,300
Purchase of truck	0	10,000	0	0
Income tax expense	3,000	3,000	3,000	3,000
Total disbursements	182,500	211,500	220,500	239,500
Excess (deficiency) of available cash over disbursements	25,500	12,000	22,500	37,900
Financing				
Add: Borrowings	0	3,000	0	0
Less: Repayments—plus $100 interest	0	0	3,100	0
Ending cash balance	$ 25,500	$ 15,000	$ 19,400	$ 37,900

A cash budget contributes to more effective cash management. For example, it can show when a company will need additional financing well before the actual need arises. Conversely, it can indicate when the company will have excess cash available for investments or other purposes.

DO IT! 4b Cash Budget

Martian Company's management wants to maintain a minimum monthly cash balance of $15,000. At the beginning of March, the cash balance is $16,500, expected cash receipts for March are $210,000, and cash disbursements are expected to be $220,000. How much cash, if any, must Martian borrow to maintain the desired minimum monthly balance?

Solution

Beginning cash balance	$ 16,500
Add: Cash receipts for March	210,000
Total available cash	226,500
Less: Cash disbursements for March	220,000
Excess of available cash over cash disbursements	6,500
Financing	
Add: Borrowings	8,500
Ending cash balance	$ 15,000

To maintain the desired minimum cash balance of $15,000, Martian Company must borrow $8,500 of cash.

Related exercise material: BE7.16, DO IT! 7.4b, and E7.17.

ACTION PLAN

- **Add the beginning cash balance to receipts to determine total available cash.**
- **Subtract disbursements to determine excess or deficiency.**
- **Compare excess or deficiency with desired minimum cash to determine borrowing needs.**

USING THE DECISION TOOLS | Mattel Corporation

Presented below is hypothetical financial information for **Mattel Corporation** from the year ended December 31, 2024. Mattel is a toy manufacturing company, at one time named by *Fortune* magazine as one of the top 100 companies for which to work.

Selected Financial Information
Year Ended December 31, 2024
(in millions)

Net cash provided by operating activities	$ 325
Capital expenditures	162
Dividends paid	80
Total expenses	680
Depreciation expense	40
Cash balance	206

Also provided below are estimates of the company's sources and uses of cash during the year ended December 31, 2025. This information should be used to prepare a cash budget for 2025.

Projected Sources and Uses of Cash
(in millions)

Beginning cash balance	$206
Cash receipts from sales of product	355
Cash receipts from sale of short-term investments	20
Cash payments for inventory	357
Cash payments for selling and administrative costs	201
Cash payments for property, plant, and equipment	45
Cash payments for taxes	17

Mattel's management believes it should maintain a balance of $200 million cash.

Instructions

a. Using the hypothetical projected sources and uses of cash information presented above, prepare a cash budget for 2025 for Mattel Corporation.

b. Comment on the company's cash adequacy, and discuss steps that might be taken to improve its cash position.

Solution

a.

Mattel Corporation
Cash Budget
For the Year Ending December 31, 2025
(in millions)

Beginning cash balance		$206
Add: Cash receipts		
From sales of product	$355	
From sale of short-term investments	20	375
Total available cash		581
Less: Cash disbursements		
Payments for inventory	357	
Payments for selling and administrative costs	201	
Payments for property, plant, and equipment	45	
Payments for taxes	17	
Total disbursements		620
Excess (deficiency) of available cash over disbursements		(39)
Financing		
Add: Borrowings		239
Ending cash balance		$200

b. Using these hypothetical data, Mattel's cash position appears adequate. For 2025, Mattel is projecting a cash shortfall. This is not necessarily of concern, but it should be investigated. Its primary line of business is toys. Most toys are sold during December. We would expect Mattel's cash position to vary significantly during the course of the year. After the holiday season, once its customers have paid Mattel, it probably has a lot of excess cash. However, when it is making and selling its product but has not yet been paid, it may need to borrow to meet any temporary cash shortfalls.

If Mattel's management is concerned with its cash position, it could take the following steps. (1) Offer its customers cash discounts for early payment, such as 2/10, n/30. (2) Implement inventory management techniques to reduce the need for large inventories of such things as the plastics used to make its toys. (3) Carefully time payments to suppliers by keeping track of when payments are due, so as not to pay too early. (4) If it has plans for major expenditures, time those expenditures to coincide with its seasonal period of excess cash.

Appendix 7A Operation of a Petty Cash Fund

LEARNING OBJECTIVE *5

Explain the operation of a petty cash fund.

The operation of a petty cash fund involves (1) establishing the fund, (2) making payments from the fund, and (3) replenishing the fund.

Establishing the Petty Cash Fund

Two essential steps in establishing a petty cash fund are as follows.

1. Appointing a petty cash custodian who will be responsible for the fund.
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 Laird Company decides to establish a $100 fund on March 1, the general journal entry is as follows.

Mar. 1	Petty Cash	100	
	Cash		100
	(To establish a petty cash fund)		

A	=	L	+	E
+100				
−100				

Cash Flows
no effect

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 Laird decides on July 1 to increase the size of the fund to $250, it would debit Petty Cash $150 and credit Cash $150.

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 7A.1**. 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 (see **Helpful Hint**).

HELPFUL HINT

The petty cash receipt satisfies two internal control principles: (1) establishment of responsibility (signature of custodian), and (2) documentation procedures.

No. 7
LAIRD COMPANY
Petty Cash Receipt

Date 3/6/25

Paid to Acme Express Agency — Amount $18.00

For Collect Express Charges

CHARGE TO Freight-In

Approved — Received Payment

L. A. Bird Custodian — R. E. Mains

ILLUSTRATION 7A.1
Petty cash receipt

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 by an independent person, such as an internal auditor, to determine the correctness of the fund.

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.

Replenishing the Petty Cash Fund

When the money in the petty cash fund reaches a minimum level, the company replenishes the fund as follows (see Helpful Hint).

> HELPFUL HINT
> **Replenishing the petty cash fund involves three internal control procedures: (1) segregation of duties, (2) documentation procedures, and (3) independent internal verification.**

1. 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.
2. The treasurer's office examines the receipts and supporting documents to verify that proper payments from the fund were made.
3. 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 Laird's petty cash custodian requests a check for $87. The fund contains $13 cash and petty cash receipts for postage $44, freight-out $38, and miscellaneous expenses $5. The general journal entry to record the check is as follows.

A	=	L	+	SE
				−44 Exp
				−38 Exp
				−5 Exp
−87				

Cash Flows
−87

Mar. 15	Postage Expense	44	
	Freight-Out	38	
	Miscellaneous Expense	5	
	Cash		87
	(To replenish petty cash fund)		

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 Laird's petty cash custodian has only $12 in cash in the fund plus the receipts as listed. The request for reimbursement would therefore be for $88, and Laird would make the following entry.

A	=	L	+	SE
				−44 Exp
				−38 Exp
				−5 Exp
				−1 Exp
−88				

Cash Flows
−88

Mar. 15	Postage Expense	44	
	Freight-Out	38	
	Miscellaneous Expense	5	
	Cash Over and Short	1	
	Cash		88
	(To replenish petty cash fund)		

Conversely, if the custodian has $14 in cash, the reimbursement request would be for $86. The company would credit Cash Over and Short for $1 (overage). A company reports a debit balance in Cash Over and Short in the income statement as miscellaneous expense (see **Helpful Hint**). 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.

> HELPFUL HINT
> **Cash over and short situations result from mathematical errors or from failure to keep accurate records.**

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.

Internal control over a petty cash fund is strengthened by:

1. Having a supervisor make surprise counts of the fund to ascertain whether the paid petty cash receipts and fund cash equal the designated amount.
2. Cancelling or mutilating the paid petty cash receipts so they cannot be resubmitted for reimbursement.

Review and Practice

Learning Objectives Review

1 Define fraud and the principles of 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 assets, enhance the reliability of accounting records, increase efficiency of operations, and ensure compliance with laws and regulations.

The principles of internal control are establishment of responsibility, segregation of duties, documentation procedures, physical controls, independent internal verification, and human resource controls.

2 Apply internal control principles to cash.

Internal controls over cash receipts include (a) designating only personnel such as cashiers to handle cash; (b) assigning the duties of receiving cash, recording cash, and having custody of cash to different individuals; (c) obtaining remittance advices for mail receipts, cash register tapes or computer records 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 or point-of-sale terminals in executing over-the-counter receipts; (e) making independent daily counts of register receipts and daily comparisons of total receipts with total deposits; and (f) conducting background checks and bonding personnel who handle cash, as well as requiring them to take vacations.

Internal controls over cash disbursements include (a) having only specified individuals such as the treasurer authorized to sign checks and approve vendors; (b) assigning the duties of approving items for payment, paying the items, and recording the payment to different individuals; (c) using prenumbered checks and accounting for all checks, with each check supported by an approved invoice; after payment, stamping each approved invoice "paid"; (d) storing blank checks in a safe or vault with access restricted to authorized personnel, and using a machine with indelible ink 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.

3 Identify the control features of a bank account.

In reconciling the bank account, it is customary to reconcile the balance per books and the balance per bank to their adjusted balance. The steps reconciling the Cash account are to determine deposits in transit and electronic funds transfers received by bank, outstanding checks and electronic payments, errors by the depositor or the bank, and unrecorded bank memoranda.

4 Explain the reporting of cash and the basic principles of cash management.

Cash is listed first in the current assets section of the balance sheet. Companies often 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 company expects to use the cash.

The basic principles of cash management include (a) increase the speed of receivables collection, (b) keep inventory levels low, (c) monitor the timing of payment of liabilities, (d) plan timing of major expenditures, and (e) invest idle cash.

The three main elements of a cash budget are the cash receipts section, cash disbursements section, and financing section.

*5 Explain the operation of a petty cash fund.

In operating a petty cash fund, a company establishes the fund by appointing a custodian and determining the size of the fund. The custodian makes payments from the fund for documented expenditures. The company replenishes the fund as needed, and at the end of each accounting period. Accounting entries to record payments are made each time the fund is replenished.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Are the company's financial statements supported by adequate internal controls?	Auditor's report, management discussion and analysis, articles in financial press	The principles of internal control activities are (1) establishment of responsibility, (2) segregation of duties, (3) documentation procedures, (4) physical controls, (5) independent internal verification, and (6) human resource controls.	If any indication is given that these or other controls are lacking, use the financial statements with caution.

(continues)

(continued)

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Is all of the company's cash available for general use?	Balance sheet and notes to financial statements	The company reports restricted cash in assets section of balance sheet.	A restriction on the use of cash limits management's ability to use those resources for general obligations. This might be considered when assessing liquidity.
Will the company be able to meet its projected cash needs?	Cash budget (typically available only to management)	The cash budget shows projected sources and uses of cash. If cash uses exceed internal cash sources, then the company must look for outside sources.	Two issues: (1) Are management's projections reasonable? (2) If outside sources are needed, are they available?

Glossary Review

Bank reconciliation The process of comparing the bank's account balance with the company's balance, and explaining the differences to make them agree. (p. 7-18).

Bank statement A statement received monthly from the bank that shows the depositor's bank transactions and balances. (p. 7-18).

Bonding Obtaining insurance protection against theft by employees. (p. 7-9).

Cash Resources that consist of coins, currency, checks, money orders, and money on hand or on deposit in a bank or similar depository. (p. 7-25).

Cash budget A projection of anticipated cash flows, usually over a one- to two-year period. (p. 7-29).

Cash equivalents Short-term, highly liquid investments that can be readily converted to a specific amount of cash and which are relatively insensitive to interest rate changes. (p. 7-26).

Committee on Sponsoring Organizations (COSO) An initiative among five leading accounting and finance organizations to provide frameworks and guidance on enterprise risk management, internal control, and fraud deterrence. (p. 7-4).

Deposits in transit Deposits recorded by the depositor that have not been recorded by the bank. (p. 7-22).

Electronic funds transfer (EFT) A disbursement system that uses wire, telephone, or computer to transfer cash from one location to another. (p. 7-14).

Fraud A dishonest act by an employee that results in personal benefit to the employee at a cost to the employer. (p. 7-3).

Fraud triangle The three factors that contribute to fraudulent activity by employees: opportunity, financial pressure, and rationalization. (p. 7-3).

Internal auditors Company employees who continuously evaluate the effectiveness of the company's internal control systems. (p. 7-9).

Internal control A process designed to provide reasonable assurance regarding the achievement of company objectives related to operations, reporting, and compliance. (p. 7-4).

NSF check A check that is not paid by a bank because of insufficient funds in a bank account. (p. 7-19).

Outstanding checks Checks issued and recorded by a company that have not been paid by the bank. (p. 7-22).

Petty cash fund A cash fund used to pay relatively small amounts. (p. 7-16).

Restricted cash Cash that is not available for general use but instead is restricted for a particular purpose. (p. 7-26).

Sarbanes-Oxley Act (SOX) Law that requires publicly traded companies to maintain adequate systems of internal control. (p. 7-3).

Treasurer Employee responsible for the management of a company's cash. (p. 7-28).

Voucher An authorization form prepared for each expenditure in a voucher system. (p. 7-15).

Voucher system A network of approvals by authorized individuals, acting independently, to ensure that all disbursements by check are proper. (p. 7-15).

Practice Multiple-Choice Questions

1. **(LO 1)** Which of the following is **not** an element of the fraud triangle?
   - **a.** Rationalization.
   - **b.** Financial pressure.
   - **c.** Segregation of duties.
   - **d.** Opportunity.

2. **(LO 1)** Internal control is used in a business to:
   - **a.** safeguard its assets.
   - **b.** enhance the accuracy and reliability of its accounting records.
   - **c.** ensure compliance with laws and regulations.
   - **d.** All of the answer choices are correct.

3. **(LO 1)** The principles of internal control do **not** include:
   a. establishment of responsibility.
   b. documentation procedures.
   c. management responsibility.
   d. independent internal verification.

4. **(LO 1)** Physical controls do **not** include:
   a. safes and vaults to store cash.
   b. independent bank reconciliations.
   c. locked warehouses for inventories.
   d. bank safety deposit boxes for important papers.

5. **(LO 1)** Which of the following was **not** a result of the Sarbanes-Oxley Act?
   a. Companies must file financial statements with the Internal Revenue Service.
   b. All publicly traded companies must maintain adequate internal controls.
   c. The Public Company Accounting Oversight Board was created to establish auditing standards and regulate auditor activity.
   d. Corporate executives and boards of directors must ensure that controls are reliable and effective, and they can be fined or imprisoned for failure to do so.

6. **(LO 1)** 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.

7. **(LO 2)** Permitting only designated personnel such as cashiers 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.

8. **(LO 2)** 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.

9. **(LO 3)** 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. **(LO 3)** In a bank reconciliation, deposits in transit are:
   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. **(LO 3)** The reconciling item in a bank reconciliation that will result in an adjusting entry by the depositor is:
   a. outstanding checks. **c.** a bank error.
   b. deposit in transit. **d.** bank service charges.

12. **(LO 4)** Which of the following items in a cash drawer at November 30 is **not** cash?
   a. Money orders.
   b. Coins and currency.
   c. An NSF check.
   d. A customer check dated November 28.

13. **(LO 4)** Which statement correctly describes the reporting of cash?
   a. Cash cannot be combined with cash equivalents.
   b. Restricted cash funds may be combined with cash.
   c. Cash is listed first in the current assets section.
   d. Restricted cash funds cannot be reported as a current asset.

14. **(LO 4)** Which of the following would **not** be an example of good cash management?
   a. Provide discounts to customers to encourage early payment.
   b. Invest temporary excess cash in stock of a small company.
   c. Carefully monitor payments so that payments are not made early.
   d. Employ just-in-time inventory methods to keep inventory low.

15. **(LO 4)** Which of the following is **not** one of the sections of a cash budget?
   a. Cash receipts section.
   b. Cash disbursements section.
   c. Financing section.
   d. Cash from operations section.

*16. **(LO 5)** A check is written to replenish a $100 petty cash fund when the fund contains receipts of $94 and $4 in cash. In recording the check:
   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.

Solutions

1. **c.** Segregation of duties is not an element of the fraud triangle. The other choices are fraud triangle elements.

2. **d.** Safeguarding a company's assets, enhancing the accuracy and reliability of its accounting records, and ensuring compliance with laws and regulations are all aspects of internal control.

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. **a.** Filing financial statements with the IRS is not a result of the Sarbanes-Oxley Act (SOX); SOX focuses on the prevention or detection of fraud. The other choices are results of SOX.

6. **d.** Establishment of responsibility, segregation of duties, and independent internal verification are all relevant to a computerized system. Although choices (a), (b), and (c) are correct, choice (d) is the better answer.

7. **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.

8. **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.

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 first 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 balance sheet, (b) restricted cash is not to be combined with cash when reporting cash on the balance sheet, and (d) restricted funds can be reported as current assets if they will be used within one year.

14. **b.** Investing excess cash to purchase stock in a small company is inappropriate because the stock of small companies is often not easily converted to cash. Choices (a) providing discounts to customers to encourage early payment, (c) carefully monitoring payments so that cash is held until just before the payment date of liabilities, and (d) keeping inventory levels low are all good cash management practices.

15. **d.** Cash from operations is not a section of a cash budget. Choices (a) cash receipts section, (b) cash disbursements section, and (c) financing section are all elements of a cash budget.

*16. **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.

Practice Brief Exercises

Prepare partial bank reconciliation.

1. **(LO 3)** At August 31, Saladino Company has the following bank information: cash balance per bank $5,200, outstanding checks $1,462, deposits in transit $1,211, and a bank debit memo $110. Determine the adjusted cash balance per bank at July 31.

Solution

1.

Cash balance per bank	$5,200
Add: Deposits in transit	1,211
	6,411
Less: Outstanding checks	1,462
Adjusted cash balance per bank	$4,949

Explain the statement presentation of cash balances.

2. **(LO 4)** Zian Company has the following cash balances: Cash in Bank $18,762, Payroll Bank Account $8,000, Petty Cash $150, and Plant Expansion Fund Cash $30,000 to be used 2 years from now. Explain how each balance should be reported on the balance sheet.

Solution

2. Zian Company should report Cash in Bank, Payroll Bank Account, and Petty Cash as current assets (usually combined as one Cash amount). Plant Expansion Fund Cash should be reported as a noncurrent asset, assuming the fund is not expected to be used during the next year.

Prepare a cash budget.

3. **(LO 4)** The following information is available for Bohemia Company for the month of June: expected cash receipts $73,000, expected cash disbursements $81,000, and cash balance on June 1, $10,000. Management wishes to maintain a minimum cash balance of $11,000. Prepare a basic cash budget for the month of June.

Solution

3.

Bohemia Company
Cash Budget
For the Month of June

Beginning cash balance	$10,000
Add: Cash receipts	73,000
Total available cash	83,000
Less: Cash disbursements	81,000
Excess of available cash over cash disbursements	2,000
Add: Borrowings	9,000
Ending cash balance	$11,000

*4. **(LO 5)** On May 31, Tyler's petty cash fund of $200 is replenished when the fund contains $7 in cash and receipts for postage $105, freight-out $49, and miscellaneous expense $40. Prepare the journal entry to record the replenishment of the petty cash fund.

Prepare entry to replenish a petty cash fund.

Solution

*4. May 31	Postage Expense	105	
	Freight-Out	49	
	Miscellaneous Expense	40	
	Cash ($200 – $7)		193
	Cash Over and Short		1

Practice Exercises

1. **(LO 1, 2)** Listed below are five procedures followed by Shepherd Company.

Indicate whether procedure is good or weak internal control.

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.

2. **(LO 3)** The information below relates to the Cash account in the ledger of Ansel Company.

Balance June 1—$17,450; 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 $1,530 from customers through electronic funds transfer	$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 checking account.

Solution

2. **a.**

Ansel Company
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:	Electronic funds transfer received	$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	
	Accounts Receivable		1,530
30	Cash	35	
	Interest Revenue		35
30	Accounts Receivable (Anne Adams)	425	
	Cash		425
30	Bank Charges Expense	55	
	Cash		55

Practice Problem

Prepare bank reconciliation and journalize entries.

(LO 3) Trillo Company's bank statement for May 2025 shows these data.

Balance May 1	$12,650	Balance May 31	$14,280
Debit memorandum:		Credit memorandum:	
NSF check	175	Collection from customer of electronic funds transfer	505

The cash balance per books at May 31 is $13,319. Your review of the data reveals the following.

1. The NSF check was from Hup Co., a customer.
2. Outstanding checks at May 31 total $2,410.
3. Deposits in transit at May 31 total $1,752.
4. A Trillo Company check for $352 dated May 10 cleared the bank on May 25. This check, which was a payment on account, was journalized for $325.

Instructions

a. Prepare a bank reconciliation at May 31.
b. Journalize the entries required by the reconciliation.

Solution

a.

Cash balance per bank statement		$14,280
Add: Deposits in transit		1,752
		16,032
Less: Outstanding checks		2,410
Adjusted cash balance per bank		$13,622
Cash balance per books		$13,319
Add: Electronic funds transfer received		505
		13,824
Less: NSF check	$175	
Error in recording check ($352 − $325)	27	202
Adjusted cash balance per books		$13,622

b.

May 31	Cash	505	
	Accounts Receivable		505
	(To record receipt of electronic funds transfer)		
31	Accounts Receivable (Hup Co.)	175	
	Cash		175
	(To record NSF check from Hup Co.)		
31	Accounts Payable	27	
	Cash		27
	(To correct error in recording check)		

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Note: All asterisked Questions, Exercises, and Problems relate to material in the appendix to the chapter.

Questions

1. A local bank reported that it lost $150,000 as the result of employee fraud. Ray Fairburn is not clear on what is meant by "employee fraud." Explain the meaning of fraud to Ray and give an example of fraud 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 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. Discuss how the Sarbanes-Oxley Act has increased the importance of internal control to top managers of a company.

6. What principles of internal control apply to most businesses?

7. In the corner grocery store, all sales clerks make change out of one cash register drawer. Is this a violation of internal control? Why?

8. Branden Doyle is reviewing the principle of segregation of duties. What are the two common applications of this principle?

9. How do documentation procedures contribute to good internal control?

10. What internal control objectives are met by physical controls?

11. a. Explain the control principle of independent internal verification.

 b. What practices are important in applying this principle?

12. As the company accountant, explain the following ideas to the management of Ortiz Company.

 a. The concept of reasonable assurance in internal control.

 b. The importance of the human factor in internal control.

13. Discuss the human resources department's involvement in internal controls.

14. Robbins Inc. owns the following assets at the balance sheet date.

Cash in bank—savings account	$ 8,000
Cash on hand	1,100
Cash refund due from the IRS	1,000
Checking account balance	12,000
Postdated checks	500

What amount should be reported as Cash in the balance sheet?

15. What principle(s) of internal control is (are) involved in making daily cash counts of over-the-counter receipts?

16. Assume that **Kohl's Department Stores** installed new cash registers in its stores. How do cash registers improve internal control over cash receipts?

17. At Lazlo Wholesale Company, two mail clerks open all mail receipts. How does this strengthen internal control?

18. "To have maximum effective internal control over cash disbursements, all payments should be made by check or electronic funds transfer." Is this true? Explain.

19. Pauli Company's internal controls over cash disbursements provide for the treasurer to sign checks imprinted by a checkwriter after comparing the check with the approved invoice. Identify the internal control principles that are present in these controls.

20. How do these principles apply to cash disbursements?

 a. Physical controls.

 b. Human resource controls.

21. What is the essential feature of an electronic funds transfer (EFT) procedure?

22. "The use of a bank contributes significantly to good internal control over cash." Is this true? Why?

23. Hank Cook 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 Hank and give an example of each cause.

24. Identify the basic principles of cash management.

25. Trisha Massey asks for your help concerning an NSF check. Explain to Trisha (a) what an NSF check is, (b) how it is treated in a bank reconciliation, and (c) whether it will require an adjusting entry on the company's books.

26. a. Describe cash equivalents and explain how they are reported.

 b. How should restricted cash funds be reported on the balance sheet?

27. What was **Apple**'s balance in cash and cash equivalents at September 26, 2020? Did it report any restricted cash? How did Apple define cash equivalents?

*28. 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?

Brief Exercises

Identify fraud triangle concepts.

BE7.1 **(LO 1), K** Match each situation with the fraud triangle factor (opportunity, financial pressure, or rationalization) that best describes it.

 a. An employee's monthly credit card payments are nearly 75% of their monthly earnings.

 b. An employee earns minimum wage at a firm that has reported record earnings for each of the last five years.

 c. An employee has an expensive gambling habit.

 d. An employee has check-writing and -signing responsibilities for a small company, and is also responsible for reconciling the bank account.

Indicate internal control concepts.

BE7.2 **(LO 1), C** Shelly Eckert has prepared the following list of statements about internal control.

 a. One of the objectives of internal control is to safeguard assets from employee theft, robbery, and unauthorized use.

 b. One of the objectives of internal control is to enhance the accuracy and reliability of the accounting records.

 c. No laws require U.S. corporations to maintain an adequate system of internal control.

Identify each statement as true or false. If false, indicate how to correct the statement.

Explain the importance of internal control.

BE7.3 **(LO 1), C** Pat Buhn is the new owner of Young Co. She has heard about internal control but is not clear about its importance for her business. Explain to Pat the four purposes of internal control, and give her one application of each purpose for Young Co.

BE7.4 **(LO 1), C** The internal control procedures in Dayton Company result in the following provisions. Identify the principles of internal control that are being followed in each case.

Identify internal control principles.

a. Employees who have physical custody of assets do not have access to the accounting records.

b. Each month, the assets on hand are compared to the accounting records by an internal auditor.

c. A prenumbered shipping document is prepared for each shipment of goods to customers.

BE7.5 **(LO 2), C** Jolson Company has the following internal control procedures over cash receipts. Identify the internal control principle that is applicable to each procedure.

Identify the internal control principles applicable to cash receipts.

a. All over-the-counter receipts are entered in cash registers.

b. All cashiers are bonded.

c. Daily cash counts are made by cashier department supervisors.

d. The duties of receiving cash, recording cash, and having custody of cash are assigned to different individuals.

e. Only cashiers may operate cash registers.

BE7.6 **(LO 2), AP** The cash register tape for Bluestem Industries reported sales of $6,871.50. Record the journal entry that would be necessary for each of the following situations. (a) Sales per cash register tape exceeds cash on hand by $50.75. (b) Cash on hand exceeds cash reported by cash register tape by $28.32.

Make journal entries for cash overage and shortfall.

BE7.7 **(LO 2), AP** While examining cash receipts information, the accounting department determined the following information: opening cash balance $150, cash on hand $1,125.74, and cash sales per register tape $988.62. Prepare the required journal entry based upon the cash count sheet.

Make journal entry using cash count sheet.

BE7.8 **(LO 2), C** Tott Company has the following internal control procedures over cash disbursements. Identify the internal control principle that is applicable to each procedure.

Identify the internal control principles applicable to cash disbursements.

a. Company checks are prenumbered.

b. The bank statement is reconciled monthly by an internal auditor.

c. Blank checks are stored in a safe in the treasurer's office.

d. Only the treasurer or assistant treasurer may sign checks.

e. Check-signers are not allowed to record cash disbursement transactions.

BE7.9 **(LO 3), C** Luke Roye is uncertain about the control features of a bank account. Explain the control benefits of (a) a checking account and (b) a bank statement.

Identify the control features of a bank account.

BE7.10 **(LO 3), C** The following reconciling items are applicable to the bank reconciliation for Forde Co. Indicate how each item should be shown on a bank reconciliation.

Indicate location of reconciling items in a bank reconciliation.

a. Outstanding checks.

b. Bank debit memorandum for service charge.

c. Bank credit memorandum for collecting from customer an electronic funds transfer.

d. Deposit in transit.

BE7.11 **(LO 3), C** Using the data in BE7.10, 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.

Identify reconciling items that require adjusting entries.

BE7.12 **(LO 3), AP** At July 31, Planter Company has this bank information: cash balance per bank $7,291, outstanding checks $762, deposits in transit $1,350, and a bank service charge $40. Determine the adjusted cash balance per bank at July 31.

Prepare partial bank reconciliation.

BE7.13 **(LO 3), AP** In the month of November, Fiesta Company Inc. wrote checks in the amount of $9,750. In December, checks in the amount of $11,762 were written. In November, $8,800 of these checks were presented to the bank for payment, and $10,889 in December. There were no outstanding checks at the beginning of November. What is the amount of outstanding checks at the end of November? At the end of December?

Analyze outstanding checks.

BE7.14 **(LO 3), AP** At August 31, Pratt Company has a cash balance per books of $9,500 and the following additional data from the bank statement: charge for printing Pratt Company checks $35 and interest earned on checking account balance $40. In addition, Pratt Company has outstanding checks of $800. Determine the adjusted cash balance per books at August 31.

Prepare partial bank reconciliation.

BE7.15 **(LO 4), C** Spahn Company has these cash balances: cash in bank $12,742, payroll bank account $6,000, and plant expansion fund cash $25,000. Explain how each balance should be reported on the balance sheet.

Explain the statement presentation of cash balances.

BE7.16 **(LO 4), AP** The following information is available for Bonkers Company for the month of January: expected cash receipts $59,000, expected cash disbursements $67,000, and cash balance on January 1, $12,000. Management wishes to maintain a minimum cash balance of $9,000. Prepare a basic cash budget for the month of January.

Prepare a cash budget.

Prepare entry to replenish a petty cash fund.

*BE7.17 **(LO 5), AP** On March 20, Harbor's petty cash fund of $100 is replenished when the fund contains $19 in cash and receipts for postage $40, supplies $26, and travel expense $15. Prepare the journal entry to record the replenishment of the petty cash fund.

DO IT! Exercises

Identify violations of control activities.

DO IT! 7.1 **(LO 1), C** 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. Steve Nicoles orders merchandise for Binn Company; he also receives merchandise and authorizes payment for merchandise.
3. Several clerks at Draper's Groceries use the same cash register drawer.

Design system of internal control over cash receipts.

DO IT! 7.2 **(LO 2), C** Wes Unsel is concerned with control over mail receipts at Wooden Sporting Goods. All mail receipts are opened by Mel Blount. Mel sends the checks to the accounting department, where they are stamped "For Deposit Only." The accounting department records and deposits the mail receipts weekly. Wes asks your help in installing a good system of internal control over mail receipts.

Explain treatment of items in bank reconciliation.

DO IT! 7.3 **(LO 3), C** Ned Douglas owns Ned's Blankets. Ned 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 our account a check written by another company.
4. A debit memorandum for a bank service charge.

Analyze statements about the reporting of cash.

DO IT! 7.4a **(LO 4), AP** Indicate whether each of the following statements is true or false. If false, indicate how to correct the statement.

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 balance sheet.
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 stock investments of $100,000. Total cash and cash equivalents is therefore $50,400.

Prepare a cash budget.

DO IT! 7.4b **(LO 4), AP** Stern Corporation's management wants to maintain a minimum monthly cash balance of $8,000. At the beginning of September, the cash balance is $12,270, expected cash receipts for September are $97,200, and cash disbursements are expected to be $115,000. How much cash, if any, must Stern borrow to maintain the desired minimum monthly balance? Determine your answer by using the basic form of the cash budget.

Exercises

Identify the principles of internal control.

E7.1 **(LO 1), C** Bank employees use a system known as the "maker-checker" system. An employee will record an entry in the appropriate journal, and then a supervisor will verify and approve the entry. These days, as all of a bank's accounts are computerized, the employee first enters a batch of entries into the computer, and then the entries are posted automatically to the general ledger account after the supervisor approves them on the system.

Access to the computer system is password-protected and task-specific, which means that the computer system will not allow the employee to approve a transaction or the supervisor to record a transaction.

Instructions

Identify the principles of internal control inherent in the "maker-checker" procedure used by banks.

Identify the principles of internal control.

E7.2 **(LO 1), C** Ricci's Pizza operates 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.)

E7.3 **(LO 1, 2), C** Listed below are five procedures followed by Eikenberry Company.

Indicate whether procedure is good or weak internal control.

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. Joe Cockrell writes checks and also records cash payment 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.		

E7.4 **(LO 1, 2), C** Listed below are five procedures followed by Gilmore Company.

Indicate whether procedure is good or weak internal control.

1. Employees are required to take vacations.
2. Any member of the sales department can approve credit sales.
3. Paul Jaggard 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.		

E7.5 **(LO 2), E** The following control procedures are used in Keaton Company for over-the-counter cash receipts.

List internal control weaknesses over cash receipts and suggest improvements.

1. Each store manager is responsible for interviewing applicants for cashier jobs. They are hired if they seem honest and trustworthy.
2. All over-the-counter receipts are registered by three clerks who share a cash register with a single cash drawer.
3. To minimize the risk of robbery, cash in excess of $100 is stored in an unlocked briefcase in the stock room until it is deposited in the bank.
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. The company accountant makes the bank deposit and then records the day's receipts.

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 the procedure that will result in good internal control.

List internal control weaknesses for cash disbursements and suggest improvements.

E7.6 **(LO 2), E** The following control procedures are used in Bunny's Boutique Shoppe for cash disbursements.

1. Each week, 100 company checks are left in an unmarked envelope on a shelf behind the cash register.
2. The store manager personally approves all payments before she signs and issues checks.
3. The store purchases used goods for resale from people that bring items to the store. Since that can occur anytime that the store is open, all employees are authorized to purchase goods for resale by disbursing cash from the register. The purchase is documented by having the store employee write on a piece of paper a description of the item that was purchased and the amount that was paid. The employee then signs the paper and puts it in the register.
4. After payment, bills are "filed" in a paid invoice folder.
5. The company accountant, who records cash transactions, prepares the bank reconciliation and reports any discrepancies to the owner.

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 for cash disbursements and suggest improvements.

E7.7 **(LO 2), E** At Martinez Company, 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. Martinez Company maintains one checking account that is reconciled by the treasurer.

Instructions

a. List the weaknesses in internal control over cash disbursements.
b. Identify improvements for correcting these weaknesses.

Prepare bank reconciliation and adjusting entries.

E7.8 **(LO 3), AP** The following information pertains to Ranchero Company.

1. Cash balance per books, August 31, $7,364.
2. Cash balance per bank, August 31, $7,328.
3. Outstanding checks, August 31, $686.
4. August bank service charge not recorded by the depositor $38.
5. Deposits in transit, August 31, $2,700.

In addition, $2,016 was collected for Ranchero Company in August by the bank through electronic funds transfer. The collection has not been recorded by Ranchero Company.

Instructions

a. Prepare a bank reconciliation at August 31, 2025.
b. Journalize the adjusting entries at August 31 on the books of Ranchero Company.

Prepare bank reconciliation and adjusting entries.

E7.9 **(LO 3), AP** Rachel Sells is unable to reconcile the bank balance at January 31. Rachel's reconciliation is shown here.

Cash balance per bank	$3,677.20
Add: NSF check	450.00
Less: Bank service charge	28.00
Adjusted balance per bank	$4,099.20
Cash balance per books	$3,975.20
Less: Deposits in transit	590.00
Add: Outstanding checks	770.00
Adjusted balance per books	$4,155.20

Instructions

a. What is the proper adjusted cash balance per bank?

b. What is the proper adjusted cash balance per books?

c. Prepare the adjusting journal entries necessary to determine the adjusted cash balance per books.

E7.10 **(LO 3), AP** At April 30, the bank reconciliation of Back 40 Company shows three outstanding checks: No. 254 $650, No. 255 $700, and No. 257 $410. The May bank statement and the May cash payments journal are given here.

Determine outstanding checks.

Bank Statement
Checks Paid

Date	Check No.	Amount
5-4	254	$650
5-2	257	410
5-17	258	159
5-12	259	275
5-20	260	925
5-29	263	480
5-30	262	750

Cash Payments Journal
Checks Issued

Date	Check No.	Amount
5-2	258	$159
5-5	259	275
5-10	260	925
5-15	261	500
5-22	262	750
5-24	263	480
5-29	264	360

Instructions

Using step 2 in the reconciliation procedure, list the outstanding checks at May 31.

E7.11 **(LO 3), AP** The following information pertains to Lance Company.

Prepare bank reconciliation and adjusting entries.

Excel

1. Cash balance per bank, July 31, $8,732.
2. July bank service charge not recorded by the depositor $45.
3. Cash balance per books, July 31, $8,768.
4. Deposits in transit, July 31, $3,500.
5. $2,023 collected from a customer for Lance Company in July by the bank through electronic funds transfer. The collection has not been recorded by Lance Company.
6. Outstanding checks, July 31, $1,486.

Instructions

a. Prepare a bank reconciliation at July 31, 2025.

b. Journalize the adjusting entries at July 31 on the books of Lance Company.

E7.12 **(LO 3), AP** This information relates to the Cash account in the ledger of Howard Company.

Prepare bank reconciliation and adjusting entries.

Excel

Balance September 1—$16,400; Cash deposited—$64,000
Balance September 30—$17,600; Checks written—$62,800

The September bank statement shows a balance of $16,500 at September 30 and the following memoranda.

Credits		Debits	
Collection from customer of electronic funds transfer	$1,830	NSF check: H. Kane	$560
Interest earned on checking account	45	Safety deposit box rent	60

At September 30, deposits in transit were $4,738 and outstanding checks totaled $2,383.

Instructions

a. Prepare the bank reconciliation at September 30, 2025.

b. Prepare the adjusting entries at September 30, assuming the NSF check was from a customer on account.

E7.13 **(LO 3), AP** The cash records of Upton Company show the following.

Compute deposits in transit and outstanding checks for two bank reconciliations.

For July:

1. The June 30 bank reconciliation indicated that deposits in transit total $580. During July, the general ledger account Cash shows deposits of $16,900, 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 $940. During the month of July, Upton Company books show that $17,500 of checks were issued, yet the bank statement showed that $16,400 of checks cleared the bank in July.

For September:

3. In September, deposits per bank statement totaled $25,900, deposits per books were $26,400, and deposits in transit at September 30 were $2,200.
4. In September, cash disbursements per books were $23,500, checks clearing the bank were $24,000, and outstanding checks at September 30 were $2,100.

There were no bank debit or credit memoranda, and no errors were made by either the bank or Upton Company.

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?

Prepare bank reconciliation and adjusting entries.

E7.14 **(LO 3), AP** Perth Inc.'s bank statement from Main Street Bank at August 31, 2025, gives the following information.

Balance, August 1	$18,400	Bank debit memorandum:	
August deposits	71,000	Safety deposit box fee	$ 25
Checks cleared in August	68,678	Service charge	50
Bank credit memorandum:		Balance, August 31	20,692
Interest earned	45		

A summary of the Cash account in the ledger for August shows the following: balance, August 1, $18,700; receipts $74,000; disbursements $73,570; and balance, August 31, $19,130. Analysis reveals that the only reconciling items on the July 31 bank reconciliation were a deposit in transit for $4,800 and outstanding checks of $4,500. In addition, you determine that there was an error involving a company check drawn in August: A check for $400 to a creditor on account that cleared the bank in August was journalized and posted for $40.

Instructions

a. Determine deposits in transit.
b. Determine outstanding checks. (*Hint:* You need to correct disbursements for the check error.)
c. Prepare a bank reconciliation at August 31.
d. Journalize the adjusting entry(ies) to be made by Perth Inc. at August 31.

Identify reporting of cash.

E7.15 **(LO 4), AP** A new accountant at Wyne Inc. is trying to identify which of the amounts shown below should be reported as the current asset "Cash and cash equivalents" in the year-end balance sheet, as of April 30, 2025.

1. $60 of currency and coin in a locked box used for incidental cash transactions.
2. A $10,000 U.S. Treasury bill, due May 31, 2025.
3. $260 of April-dated checks that Wyne has received from customers but not yet deposited.
4. An $85 check received from a customer in payment of its April account, but postdated to May 1.
5. $2,500 in the company's checking account.
6. $4,800 in its savings account.
7. $75 of prepaid postage in its postage meter.
8. A $25 IOU from the company receptionist.

Instructions

a. What balance should Wyne report as its "Cash and cash equivalents" balance at April 30, 2025?
b. In what account(s) and in what financial statement(s) should the items not included in "Cash and cash equivalents" be reported?

E7.16 **(LO 4), C** Lance, Art, and Wayne have joined together to open a law practice but are struggling to manage their cash flow. They haven't yet built up sufficient clientele and revenues to support their legal practice's ongoing costs. Initial costs, such as advertising, renovations to their premises, and the like, all result in outgoing cash flow at a time when little is coming in. Lance, Art, and Wayne haven't had time to establish a billing system since most of their clients' cases haven't yet reached the courts, and the lawyers didn't think it would be right to bill them until "results were achieved."

Review cash management practices.

Unfortunately, Lance, Art, and Wayne's suppliers don't feel the same way. Their suppliers expect them to pay their accounts payable within a few days of receiving their bills. So far, there hasn't even been enough money to pay the three lawyers, and they are not sure how long they can keep practicing law without getting some money into their pockets.

Instructions

Can you provide any suggestions for Lance, Art, and Wayne to improve their cash management practices?

E7.17 **(LO 4), AP** Rigley Company expects to have a cash balance of $46,000 on January 1, 2025. These are the relevant monthly budget data for the first two months of 2025.

Prepare a cash budget for two months.

Excel

1. Collections from customers: January $71,000 and February $146,000.
2. Payments to suppliers: January $40,000 and February $75,000.
3. Wages: January $30,000 and February $40,000. Wages are paid in the month they are incurred.
4. Administrative expenses: January $21,000 and February $24,000. These costs include depreciation of $1,000 per month. All other costs are paid as incurred.
5. Selling expenses: January $15,000 and February $20,000. These costs are exclusive of depreciation. They are paid as incurred.
6. Sales of short-term investments in January are expected to realize $12,000 in cash. Rigley has a line of credit at a local bank that enables it to borrow up to $25,000. The company wants to maintain a minimum monthly cash balance of $20,000.

Instructions

Prepare a cash budget for January and February.

*E7.18 **(LO 5), AP** During October, Bismark Light Company experiences the following transactions in establishing a petty cash fund.

Prepare journal entries for a petty cash fund.

Oct. 1	A petty cash fund is established with a check for $150 issued to the petty cash custodian.		
31	A check was written to reimburse the fund and increase the fund to $200. A count of the petty cash fund disclosed the following items:		
	Currency		$59.00
	Coins		0.70
	Expenditure receipts (vouchers):		
	Supplies	$26.10	
	Telephone, Internet, and fax	16.40	
	Postage	39.70	
	Freight-out	6.80	

Instructions

Journalize the entries in October that pertain to the petty cash fund.

*E7.19 **(LO 5), AP** Kael Company maintains a petty cash fund for small expenditures. These transactions occurred during the month of August.

Journalize and post petty cash fund transactions.

Aug. 1	Established the petty cash fund by writing a check payable to the petty cash custodian for $200.
15	Replenished the petty cash fund by writing a check for $175. On this date, the fund consisted of $25 in cash and these petty cash receipts: freight-out $74.40, entertainment expense $36, postage expense $33.70, and miscellaneous expense $27.50.
16	Increased the amount of the petty cash fund to $400 by writing a check for $200.
31	Replenished the petty cash fund by writing a check for $283. On this date, the fund consisted of $117 in cash and these petty cash receipts: postage expense $145, entertainment expense $90.60, and freight-out $46.40.

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?

Problems

Identify internal control weaknesses for cash receipts.

P7.1 **(LO 2), C** Gary Theater is in the Hoosier Mall. A cashier's booth is located near the entrance to the theater. Two cashiers are employed. One works from 1:00 to 5:00 P.M., the other from 5:00 to 9:00 P.M. Each cashier is bonded. 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 a doorperson stationed at the entrance of the theater lobby some 60 feet from the cashier's booth. The doorperson 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 doorperson.

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. In addition, the manager 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 Gary Theater.
b. If the doorperson and cashier decided to collaborate to misappropriate cash, what actions might they take?

Identify internal control weaknesses in cash receipts and cash disbursements.

P7.2 **(LO 2), C** Blue Bayou 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 Kray Zee will play classic and not-so-classic dance tunes. Grant Hill, the music and theater instructor, has been given the responsibility for coordinating the fund-raising efforts. This is Grant'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.

Grant 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 Grant, 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. Grant 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 Grant asked Lynn Dandi to count the money, prepare a deposit slip, and deposit the money in a bank account that Grant had opened.

The day of the dance, Grant wrote a check from the account to pay Kray Zee. The DJ said, however, that he accepted only cash and did not give receipts. So Grant took $200 out of the cash box and gave it to Kray. At the dance, Grant had Dana Uhler working at the entrance to the gymnasium, collecting tickets from students and selling tickets to those who had not pre-purchased them. Grant estimated that 400 students attended the dance.

The following day, Grant closed out the bank account, which had $250 in it, and gave that amount plus the $180 in the cash box to Principal Sanchez. Principal Sanchez seemed surprised that, after generating roughly $2,000 in sales, the dance netted only $430 in cash. Grant 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.

P7.3 **(LO 3), AP** On July 31, 2025, Keeds Company had a cash balance per books of $6,140. The statement from Dakota State Bank on that date showed a balance of $7,690.80. A comparison of the bank statement with the Cash account revealed the following facts.

Prepare a bank reconciliation and adjusting entries.

1. The bank service charge for July was $25.
2. The bank collected $1,520 from a customer for Keeds Company through electronic funds transfer.
3. The July 31 receipts of $1,193.30 were not included in the bank deposits for July. These receipts were deposited by the company in a night deposit vault on July 31.
4. Company check No. 2480 issued to L. Taylor, a creditor, for $384 that cleared the bank in July was incorrectly entered in the cash payments journal on July 10 for $348.
5. Checks outstanding on July 31 totaled $1,860.10.
6. On July 31, the bank statement showed an NSF charge of $575 for a check received by the company from W. Krueger, a customer, on account.

Instructions

a. Prepare the bank reconciliation as of July 31.

b. Prepare the necessary adjusting entries at July 31.

a. Adjusted cash bal. $7,024.00

P7.4 **(LO 3), AP** The bank portion of the bank reconciliation for Bogalusa Company at October 31, 2025, is shown below.

Prepare a bank reconciliation and adjusting entries from detailed data.

Bogalusa Company
Bank Reconciliation
October 31, 2025

Cash balance per bank		$12,367.90
Add: Deposits in transit		1,530.20
		13,898.10
Less: Outstanding checks		
Check Number	**Check Amount**	
2451	$1,260.40	
2470	684.20	
2471	844.50	
2472	426.80	
2474	1,050.00	4,265.90
Adjusted cash balance per bank		$9,632.20

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 and Debits			Deposits and Credits	
Date	**Number**	**Amount**	**Date**	**Amount**
11-1	2470	$ 684.20	11-1	$ 1,530.20
11-2	2471	844.50	11-4	1,211.60
11-5	2474	1,050.00	11-8	990.10
11-4	2475	1,640.70	11-13	2,575.00
11-8	2476	2,830.00	11-18	1,472.70
11-10	2477	600.00	11-19 EFT	2,242.00
11-15	2479	1,750.00	11-21	2,945.00
11-18	2480	1,330.00	11-25	2,567.30
11-27	2481	695.40	11-28	1,650.00
11-28	SC	85.00	11-30	1,186.00
11-30	2483	575.50	Total	$18,369.90
11-29	2486	940.00		
	Total	$13,025.30		

The cash records per books for November showed the following.

Cash Payments Journal

Date	Number	Amount	Date	Number	Amount
11-1	2475	$1,640.70	11-20	2483	$ 575.50
11-2	2476	2,830.00	11-22	2484	829.50
11-2	2477	600.00	11-23	2485	974.80
11-4	2478	538.20	11-24	2486	940.00
11-8	2479	1,705.00	11-29	2487	398.00
11-10	2480	1,330.00	11-30	2488	800.00
11-15	2481	695.40	Total		$14,469.10
11-18	2482	612.00			

Cash Receipts Journal

Date	Amount
11-3	$ 1,211.60
11-7	990.10
11-12	2,575.00
11-17	1,472.70
11-20	2,954.00
11-24	2,567.30
11-27	1,650.00
11-29	1,186.00
11-30	1,304.00
Total	$15,910.70

The bank statement contained two bank memoranda:

1. A credit of $2,242 for the collection from a customer for Bogalusa Company of an electronic funds transfer.
2. A debit for the printing of additional company checks $85.

At November 30, the cash balance per books was $11,073.80 and the cash balance per bank statement was $17,712.50. The bank did not make any errors, but **Bogalusa Company made two errors.**

Instructions

a. Adjusted cash bal. $13,176.[illegible]

a. Using the steps in the reconciliation procedure described in the chapter, prepare a bank reconciliation at November 30, 2025.

b. Prepare the adjusting entries based on the reconciliation. (*Note:* 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.)

Prepare a bank reconciliation and adjusting entries.

P7.5 **(LO 3), AP** Timmins Company of Emporia, Kansas, spreads herbicides and applies liquid fertilizer for local farmers. On May 31, 2025, the company's Cash account per its general ledger showed a balance of $6,738.90.

The bank statement from Emporia State Bank on that date showed the following balance.

Emporia State Bank

Checks and Debits	Deposits and Credits	Daily Balance
XXX	XXX	5-31 6,968.00

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 $40 for the printing of additional company checks.
2. Cash sales of $883.15 on May 12 were deposited in the bank. The cash receipts journal entry and the deposit slip were incorrectly made for $933.15. The bank credited Timmins Company for the correct amount.
3. Outstanding checks at May 31 totaled $276.25, and deposits in transit were $1,880.15.
4. On May 18, the company issued check No. 1181 for $685 to H. Moses, on account. The check, which cleared the bank in May, was incorrectly journalized and posted by Timmins Company for $658.
5. $2,690 was collected from a customer's note receivable by the bank for Timmins Company on May 31 through electronic funds transfer.
6. Included with the canceled checks was a check issued by Tomins Company to C. Pernod for $360 that was incorrectly charged to Timmins Company by the bank.
7. On May 31, the bank statement showed an NSF charge of $380 for a check issued by Sara Ballard, a customer, to Timmins Company on account.

Instructions

a. Prepare the bank reconciliation at May 31, 2025.

b. Prepare the necessary adjusting entries for Timmins Company at May 31, 2025.

a. Adjusted cash bal. $8,931.90

P7.6 (LO 1, 2, 3), E Daisey Company 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, Bret Turrin 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.

The balance per the bank statement on October 31, 2025, was $18,380. Outstanding checks were No. 62 for $140.75, No. 183 for $180, No. 284 for $253.25, No. 862 for $190.71, No. 863 for $226.80, and No. 864 for $165.28. Included with the statement was a credit memorandum of $185 indicating the collection of a note receivable for Daisey Company by the bank on October 25. This memorandum has not been recorded by Daisey.

The company's ledger showed one Cash account with a balance of $21,877.72. The balance included undeposited cash on hand. Because of the lack of internal controls, Bret took for personal use all of the undeposited receipts in excess of $3,795.51. He then prepared the following bank reconciliation in an effort to conceal his theft of cash.

Cash balance per books, October 31		$21,877.72
Add: Outstanding checks		
No. 862	$190.71	
No. 863	226.80	
No. 864	165.28	482.79
		22,360.51
Less: Undeposited receipts		3,795.51
Unadjusted balance per bank, October 31		18,565.00
Less: Bank credit memorandum		185.00
Cash balance per bank statement, October 31		$18,380.00

Instructions

a. Prepare a correct bank reconciliation. (*Hint:* Deduct the amount of the theft from the adjusted balance per books.)

a. Adjusted cash bal. $21,018.72

b. Indicate the three ways that Bret attempted to conceal the theft and the dollar amount involved in each method.

c. What principles of internal control were violated in this case?

P7.7 (LO 4), AP You are provided with the following information taken from Moynahan Inc.'s March 31, 2025, balance sheet.

Prepare a cash budget.

Cash	$ 11,000
Accounts receivable	20,000
Inventory	36,000
Property, plant, and equipment, net of depreciation	120,000
Accounts payable	22,400
Common stock	150,000
Retained earnings	11,600

Additional information concerning Moynahan Inc. is as follows.

1. Gross profit is 25% of sales.
2. Actual and budgeted sales data:

March (actual)	$46,000
April (budgeted)	70,000

3. Sales are both cash and credit. Cash collections expected in April are:

March	$18,400	(40% of $46,000)
April	42,000	(60% of $70,000)
	$60,400	

4. Half of a month's purchases are paid for in the month of purchase and half in the following month. Cash disbursements expected in April are:

Purchases March	$22,400
Purchases April	28,100
	$50,500

5. Cash operating costs are anticipated to be $11,200 for the month of April.
6. Equipment costing $2,500 will be purchased for cash in April.
7. The company wishes to maintain a minimum cash balance of $9,000. An open line of credit is available at the bank. All borrowing is done at the beginning of the month, and all repayments are made at the end of the month. The interest rate is 12% per year, and interest expense is accrued at the end of the month and paid in the following month.

Instructions

Apr. borrowings $1,800

Prepare a cash budget for the month of April. Determine how much cash Moynahan Inc. must borrow, or can repay, in April.

Prepare a cash budget.

P7.8 **(LO 4), AP** Bastille Corporation prepares monthly cash budgets. Here are relevant data from operating budgets for 2025.

	January	February
Sales	$360,000	$400,000
Purchases	120,000	130,000
Salaries	84,000	81,000
Administrative expenses	72,000	75,000
Selling expenses	79,000	88,000

All sales and purchases are on account. Budgeted collections and disbursement data are given below. All other expenses are paid in the month incurred. Administrative expenses include $1,000 of depreciation per month.

Other data.

1. Collections from customers: January $326,000; February $378,000.
2. Payments for purchases: January $110,000; February $135,000.
3. Other receipts: January: collection of December 31, 2024, notes receivable $15,000; February: proceeds from sale of securities $4,000.
4. Other disbursements: February $10,000 cash dividend.

The company's cash balance on January 1, 2025, is expected to be $46,000. The company wants to maintain a minimum cash balance of $40,000.

Instructions

Jan. 31 cash bal. $43,000

Prepare a cash budget for January and February.

Continuing Case

leungchopan/
Shutterstock.com

Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 through 6.)

CC7 Part 1 Natalie 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 John is an accounting student who runs his own accounting service. He has asked Natalie if she would like to have him do her accounting. John and Natalie meet and discuss her business.

Part 2 Natalie decides that she cannot afford to hire John 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. Natalie would like you to help her.

Go to Wiley Course Resources for complete case details and instructions.

Comprehensive Accounting Cycle Review

ACR7 On December 1, 2025, Ravenwood Company 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	Common Stock	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 Greene 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 Greene 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.
3. Income tax expense was $425. It was unpaid at December 31.

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, Sales Discounts, Income Taxes Payable, and Income Tax Expense.

c. The statement from Lyon County 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 the $2,000 note receivable for Ravenwood Company on December 15 through electronic funds transfer.
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 a NSF charge of $680 for a check received by the company from M. Lawrence, 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 balance sheet at December 31.

f.	Totals	$89,925
g.	Net income	$ 2,455
	Total assets	$73,180

Data Analytics in Action

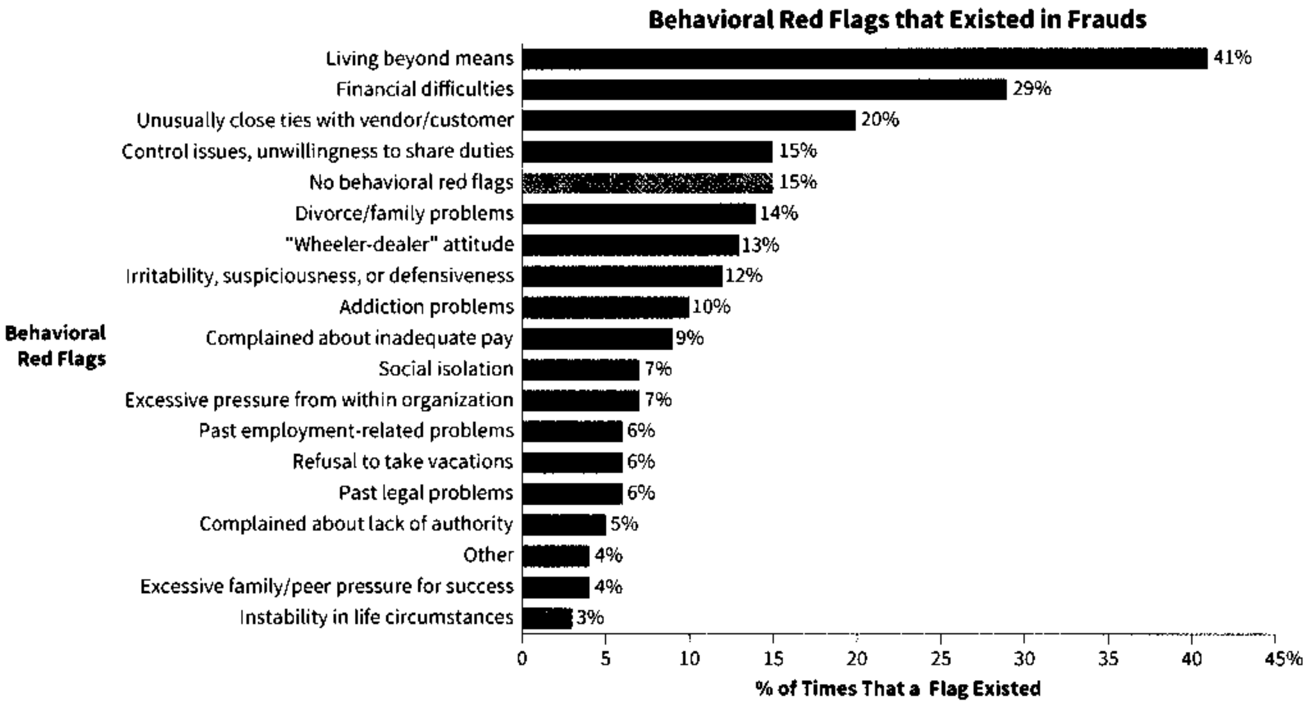
Using Data Visualization to Understand Fraud

DA7.1 Data visualization can be used to identify the occurrence of behavioral red flags.

Excel

Example: Recall the "Anatomy of a Fraud" examples presented in the chapter. Most people who commit fraud leave clues, called red flags, that call attention to their actions. Sometimes, more than one red flag exists. Rarely, there are none.

Many of the red flags have common characteristics and can be divided into groups. For example, consider the following chart. Do you notice that several red flags are related to finances, while other red flags appear to have social and emotional ties? Both groups are tied to the pressure component of the fraud triangle, which will lead people to consider committing fraud.



Source: Based on ACFE, "2018 Global Study on Occupational Fraud and Abuse," *Report to the Nations* (2018).

Unfortunately, even with 85% of incidents showing red flags (as noted in the chart, 15% of frauds indicated no red flags), much of the fraudulent activity is not identified until a loss has occurred. Nonetheless, it is important for managers to look out for red flags to help identify fraud situations as soon as possible.

For this case, you will use data that show internal controls in place and the impact on reducing the cost to the organization of the fraud. You will create a combo clustered column and line chart and then analyze it to determine which internal controls reduced the loss by the greatest percentage.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Analytics to Determine the Impact of Internal Control Activities

DA7.2 Fraud not only costs an organization money but also time. For this case, you will use data that provides the percentage reduction of time and percent reduction of loss for various internal control activities. You will create and analyze a column chart to identify the controls that are most effective in reducing time and fraud.

Excel

Go to Wiley Course Resources for complete case details and instructions.

Expand Your Critical Thinking

Financial Reporting Problem: Apple Inc.

CT7.1 The financial statements of **Apple Inc.** are presented in Appendix A. The complete annual report, including the notes to its financial statements, is available at the company's website.

Instructions

Using the financial statements and reports, 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 2020?

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.

Comparative Analysis Problem: Columbia Sportswear Company vs. Under Armour, Inc.

CT7.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements of **Under Armour, Inc.** are presented in Appendix C.

Instructions

Answer the following questions for each company.

a. What is the balance in cash and cash equivalents at December 31, 2020?

b. What percentage of total assets does cash represent for each company over the last 2 years? Has it changed significantly for either company?

c. How much cash was provided by operating activities during 2020?

d. Comment on your findings in parts (a) through (c).

Comparative Analysis Problem: Amazon.com, Inc. vs. Walmart Inc.

CT7.3 The financial statements of **Amazon.com, Inc.** are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

Answer the following questions for each company.

a. What is the balance in cash and cash equivalents at December 31, 2020, for Amazon and at January 31, 2021, for Walmart?

b. What percentage of total assets does cash represent for each company over the last two years provided? Has it changed significantly for either company?

c. How much cash was provided by operating activities during the year ended December 31, 2020, for Amazon and January 31, 2021, for Walmart?

d. Comment on your findings in parts (a) through (c).

Interpreting Financial Statements

CT7.4 The international accounting firm **Ernst & Young** performed a global survey on fraud. The results of that survey are summarized in a report titled *15th Global Fraud Survey 2018*. You can find this report by doing an Internet search on the title.

Instructions

Read the Executive Summary section and then answer the following questions.

a. What percentage of respondents said that bribery/corruption practices occur widely in business in their country? What percentage of respondents would justify cash payments to win/retain business when helping a business survive an economic downturn?

b. What were the findings regarding the relationship between a respondents age and whether they would feel justified in engaging in fraud or corruption to meet financial targets or help a business survive an economic downturn?

c. Respondents were asked who among five possibilities was responsible for ensuring that employees behave with integrity? What percentage of respondents chose each of the following: legal and compliance department, human resources department, board of directors, individual responsibility, and management. Discuss who you think is responsible.

Real-World Focus

CT7.5 While blockchain technology is currently costly and complex, it has numerous potential benefits to improve internal control. An article by Ken Tysiac in the *Journal of Accountancy* entitled "Evaluating Blockchain and Internal Control Through a COSO Lens" discusses these potential benefits.

Instructions

Search for the Internet for the article and then describe the potential benefits of blockchain for each of the five primary components of internal control: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring.

CT7.6 The **Financial Accounting Standards Board (FASB)** is a private organization established to improve accounting standards and financial reporting. The FASB conducts extensive research before issuing a "Statement of Financial Accounting Standards," which represents an authoritative expression of generally accepted accounting principles.

Instructions

Go to the FASB website to answer the following questions.

a. What are the 10 steps of the standard-setting process?

b. What are the advisory groups that provide service to the FASB?

c. What characteristics make the FASB's procedures an "open" decision-making process?

CT7.7 The **Public Company Accounting Oversight Board (PCAOB)** was created as a result of the Sarbanes-Oxley Act. It has oversight and enforcement responsibilities over accounting firms in the United States.

Instructions

Go to the PCAOB website to answer the following questions.

a. What is the mission of the PCAOB?

b. Briefly summarize its responsibilities related to inspections.

c. Briefly summarize its responsibilities related to enforcement.

Decision-Making Across the Organization

CT7.8 **Alternative Distributor Corp.**, a distributor of groceries and related products, is headquartered in Medford, Massachusetts.

During a recent audit, Alternative Distributor Corp. was advised that existing internal controls necessary for the company to develop reliable financial statements were inadequate. The audit report stated that the current system of accounting for sales, receivables, and cash receipts constituted a material weakness. Among other items, the report focused on nontimely deposit of cash receipts, exposing Alternative Distributor to potential loss or misappropriation, excessive past due accounts receivable due to lack of collection efforts, disregard of advantages offered by vendors for prompt payment of invoices, absence of appropriate segregation of duties by personnel consistent with appropriate control objectives, inadequate procedures for applying accounting principles, lack of qualified management personnel, lack of supervision by an outside board of directors, and overall poor recordkeeping.

Instructions

a. Identify the principles of internal control violated by Alternative Distributor Corp.

b. Explain why managers of various functional areas in the company should be concerned about internal controls.

Communication Activity

CT7.9 As a new auditor for the CPA firm of Blacke and Whyte, you have been assigned to review the internal controls over mail cash receipts of Simon Company. Your review reveals that 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 Frank Simon, owner of Simon Company, explaining the weaknesses in internal control and your recommendations for improving the system.

Ethics Cases

CT7.10 Banks charge fees for "bounced" checks—that is, checks that exceed the balance in the account. It has been estimated that processing bounced checks costs a bank roughly $1.50 per check. Thus, the profit margin on bounced checks is very high. Recognizing this, some banks have started to process checks from largest to smallest. By doing this, they maximize the number of checks that bounce if a customer overdraws an account. For example, **NationsBank** (now **Bank of America**) projected a $14 million increase in fee revenue as a result of processing largest checks first. In response to criticism, banks have responded that their customers prefer to have large checks processed first, because those tend to be the most important. At the other extreme, some banks will cover their customers' bounced checks, effectively extending them an interest-free loan while their account is overdrawn.

Instructions

Answer each of the following questions.

a. Carl Roen had a balance of $1,500 in his checking account at First National Bank on a day when the bank received the following five checks for processing against his account.

Check Number	Amount	Check Number	Amount
3150	$ 35	3165	$ 550
3162	400	3166	1,510
		3169	180

Assuming a $30 fee assessed by the bank for each bounced check, how much fee revenue would the bank generate if it processed checks (1) from largest to smallest, (2) from smallest to largest, and (3) in order of check number?

b. Do you think that processing checks from largest to smallest is an ethical business practice?

c. In addition to ethical issues, what other issues must a bank consider in deciding whether to process checks from largest to smallest?

d. If you were managing a bank, what policy would you adopt on bounced checks?

CT7.11 The **National Fraud Information Center (NFIC)** was originally established in 1992 by the National Consumers League, the oldest nonprofit consumer organization in the United States, to fight the growing menace of telemarketing fraud by improving prevention and enforcement. It maintains a website that provides many useful fraud-related resources.

Instructions

Go to the NFIC website and find an item of interest to you. Write a short summary of your findings.

All About You

CT7.12 The print and electronic media are full of stories about potential security risks that can arise from your personal computer. It is important to keep in mind, however, that there are also many ways that your identity can be stolen other than from your computer. The federal government provides many resources to help protect you from identity thieves.

Instructions

Search the Internet for "ID Theft Faceoff Game" and then complete the quiz provided.

FASB Codification Activity

CT7.13 If your school has a subscription to the FASB Codification, log in and prepare responses to the following.

a. How is cash defined in the Codification?

b. How are cash equivalents defined in the Codification?

c. What are the disclosure requirements related to cash and cash equivalents?

Answers to Insight and Accounting Across the Organization Questions

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.

SOX Boosts 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), for example, 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.

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. For example, to reduce fraudulent disbursements, companies should require that only designated personnel sign checks, have different personnel approve payments and make payments, ensure that check-signers do not record disbursements, use prenumbered checks and match each check to an approved invoice, store blank checks securely, reconcile the bank statement, and stamp invoices PAID.

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 issued an unqualified opinion each year.

CHAPTER 8

Reporting and Analyzing Receivables

Chapter Preview

As indicated in the following Feature Story, receivables are a significant asset for Nike as well as many other retail companies. Because a large portion of sales in the United States 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.

Feature Story

What's Cooking?

What major U.S corporation got its start 40 years ago with a waffle iron? *Hint:* It doesn't sell food. That's right, it's Nike. In 1971, Nike co-founder Bill Bowerman put a piece of rubber into a kitchen waffle iron, and the trademark waffle sole was born.

Nike was co-founded by Bowerman and Phil Knight, a member of Bowerman's University of Oregon track team. Bowerman got his start by making hand-crafted running shoes for his University of Oregon track team. Knight, after completing graduate school, started a small business importing low-cost, high-quality shoes from Japan. In 1964, the two joined forces, each contributing $500, and formed Blue Ribbon Sports, a partnership that marketed Japanese shoes.

It wasn't until 1971 that the company began manufacturing its own line of shoes. With the new shoes came a new corporate name—Nike—the Greek goddess of victory. It is hard to imagine that the company one time had part-time employees selling shoes out of car trunks at track meets on a cash-and-carry basis.

As the business grew, Nike sold its shoes to sporting good shops and department stores on a credit basis. This necessitated receivables management. Today, with sales of $20.8 billion and accounts receivable of $3.1 billion, managing accounts receivable is vitally important to Nike's success. A major mistake with its receivables will definitely affect its bottom line.

Nike has expanded its product line to a diverse range of products. This has increased sales revenue, but it has also complicated Nike's receivables management efforts. Now, instead of selling shoes at a limited number of retail outlets, it sells its vast number of products to a diverse array of stores, large and small. For example, Nike golf clubs are sold at local country clubs and golf shops across the country, while soccer equipment can be sold directly to customers through Internet sales.

This diversification of its customer list complicates matters because Nike has to approve each new store or customer for credit sales, monitor cash collections, and pursue slow-paying accounts. That's a lot of work. Maybe cash-and-carry wasn't so bad after all.

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Explain how companies recognize accounts receivable.	• Types of receivables • Recognizing accounts receivable	**DO IT! 1** Recognizing Accounts Receivable
LO 2 Describe how companies value accounts receivable and record their disposition.	• Valuing accounts receivable • Disposing of accounts receivable	**DO IT! 2a** Bad Debt Expense **2b** Factoring
LO 3 Explain how companies recognize, value, and dispose of notes receivable.	• Determining the maturity date • Computing interest • Recognizing notes receivable • Valuing notes receivable • Disposing of notes receivable	**DO IT! 3** Recognizing Notes Receivable
LO 4 Describe the statement presentation of receivables and the principles of receivables management.	• Financial statement presentation of receivables • Managing receivables • Evaluating liquidity • Accelerating cash receipts • Data analytics and receivables management	**DO IT! 4** Analysis of Receivables

Go to the Review and Practice section at the end of the chapter for a review of key concepts and practice applications with solutions.

Visit Wiley Course Resources for additional tutorials and practice opportunities.

8.1 Recognition of Accounts Receivable

LEARNING OBJECTIVE 1

Explain how companies recognize accounts receivable.

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
Ford	25.6%
Tesla	3.9
Amazon	10.3
Caterpillar	22.8
Boeing	12.2

Types of Receivables

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 nontrade 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 balance sheet (see Ethics Note).

ETHICS NOTE

Companies report receivables from employees separately in the financial statements. The reason: Sometimes these receivables are not the result of an "arm's-length" transaction.

Recognizing 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.

Recall that sellers sometimes offer sales discounts to encourage early payment by the buyer. If the buyer pays during the discount period, the receivable balance will be satisfied with a smaller cash payment. Also, the buyer might find some of the goods unacceptable and choose to return the unwanted goods. When a buyer returns goods that it previously purchased on credit, the receivable balance is reduced.

To review, assume that **Patagonia** on July 1, 2025, sells merchandise on account to **Urban Outfitters** for $1,000, terms 2/10, n/30. On July 5, Urban Outfitters returns merchandise with a sales price of $100 to Patagonia. On July 11, Patagonia receives payment from Urban Outfitters for the balance due. The journal entries to record these transactions on the books of Patagonia are as follows (see **Helpful Hint**). *To simplify presentation, cost of goods sold entries are omitted here and in the end-of-chapter assignment requirements.*

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.

July 1	Accounts Receivable	1,000	
	Sales Revenue		1,000
	(To record sales on account)		
July 5	Sales Returns and Allowances	100	
	Accounts Receivable		100
	(To record merchandise returned)		
July 11	Cash ($900 – $18)	882	
	Sales Discounts ($900 × .02)	18	
	Accounts Receivable		900
	(To record collection of accounts receivable)		

Some retailers issue their own credit cards, such as the **Amazon** Store Card™ or the **Target** RedCard™, which can only be used for purchases at their stores. When you use a retailer's credit card, 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 Target RedCard to purchase clothing with a sales price of $300 on June 1, 2025. Target will increase (debit) Accounts Receivable for $300 and increase (credit) Sales Revenue for $300 (cost of goods sold entry omitted) as follows.

= L +

+300

+300 Rev

Cash Flows

no effect

June 1	Accounts Receivable	300	
	Sales Revenue		300
	(To record sale of merchandise)		

Assuming that you owe $300 at the end of the month and Target charges 1% per month on the balance due, the adjusting entry that Target makes to record interest revenue of $3 ($300 × 1%) on June 30 is as follows.

A = L +

+3

+3 Rev

Cash Flows

no effect

June 30	Accounts Receivable	3	
	Interest Revenue		3
	(To record interest on amount due)		

Interest revenue is often substantial for many retailers.

Anatomy of a Fraud

Tasanee was the accounts receivable clerk for a large nonprofit 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 (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! 1 Recognizing Accounts Receivable

On May 1, Wilton sold merchandise on account to Bates for $50,000 terms 3/15, n/45. On May 4, Bates returns merchandise with a sales price of $2,000. On May 14, Wilton receives payment from Bates for the balance due. Prepare journal entries to record the May transactions on Wilton's books. **(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	50,000	
	Sales Revenue		50,000
4	Sales Returns and Allowances	2,000	
	Accounts Receivable		2,000
14	Cash ($48,000 – $1,440)	46,560	
	Sales Discounts ($48,000 × .03)	1,440	
	Accounts Receivable		48,000

Related exercise material: BE8.1, BE8.2, DO IT! 8.1, E8.1, and E8.2.

8.2 Valuation and Disposition of Accounts Receivable

LEARNING OBJECTIVE 2

Describe how companies value accounts receivable and record their disposition.

Valuing 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 balance sheet 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 **Bad Debt Expense** (or Uncollectible Accounts Expense).
- Such losses are a normal and necessary risk of doing business on a credit basis.

For example, when the economy in general slows, lenders can experience huge increases in their bad debt expense. During one quarter **Wachovia** (a large U.S. bank now owned by **Wells Fargo**) increased bad debt expense from $108 million to $408 million. Similarly, **American Express** increased its bad debt expense by 70%.

Two methods are used in accounting for uncollectible accounts: (1) the direct write-off method (not GAAP) and (2) the allowance method (GAAP). 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 Co. writes off as uncollectible M. E. Doran's $200 balance on December 12. Warden's entry is as follows.

A	=	L	+	SE
				−200 Exp
−200				

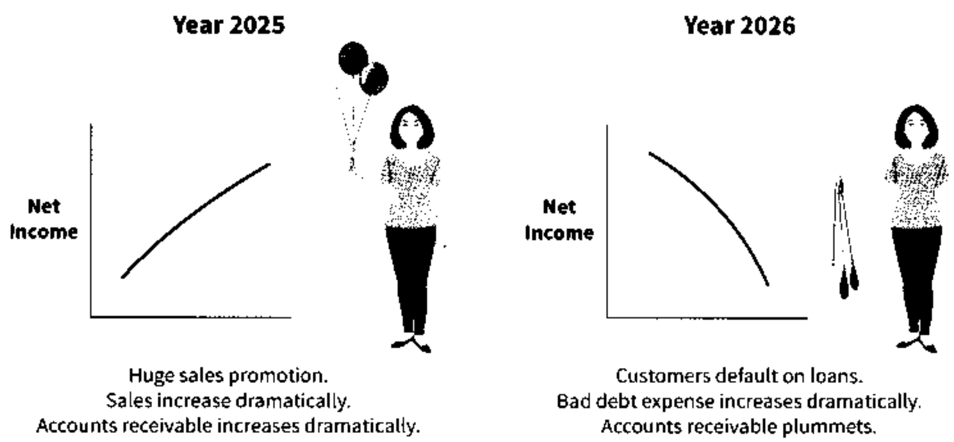
Cash Flows
no effect

Dec. 12	Bad Debt Expense	200	
	Accounts Receivable		200
	(To record write-off of M. E. Doran account)		

Under this method, Bad Debt Expense will show only **actual losses** from specific customer uncollectibles. The company will report accounts receivable at its gross amount, shown in the Accounts Receivable account.

Use of the direct write-off method can reduce the relevance of both the income statement and the balance sheet. Consider the following example. In 2025, Quick Buck Computer Company decided it could increase its revenues by offering computers to college students without requiring any money down and with a no credit-approval process. On campuses across the country, it sold one million computers with a selling price of $800 each. This increased Quick Buck's revenues and receivables by $800 million. The promotion was a huge success! The 2025 balance sheet and income statement looked great. Unfortunately, during 2026, nearly 40% of the customers defaulted on their loans. This made the 2026 income statement and balance sheet look terrible. **Illustration 8.2** shows the effect 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 related revenue. This is problematic for two reasons:

1. The method does not attempt to match bad debt expense to sales revenue in the income statement.
2. The direct write-off method does not show accounts receivable in the balance sheet at the amount the company actually expects to receive in cash.

Consequently, unless uncollectibles 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 uncollectibles involves estimating uncollectible accounts at the end of each period. This provides better matching of expenses with revenues on the income statement. It also ensures that companies state receivables on the balance sheet at their cash (net) realizable value.

- **Cash (net) realizable value** is the net amount the company expects to receive in cash.
- It excludes amounts that the company estimates it will not collect.

Thus, this method reduces receivables in the balance sheet by the amount of estimated uncollectible receivables.

Companies must use the allowance method for financial reporting purposes when uncollectibles are material in amount (see Helpful Hint). This method has three essential features:

> HELPFUL HINT
> **In this context, *material* means significant or important to financial statement users.**

1. Companies **estimate** uncollectible accounts receivable. They match estimated expense **against revenues** in the same accounting period in which they record the revenues.
2. Companies debit Bad Debt Expense and credit 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 customer account, they debit uncollectible amounts to Allowance for Doubtful Accounts and credit Accounts Receivable.

Recording Estimated Uncollectibles

To illustrate the allowance method, assume that Hampson Furniture has credit sales of $1,200,000 in 2025, its first year of operations. Of this amount, $200,000 of receivables remains uncollected at December 31. The credit manager estimates that $12,000 of these receivables 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.

Dec. 31	Bad Debt Expense	12,000	
	Allowance for Doubtful Accounts		12,000
	(To record estimate of uncollectible accounts)		

A	=	L	+	E
				−12,000 Exp
−12,000				

Cash Flows
no effect

Hampson reports Bad Debt Expense in the income statement as an operating expense. Thus, the estimated uncollectibles are matched with the sales revenue in 2025. 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 specific 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 balance sheet.

ILLUSTRATION 8.3
Presentation of allowance for doubtful accounts

Hampson Furniture Balance Sheet (partial)		
Current assets		
Cash		$ 14,800
Accounts receivable	$200,000	
Less: Allowance for doubtful accounts	12,000	188,000
Inventory		310,000
Supplies		25,000
Total current assets		$537,800

HELPFUL HINT
Cash realizable value is sometimes referred to as *accounts receivable (net).*

The amount of $188,000 in Illustration 8.3 represents the expected **cash realizable value** of the accounts receivable at the statement date (see **Helpful Hint**). **Companies do not close Allowance for Doubtful Accounts at the end of the fiscal year as it is a permanent account.**

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 writes 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, 2026. The entry to record the write-off is as follows.

A	=	L	+	
+500				
−500				

Cash Flows
no effect

Mar. 1	Allowance for Doubtful Accounts	500	
	Accounts Receivable		500
	(Write-off of R. A. Ware account)		

The company does not increase Bad Debt Expense when the write-off occurs.

- **Under the allowance method, companies debit every specific customer write-off to Allowance for Doubtful Accounts 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 uncollectibles.
- 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 for 2026 appear as shown in Illustration 8.4.

ILLUSTRATION 8.4
General ledger balances after write-off

Accounts Receivable			
Jan. 1 Bal.	200,000	Mar. 1	500
Mar. 1 Bal.	199,500		

Allowance for Doubtful Accounts			
Mar. 1	500	Jan. 1 Bal.	12,000
		Mar. 1 Bal.	11,500

A write-off affects **only balance sheet 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 balance sheet, 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
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 previously written off customer account.

1. It reverses the entry made in writing off the account. This reinstates the customer's account.
2. It journalizes the cash collection in the usual manner.

To illustrate, assume that on July 1, 2026, R. A. Ware pays the $500 amount that Hampson had written off on March 1. Hampson makes the following entries.

(1)

July 1	Accounts Receivable	500	
	Allowance for Doubtful Accounts		500
	(To reverse write-off of R. A. Ware account)		

A = L + SE
+500
−500
Cash Flows
no effect

(2)

July 1	Cash	500	
	Accounts Receivable		500
	(To record collection from R. A. Ware)		

A = L + SE
+500
−500
Cash Flows
+500

Note that the recovery of a customer account, like the write-off of a customer account, affects **only balance sheet accounts**. The net effect of the two entries above is a debit to Cash and a credit to Allowance for Doubtful Accounts for $500.

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 the amount of expected uncollectible accounts if they use the allowance method. **Illustration 8.6** shows an excerpt from the notes to Nike's financial statements discussing its use of the allowance method.

ILLUSTRATION 8.6
Nike's allowance method disclosure

Real World

Nike, Inc.
Notes to the Financial Statements

Allowance for Uncollectible Accounts Receivable

We make ongoing estimates relating to the ability to collect our accounts receivable and maintain an allowance for estimated losses resulting from the inability of our customers to make required payments. In determining the amount of the allowance, we consider our historical level of credit losses and make judgments about the creditworthiness of significant customers based on ongoing credit evaluations. Since we cannot predict future changes in the financial stability of our customers, actual future losses from uncollectible accounts may differ from our estimates.

- Frequently, companies estimate the allowance as a percentage of the outstanding receivables.
- Under the **percentage-of-receivables basis**, management establishes a percentage relationship between the amount of receivables and expected losses from uncollectible accounts (see **Helpful Hint**).

HELPFUL HINT
Where appropriate, the percentage-of-receivables basis may use only a single percentage rate.

Allowance for Doubtful Accounts

	Dec. 31 Unadj. Bal. 1,500
	Dec. 31 Adj. 8,500
	Dec. 31 Bal. 10,000

For example, suppose Steffen Company has an ending balance in Accounts Receivable of $200,000 and an unadjusted credit balance in Allowance for Doubtful Accounts of $1,500. It estimates that 5% of its accounts receivable will eventually be uncollectible. It should report a **balance** in Allowance for Doubtful Accounts of $10,000 (5% × $200,000). To increase the balance in Allowance for Doubtful Accounts from its unadjusted amount of $1,500 to $10,000, the company debits (increases) Bad Debt Expense and credits (increases) Allowance for Doubtful Accounts by $8,500 ($10,000 − $1,500).

To more accurately estimate the ending balance in the allowance account, a company often prepares a schedule called **aging the accounts receivable**.

- This schedule classifies customer balances by the length of time they have been unpaid.
- After the company arranges the accounts by age, it determines the expected uncollectible accounts by applying percentages, based on past experience, to the totals of each category.
- The longer a receivable is past due, the less likely it is to be collected. As a result, the estimated percentage of uncollectible accounts increases as the number of days past due increases (see **Helpful Hint**).

HELPFUL HINT

The older categories have higher percentages because the longer an account is past due, the less likely it is to be collected.

Decision Tools

An aging schedule helps users determine if the amount of past due accounts is increasing and which accounts require management's attention.

Illustration 8.7 shows an aging schedule for Dart Company at December 31, 2025 (see **Decision Tools**). Note the increasing uncollectible percentages from 2% to 40%.

ILLUSTRATION 8.7

Aging schedule

	A	B	C	D	E	F	G
1				**Dart Company** **Aging Schedule** **December 31, 2025**			
2				**Number of Days Past Due**			
3	**Customer**	**Not Yet Due**	**1–30**	**31–60**	**61–90**	**Over 90**	**Total**
4	T. E. Adert		$ 300		$ 200	$ 100	$ 600
5	R. C. Bortz	$ 300					300
6	B. A. Carl		200	$ 250			450
7	O. L. Diker	500			200		700
8	T. O. Ebbet			300		300	600
9	Others	26,200	5,200	2,450	1,600	1,500	36,950
10		$27,000	$5,700	$3,000	$2,000	$1,900	$39,600
11	Estimated percentage uncollectible	2%	4%	10%	20%	40%	
12	Total estimated uncollectible accounts	$ 540	$ 228	$ 300	$ 400	$ 760	$ 2,228

Required balance in the allowance

Total estimated uncollectible accounts for Dart Company ($2,228) represent the existing customer claims expected to become uncollectible in the future.

- The amount of total estimated uncollectible accounts represents the **required balance** in Allowance for Doubtful Accounts at the balance sheet date.
- Accordingly, **the amount of bad debt expense that should be recorded in the adjusting entry is the difference between the required balance and the existing balance in the allowance account**.
- The existing, unadjusted balance in Allowance for Doubtful Accounts is the net result of the beginning balance (a normal credit balance) less the write-offs of specific accounts during the year (debits to the allowance account).

For example, if the unadjusted trial balance shows Allowance for Doubtful Accounts with a credit balance of $528, then an adjusting entry for $1,700 ($2,228 − $528) is necessary:

Dec. 31	Bad Debt Expense	1,700	
	Allowance for Doubtful Accounts		1,700
	(To adjust allowance account to total estimated uncollectibles)		

A = L +
−1,700 Exp
−1,700

Cash Flows
no effect

After Dart posts the adjusting entry, its accounts appear as shown in **Illustration 8.8**.

ILLUSTRATION 8.8
Bad debt expense and allowance accounts after posting

Bad Debt Expense

Debit	Credit
Dec. 31 Adj. 1,700	

Allowance for Doubtful Accounts

Debit	Credit
	Dec. 31 Unadj. Bal. 528
	Dec. 31 Adj. 1,700
	Dec. 31 Bal. 2,228

Required balance in the allowance

An important aspect of accounts receivable management is simply maintaining a close watch on the accounts. Studies have shown that customer accounts more than 60 days past due lose approximately 50% of their value if no payment activity occurs within the next 30 days. For each additional 30 days that pass, the collectible value halves once again.

Occasionally, the allowance account will have a **debit balance** prior to adjustment.

- This occurs because the debits to the allowance account from write-offs during the year **exceeded** the beginning balance in the account, which was based on previous estimates for uncollectibles.
- In such a case, the company **adds the debit balance to the required balance** when it makes the adjusting entry.

Thus, if there was a $500 **debit** balance in the allowance account before adjustment, the adjusting entry would be for $2,728 ($2,228 + $500) to arrive at an adjusted credit balance of $2,228 as shown below.

Dec. 31	Bad Debt Expense	2,728	
	Allowance for Doubtful Accounts		2,728
	(To adjust allowance account to total estimated uncollectibles)		

A = L +
−2,728 Exp
−2,728

Cash Flows
no effect

After Dart posts the adjusting entry, its accounts appear as shown in **Illustration 8.9**.

ILLUSTRATION 8.9
Bad debt expense and allowance accounts after posting

Bad Debt Expense

Debit	Credit
Dec. 31 Adj. 2,728	

Allowance for Doubtful Accounts

Debit	Credit
Dec. 31 Unadj. Bal. 500	Dec. 31 Adj. 2,728
	Dec. 31 Bal. 2,228

The percentage-of-receivables basis provides an estimate of the cash realizable value of the receivables. The FASB now employs an expected credit loss model which requires that companies must measure expected uncollectible accounts and record bad debt expense on all receivables, even those with a low risk of loss. Companies use sophisticated models employing data analytics to arrive at accurate estimates on a timely basis.

The note in **Illustration 8.10** regarding accounts receivable comes from the annual report of the storage and organization products company The Container Store.

ILLUSTRATION 8.10

The Container Store's note disclosure of accounts receivable

Real World

The Container Store Group, Inc.

Notes to the Financial Statements

Accounts receivable

Accounts receivable consist primarily of trade receivables, receivables from The Container Store, Inc.'s credit card processors for sales transactions, and tenant improvement allowances from The Container Store, Inc.'s landlords in connection with new leases. An allowance for doubtful accounts is established on trade receivables, if necessary, for estimated losses resulting from the inability of customers to make required payments. Factors such as payment terms, historical loss experience, and economic conditions are generally considered in determining the allowance for doubtful accounts. Accounts receivable are presented net of allowances for doubtful accounts of $326 and $57 at March 28, 2020 and March 30, 2019, respectively.

Ethics Insight

Cookie Jar Allowances

Christy Thompson/ Shutterstock.com

There are many pressures on companies to achieve earnings targets. For managers, poor earnings can lead to dismissal or lack of promotion. It is thus not surprising that management may be tempted to look for ways to boost their earnings number.

One way a company can achieve greater earnings is to lower its estimate of what is needed in its Allowance for Doubtful Accounts (sometimes referred to as "tapping the cookie jar"). For example, suppose a company has an Allowance for Doubtful Accounts of $10 million and decides to reduce this balance to $9 million. As a result of this change, Bad Debt Expense decreases by $1 million and earnings increase by $1 million.

Large banks such as JPMorgan Chase, Wells Fargo, and Bank of America recently decreased their Allowance for Doubtful Accounts by over $4 billion. These reductions came at a time when these big banks were still suffering from lower mortgage lending and trading activity, both of which led to lower earnings. They justified these reductions in the allowance balances by noting that credit quality and economic conditions had improved. This may be so, but it sure is great to have a cookie jar that might be tapped when a boost in earnings is needed.

How might investors determine that a company is managing its earnings? (Answer is available at the end of the chapter.)

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—that is, the amount the company expects to collect in cash.**

DO IT! 2a Bad Debt Expense

Brule Corporation has been in business for 5 years. The unadjusted trial balance at the end of the current year shows Accounts Receivable $30,000, Sales Revenue $180,000, and Allowance for Doubtful Accounts with a debit balance of $2,000. Brule estimates uncollectibles to be 10% of accounts receivable. Prepare the entry necessary to adjust Allowance for Doubtful Accounts.

Solution

Brule should make the following entry to bring the debit 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 adjust allowance account to total estimated uncollectibles)		

Related exercise material: BE8.3, BE8.6, DO IT! 8.2a, E8.3, E8.4, E8.5, E8.6, E8.7, E8.8, E8.9, and E8.10.

Disposing 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:

1. Receivables **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.
2. **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**, **Visa**, and **Discover** specialize in billing and collecting accounts receivable.

Sale of Receivables to a Factor

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 fee to the company that is selling the receivables. This fee often ranges from 1–3% of the amount of receivables purchased.

To illustrate, assume that Hendredon Furniture factors $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 Hendredon Furniture on April 2, 2025, is as follows (see **Helpful Hint**).

HELPFUL HINT

When multiplying by percentages such as 2%, you can also use the value .02.

Apr. 2	Cash	588,000	
	Service Charge Expense (2% × $600,000)	12,000	
	Accounts Receivable		600,000
	(To record the sale of accounts receivable)		

[illegible]	=	L	+	[illegible]
+588,000				
				−12,000 Exp
−600,000				

Cash Flows
+588,000

If Hendredon often sells its receivables, it reports the service charge expense as an operating expense. If the company infrequently sells receivables, it may report this amount in the "Other expenses and losses" section of the income statement.

National Credit Card Sales

Over one billion credit cards are in use in the United States—more than three credit cards for every man, woman, and child in this country. **Visa**, **MasterCard**, and **American Express** are the national credit cards that most individuals use. Three parties are involved when national credit cards are used in retail sales:

1. The credit card issuer, who is independent of the retailer.
2. The retailer.
3. The customer.

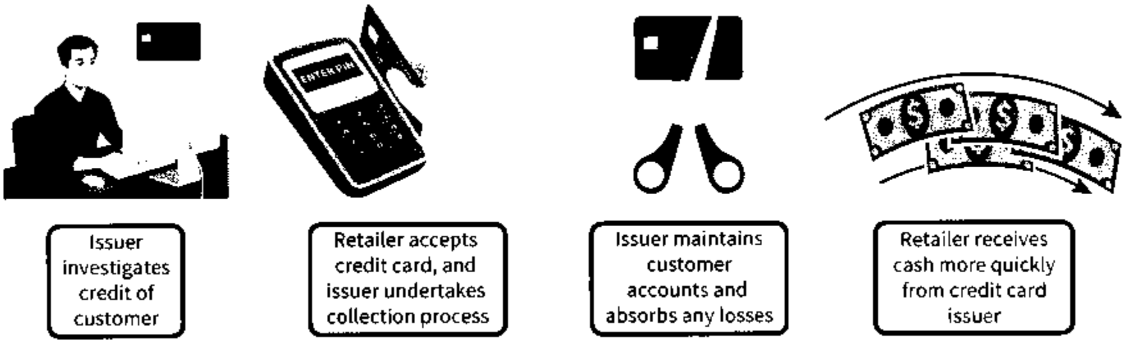
A retailer's acceptance of a national credit card is another form of selling (factoring) the receivable.

Illustration 8.11 shows the major advantages of national credit cards to the retailer. In exchange for these advantages, the retailer pays the credit card issuer a fee of 2–4% of the invoice price for its services (see **Ethics Note**).

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.

ILLUSTRATION 8.11 **Advantages of credit cards to the retailer**



Accounting for Credit Card Sales The retailer generally considers sales from the use of national credit cards 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.

To illustrate, Anita Ferreri purchases $1,000 of sound equipment for her restaurant from Karen Kerr Music Co., using her Visa First Bank Card. First Bank charges a service fee of 3%. The entry to record this transaction by Karen Kerr Music on March 22, 2025, is as follows.

A	=	L	+	SE
+970				
				−30 Exp
				+1,000 Rev

Cash Flows
+970

Mar. 22	Cash	970	
	Service Charge Expense	30	
	Sales Revenue		1,000
	(To record Visa credit card sales)		

Accounting Across the Organization Foot Locker


Massimo Todaro/
Shutterstock.com

How Does a Credit Card Work?

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 Nike shoes at **Foot Locker.** Here's how the transaction is processed.

You swipe or tap your credit card (or insert it if it is a chip card), which allows the information to be read. The salesperson 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, you sign to authorize the transaction.

Visa acts as the clearing agent for the transaction. It transfers funds from the issuing bank to Foot Locker'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 shoe purchase; that amount counts immediately against your available credit limit (if you view your credit card's app on your mobile device, you may see this pending charge on your account right away). Then, 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 new shoes.

Assume that Foot Locker prepares a bank reconciliation at the end of each month. If some credit card sales have not been processed by the bank, how should Foot Locker treat these transactions on its bank reconciliation? (Answer is available at the end of the chapter.)

ACTION PLAN
- **Consider sale of receivables to a factor.**
- **Weigh cost of factoring against benefit of having cash in hand.**

DO IT! 2b Factoring

Kell Wholesalers Co. needs to raise $120,000 in cash to safely cover next Friday's employee payroll. Kell has reached its debt ceiling with its lenders. Kell's present balance of outstanding receivables totals $750,000. Kell decides to factor $125,000 of its receivables on September 7, 2025, to alleviate this cash crunch. Record the entry that Kell would make when it raises the needed cash. (Assume a 1% service charge.)

Solution

Assuming that Kell factors $125,000 of its accounts receivable at a 1% service charge, it would make this 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: BE8.7, DO IT! 8.2b and E8.10.

8.3 Notes Receivable

LEARNING OBJECTIVE 3

Explain how companies recognize, value, and dispose of 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 in the following cases:

1. When individuals and companies lend or borrow money.
2. When the amount of the transaction and the credit period exceed normal limits.
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.

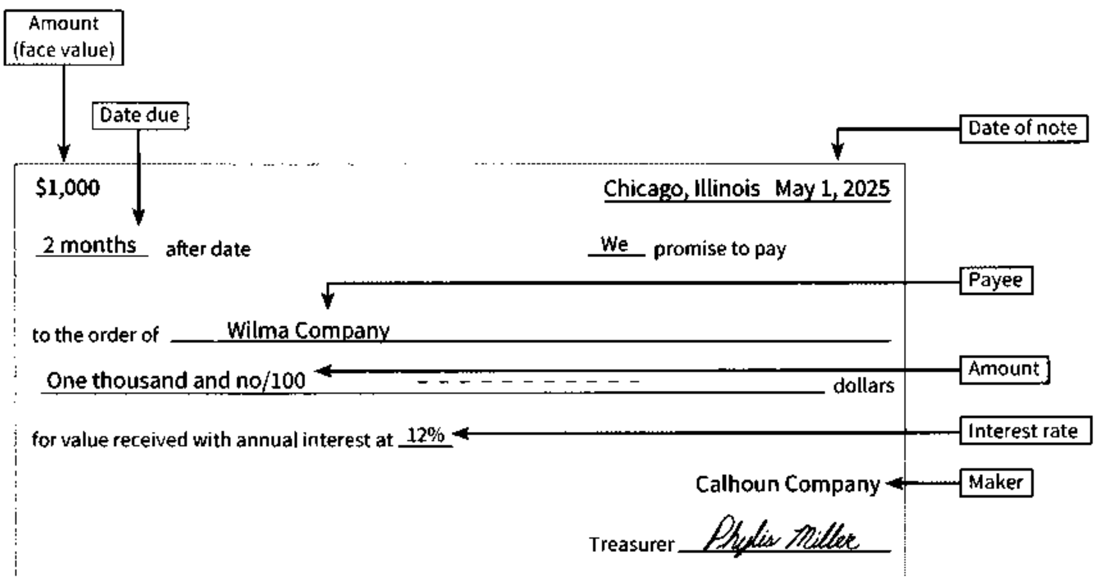
In the note shown in **Illustration 8.12**, Calhoun Company is the maker and Wilma Company is the payee. To Wilma Company, the promissory note is a note receivable. To Calhoun Company, it is a note payable (see **Helpful Hint**).

HELPFUL HINT

For this note, the maker, Calhoun Company, debits Cash and credits Notes Payable. The payee, Wilma Company, 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.

ILLUSTRATION 8.12
Promissory note



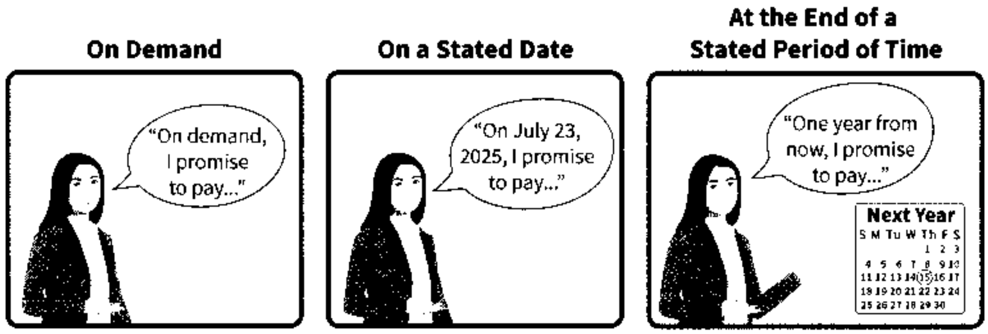
Companies frequently accept notes receivable from customers who need to extend the payment of an outstanding account receivable. They often require such notes from high-risk customers. In some industries (such as the pleasure and sport boat industry), all credit sales are supported by notes. The majority of notes, however, originate from lending transactions.

The basic issues in accounting for notes receivable are the same as those for accounts 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

Illustration 8.13 shows three ways of stating the maturity date of a promissory note.

ILLUSTRATION 8.13
Maturity date of different notes



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 its repayment 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 shown in **Illustration** 8.14.

ILLUSTRATION 8.14
Computation of maturity date

Term of note		60 days
July (31–17)	14	
August	31	45
Maturity date: September		15

Computing Interest

Illustration 8.15 gives the basic formula for computing interest on an interest-bearing note.

ILLUSTRATION 8.15
Formula for computing interest

$$\text{Face Value of Note} \times \text{Annual Interest Rate} \times \text{Time in Terms of One Year} = \text{Interest}$$

HELPFUL HINT
Unless noted, the interest rate specified is the *annual* rate.

The interest rate specified in a note is an **annual** rate of interest (see **Helpful Hint**). The time factor in the formula in Illustration 8.15 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.
- Remember that 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 8.16 shows computation of interest for various time periods.

ILLUSTRATION 8.16

Computation of interest

Terms of Note	Face	×	Rate	×	Time	=	Interest
$730, 12%, 120 days	$730	×	12%	×	$\frac{120}{360}$	=	$ 29.20
$1,000, 9%, 6 months	$1,000	×	9%	×	$\frac{6}{12}$	=	$ 45.00
$2,000, 6%, 1 year	$2,000	×	6%	×	$\frac{1}{1}$	=	$120.00

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 institutions use 365 days to compute interest. *For homework problems, assume 360 days to simplify computations.*

Recognizing Notes Receivable

To illustrate the basic entry for notes receivable, we will use Calhoun Company's $1,000, two-month, 12% promissory note dated May 1. Assuming that Calhoun Company wrote the note to settle an open account, Wilma Company makes the following entry for the receipt of the note.

May 1	Notes Receivable	1,000	
	Accounts Receivable		1,000
	(To record acceptance of Calhoun Company note)		

A = L +

+1,000
−1,000

Cash Flows
no effect

The company records the note receivable at its **face value**, the value shown on the face of the note. No interest revenue is reported when the note is accepted because the revenue recognition principle requires that revenue be recognized only when the performance obligation is satisfied. Interest is therefore recognized (accrued) as time passes.

If a company lends cash in exchange for a note, the entry is a debit to Notes Receivable and a credit to Cash for the amount of the loan.

Valuing 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.

Disposing of Notes 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 (as described earlier in this chapter).

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	+	
+10,375				
−10,000				
				+375 Rev

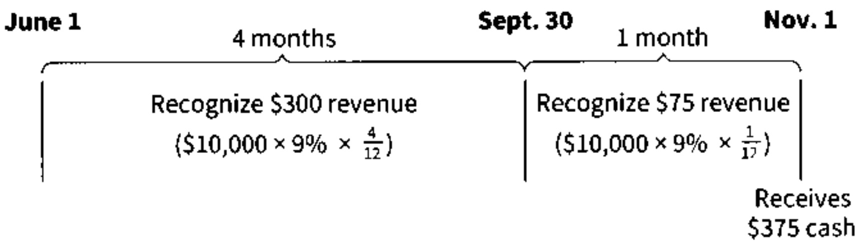
Cash Flows
+10,375

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, necessitating an interest-adjusting entry. The timeline in **Illustration 8.17** presents the revenue analysis for this situation.

ILLUSTRATION 8.17
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.

A	=	L	+	
+300				
				+300 Rev

Cash Flows
no effect

Sept. 30	Interest Receivable ($10,000 × 9% × $\frac{4}{12}$)	300	
	Interest Revenue		300
	(To accrue 4 months' interest on Higley note)		

At the note's maturity on November 1, Wolder receives $10,375. This amount represents repayment of the $10,000 note as well as all 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.

A	=	L	+	
+10,375				
−10,000				
−300				
				+75 Rev

Cash Flows
+10,375

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)		

In this case, Wolder credits Interest Receivable for the $300 that 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, but 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 customer's debt from 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. recognizes interest revenue and 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	10,375	
	Notes Receivable		10,000
	Interest Revenue		375
	(To record the dishonor of Higley note)		

A	=	L	+	
+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 is not expected to occur.

Accounting Across the Organization — Countrywide Financial Corporation

Steve Debenport/E+/ Getty Images

Bad Information Can Lead to Bad Loans

Many factors contributed to the financial crisis of 2008. One significant factor that resulted in many bad loans was a failure by lenders to investigate loan customers sufficiently. For example, **Countrywide Financial Corporation** wrote many loans under its "Fast and Easy" loan program. That program allowed borrowers to provide little or no documentation for their income or their assets. Other lenders had similar programs, which earned the nickname "liars' loans." One study found that in these situations, 60% of applicants overstated their incomes by more than 50% in order to qualify for a loan. Critics of the banking industry say that because loan officers were compensated for loan volume and because banks were selling the loans to investors rather than holding them, the lenders had little incentive to investigate the borrowers' creditworthiness.

Sources: Glenn R. Simpson and James R. Hagerty, "Countrywide Loss Focuses Attention on Underwriting," *Wall Street Journal* (April 30, 2008), p. B1; and Michael Corkery, "Fraud Seen as Driver in Wave of Foreclosures," *Wall Street Journal* (December 21, 2007), p. A1.

What steps should the banks have taken to ensure the accuracy of financial information provided on loan applications? (Answer is available at the end of the chapter.)

DO IT! 3 Recognizing Notes Receivable

Gambit Stores accepts from Leonard Co. a $3,400, 90-day, 6% note dated May 10 in settlement of Leonard's overdue receivable. (a) What is the maturity date of the note? (b) What is the interest to be received at the maturity date? (c) 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.**
- **Compute the accrued interest.**
- **Prepare the entry for payment of the note and the interest.**

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 to be received at the maturity date is $51, computed as follows.

$$\begin{array}{ccccccc} \text{Face} & \times & \text{Rate} & \times & \text{Time} & = & \text{Interest} \\ \$3{,}400 & \times & 6\% & \times & \frac{90}{360} & = & \$51 \end{array}$$

c. Gambit Stores records this entry at the maturity date:

Cash	3,451	
Notes Receivable		3,400
Interest Revenue		51
(To record collection of Leonard note and interest)		

Related exercise material: BE8.8, BE8.9, DO IT! 8.3, E8.13, E8.14, and E8.15.

8.4 Receivables Presentation and Management

LEARNING OBJECTIVE 4

Describe the statement presentation of receivables and the principles of receivables management.

If a company has significant receivables, analysts carefully review the company's financial statement disclosures to evaluate how well the company is managing its receivables.

Financial Statement Presentation of Receivables

Companies should identify in the balance sheet or in the notes to the financial statements each of the major types of receivables.

- Short-term receivables are reported in the current assets section of the balance sheet, below short-term investments. Short-term investments appear before short-term receivables because these investments are nearer to cash.
- Companies report both the gross amount of receivables and the allowance for doubtful accounts.

Receivables represent 60% of the total assets of heavy equipment manufacturer Deere & Company. Illustration 8.18 shows a presentation of receivables for Deere & Company from its balance sheet and notes in a recent year.

ILLUSTRATION 8.18

Balance sheet presentation of receivables

Real World

Deere & Company
Balance Sheet (partial)
(in millions)

Receivables	
Receivables from unconsolidated subsidiaries	$ 30
Trade accounts and notes receivable	3,278
Financing receivables	27,583
Restricted financing receivables	4,616
Other receivables	1,500
Total receivables	37,007
Less: Allowance for doubtful trade receivables	175
Net receivables	$36,832

In the income statement, companies report bad debt expense under Selling expenses in the operating expenses section. They show interest revenue under Other revenues and gains in the nonoperating section of the income statement.

If a company has significant risk of uncollectible accounts or other problems with its receivables, it is required to discuss this possibility in the notes to the financial statements.

Managing Receivables

Managing accounts receivable involves five steps:

1. Determine to whom to extend credit.
2. Establish a payment period.
3. Monitor collections.
4. Evaluate the liquidity of receivables.
5. Accelerate cash receipts from receivables when necessary.

Extending Credit

Every entrepreneur struggles with financing issues. For example, the very first order that Apple's founders received was 50 circuit boards for a computer hobby shop. To produce the $25,000 order, Steve Jobs and Steve Wozniak needed $15,000 of parts. To purchase the parts, they borrowed $5,000 from friends but then were turned down when they applied for a bank loan for the $10,000 balance. They approached two parts suppliers in an effort to negotiate a purchase on credit, but both suppliers said no. Finally, a third supplier agreed to sell them the parts on 30-day credit after he called the computer hobby shop to confirm that it had, in fact, placed a $25,000 order to purchase goods.

A critical part of managing receivables is determining who should be extended credit and who should not.

- If your credit policy is too tight, you will lose sales.
- If it is too loose, you may sell to "deadbeats" who will pay either very late or not at all.

Companies can take certain steps to help minimize losses due to bad debts when they decide to relax credit standards for new customers. They might require risky customers to provide letters of credit or bank guarantees. Then, if the customer does not pay, the bank that provided the guarantee will do so.

Particularly risky customers might be required to pay cash on delivery. For example, at one time retailer **Linens'n Things, Inc.** reported that its largest suppliers were requiring cash payment before delivery. The suppliers had cut off shipments because the company had been slow in paying. **Kmart**'s suppliers also required it to pay cash in advance when it was financially troubled.

In addition, companies should ask potential customers for references from banks and suppliers, to determine their payment history. It is important to check references of potential new customers as well as periodically to check the financial health of continuing customers. Many resources are available for investigating customers. For example, *The Dun & Bradstreet Reference Book of American Business* lists millions of companies and provides credit ratings for many of them.

Data Analytics Insight

Andrey_Popov/Shutterstock.com

They've Got Your Number

Offering credit to customers has costs, as some credit customers will ultimately not be able to pay the amounts owed. Companies can minimize these costs by effectively analyzing data regarding current and potential customers.

Traditionally, companies based credit decisions on a limited number of factors, such as the customer's payment history, credit history, and debt to assets ratio. In contrast, credit-granting decisions using big data can take into account hundreds or even thousands of data points. These can even include the customer's social media network, spending habits, criminal history, and cell phone information. As the CEO of one online lender stated, "all data is credit data."

Data analytics can also be used in estimating uncollectible accounts and to minimize bad debts. For example, companies can use data analytics to determine the normal payment patterns of specific customers and then automatically generate phone calls whenever these customers deviate from their normal payment patterns. Resolving accounts receivable issues earlier increases the likelihood of their being resolved favorably.

Source: Based on Mikella Hurley and Julius Adebayo, "Credit Scoring in the Era of Big Data," *Yale Journal of Law and Technology*, Volume 18, Issue 1 (2017).

Why might a company want to consider a customer's social media network when deciding whether to grant the customer credit? (Answer is available at the end of the chapter.)

Establishing a Payment Period

Companies that extend credit should determine a required payment period and communicate that policy to their customers.

- It is important that the payment period is consistent with that of competitors.
- For example, if you require payment within 15 days but your competitors allow payment within 45 days, you may lose sales to your competitors.

To match your competitors' generous terms yet still encourage prompt payment of accounts, you might allow up to 45 days to pay but offer a sales discount for people paying within 15 days.

Monitoring Collections

Decision Tools

Monitoring the accounts receivable aging schedule helps users determine if the company's credit risk is increasing.

We discussed preparation of the accounts receivable aging schedule earlier in the chapter. Companies should prepare an accounts receivable aging schedule at least monthly (see Decision Tools). In addition to estimating the allowance for doubtful accounts, the aging schedule has other uses.

- The aging schedule helps managers estimate the timing of future cash inflows, which is very important to the treasurer's efforts to prepare a cash budget.
- It also provides information about the overall collection experience of the company and identifies problem accounts. For example, management would compute and compare the percentage of receivables that are over 90 days past due.

Illustration 8.19 contains an excerpt from the notes to **Skechers'** financial statements discussing how it monitors receivables.

ILLUSTRATION 8.19
Note on monitoring Skechers' receivables
Real World

Skechers USA
Notes to the Financial Statements

To minimize the likelihood of uncollectibility, customers' credit-worthiness is reviewed and adjusted periodically in accordance with external credit reporting services, financial statements issued by the customer and our experience with the account. When a customer's account becomes significantly past due, we generally place a hold on the account and discontinue further shipments to that customer, minimizing further risk of loss.

The aging schedule identifies problem accounts that the company needs to pursue with phone calls, letters, and occasionally legal action. Sometimes, special arrangements must be made with problem accounts. For example, it was reported that **Intel Corporation** (a major manufacturer of computer chips) required that **Packard Bell** (at one time one of the largest U.S. sellers of personal computers) exchange its past-due account receivable for an interest-bearing note receivable. This caused concern within the investment community. The move suggested that Packard Bell was in trouble, which worried Intel investors concerned about Intel's accounts receivable.

Decision Tools

Identifying risky credit customers helps users determine if the company has significant concentrations of credit risk.

- If a company has significant concentrations of credit risk, it must discuss this risk in the notes to its financial statements (see Decision Tools).
- A **concentration of credit risk** is a threat of nonpayment from a single large customer or class of customers that could adversely affect the financial health of the company.

Illustration 8.20 shows an excerpt from the credit risk note from a recent annual report of **Skechers**. Skechers reports that its five largest customers account for 9.6% of its net sales.

ILLUSTRATION 8.20
Excerpt from Skechers' note on concentration of credit risk
Real World

Skechers USA
Notes to the Financial Statements

During 2019, 2018 and 2017, our net sales to our five largest customers accounted for approximately 9.6%, 10.4% and 10.5% of total net sales, respectively. No customer accounted for more than 10.0% of our net sales during 2019, 2018 and 2017. No customer accounted for more than 10.0% of trade receivables at December 31, 2019 and 2018.

This note to Skechers' financial statements indicates it has a relatively high concentration of credit risk. A default by any of these large customers could have a significant negative impact on its financial performance.

Evaluating Liquidity of Receivables

Investors and managers keep a watchful eye on the relationship among sales, accounts receivable, and cash collections. If sales increase, then accounts receivable are also expected to increase. But a disproportionate increase in accounts receivable might signal trouble. Perhaps the company increased its sales by loosening its credit policy, and these receivables may be difficult or impossible to collect. Such receivables are considered less liquid. Recall that liquidity is measured by how quickly certain assets can be converted to cash.

The ratio that analysts use to assess the liquidity of receivables is the **accounts receivable turnover**, computed by dividing net credit sales (net sales less cash sales) by the average net accounts receivable during the year (see **Decision Tools**).

Decision Tools

The accounts receivable turnover and the average collection period help users determine if a company's collections are being made in a timely fashion.

- The accounts receivable turnover measures the number of times, on average, a company collects receivables during the period.
- Unless seasonal factors are significant, **average** accounts receivable outstanding can be computed from the beginning and ending balances of the net receivables.[1]

A popular variant of the accounts receivable turnover is the **average collection period**, which measures the average amount of time that a receivable is outstanding. This is done by dividing the accounts receivable turnover into 365 days.

- Companies use the average collection period to assess the effectiveness of a company's credit and collection policies.
- The average collection period should not greatly exceed the credit term period (i.e., the time allowed for payment).

Let us calculate these ratios using the following data (in millions) for **Nike**.

Net credit sales	\$37,403
Beginning accounts receivable (net)	4,272
Ending accounts receivable (net)	2,749

Illustration 8.21 shows the accounts receivable turnover and average collection period for Nike and **Skechers**. These calculations assume that all sales were credit sales.

Nike's accounts receivable turnover was 10.7 times, with a corresponding average collection period of 34.1 days. It was quicker than **Skechers**, which was 40.1 days. What this means is that Nike turned its receivables into cash more quickly than Skechers. Therefore, Nike might be more likely to pay its current obligations than a company with a slower accounts receivable turnover (all else equal) and is less likely to need outside financing to meet cash shortfalls.

In some cases, accounts receivable turnover may be misleading.

- Some large retail chains that issue their own credit cards encourage customers to use these cards for purchases. If customers pay slowly, the stores earn a healthy return on the outstanding receivables in the form of interest at rates of 18% to 22%.
- On the other hand, companies that sell (factor) their receivables on a consistent basis will have a faster turnover than those that do not.

Thus, to interpret accounts receivable turnover, you must know how a company manages its receivables. In general, the faster the turnover, the greater the reliability of the current ratio for assessing liquidity.

[1]If seasonal factors are significant, determine the average accounts receivable balance by using monthly or quarterly amounts.

ILLUSTRATION 8.21 **Accounts receivable turnover and average collection period**

$$\text{Accounts Receivable Turnover} = \frac{\text{Net Credit Sales}}{\text{Average Net Accounts Receivable}}$$

$$\text{Average Collection Period} = \frac{365}{\text{Accounts Receivable Turnover}}$$

Ratio	Nike ($ in millions)	Skechers USA
Accounts receivable turnover	$\frac{\$37,403}{(\$4,272 + \$2,749) \div 2} = 10.7$ times	9.10 times
Average collection period	$\frac{365 \text{ days}}{10.7} = 34.1$ days	40.1 days

Accelerating Cash Receipts

In the normal course of events, companies collect accounts receivable in cash and remove them from the books. However, as credit sales and receivables have grown in size and significance, the "normal course of events" has changed. Two common expressions apply to the collection of receivables:

1. "Time is money"—that is, waiting for the normal collection process costs money.
2. "A bird in the hand is worth two in the bush"—that is, getting the cash now is better than getting it later or not at all.

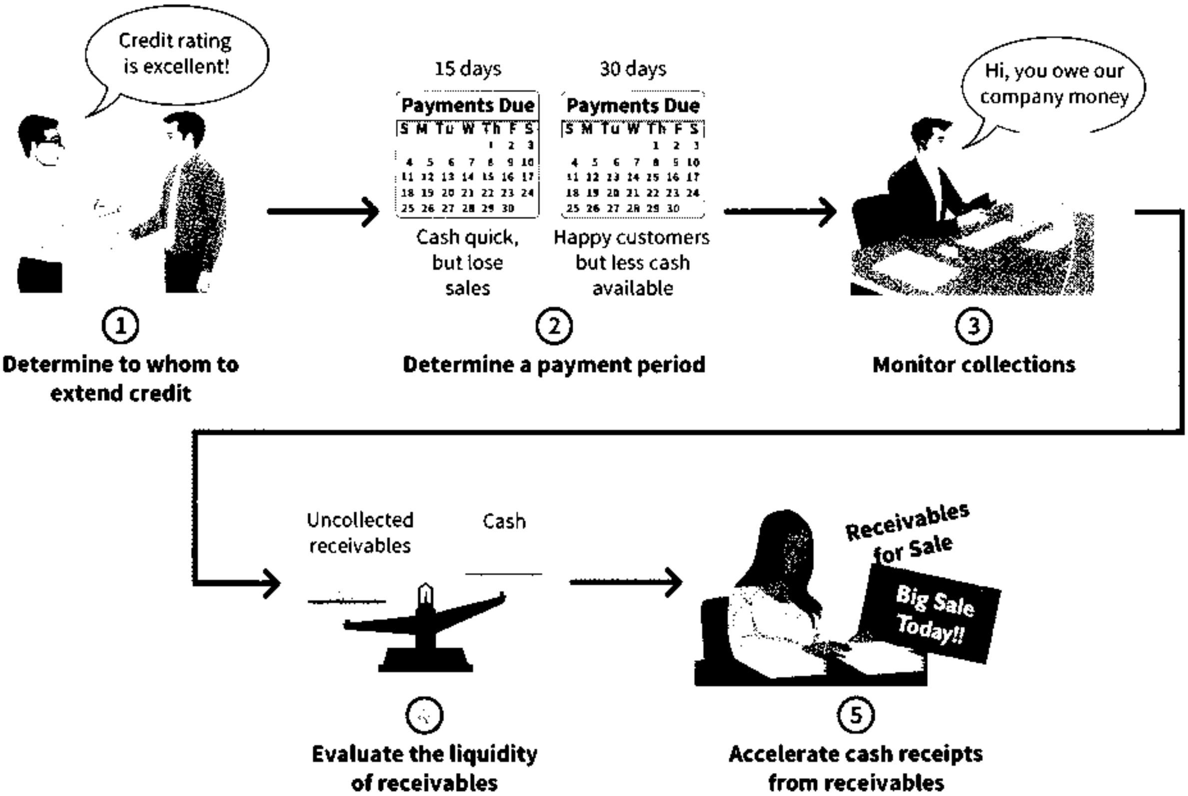
Therefore, in order to accelerate the receipt of cash from receivables, companies frequently sell their receivables to another company for cash, thereby shortening the cash-to-cash operating cycle.

There are three reasons for the sale of receivables.

1. **Size.** For competitive reasons, sellers (retailers, wholesalers, and manufacturers) often have provided financing to purchasers of their goods. For example, many major companies in the automobile, truck, industrial and farm equipment, computer, and appliance industries have created companies that accept responsibility for accounts receivable financing. **Caterpillar** has **Caterpillar Financial Services**, **General Electric** has **GE Capital**, and **Ford** has **Ford Motor Credit Corp. (FMCC)**. These companies are referred to as **captive finance companies** because they are owned by the company selling the product. The purpose of captive finance companies is to encourage the sale of the company's products by assuring financing to buyers. However, the parent companies involved do not necessarily want to hold large amounts of receivables, so they may sell them.
2. **As a source of cash.** When credit is tight, companies may not be able to borrow money in the usual credit markets. Even if credit is available, the cost of borrowing may be prohibitive.
3. **Billing and collection are often time-consuming and costly.** As a result, it is often easier for a retailer to sell the receivables to another party that has expertise in billing and collection matters. Credit card companies such as **MasterCard**, **Visa**, **American Express**, and **Discover** specialize in billing and collecting accounts receivable.

Illustration 8.22 summarizes the basic principles of managing accounts receivable.

ILLUSTRATION 8.22 **Managing receivables**



Data Analytics and Receivables Management

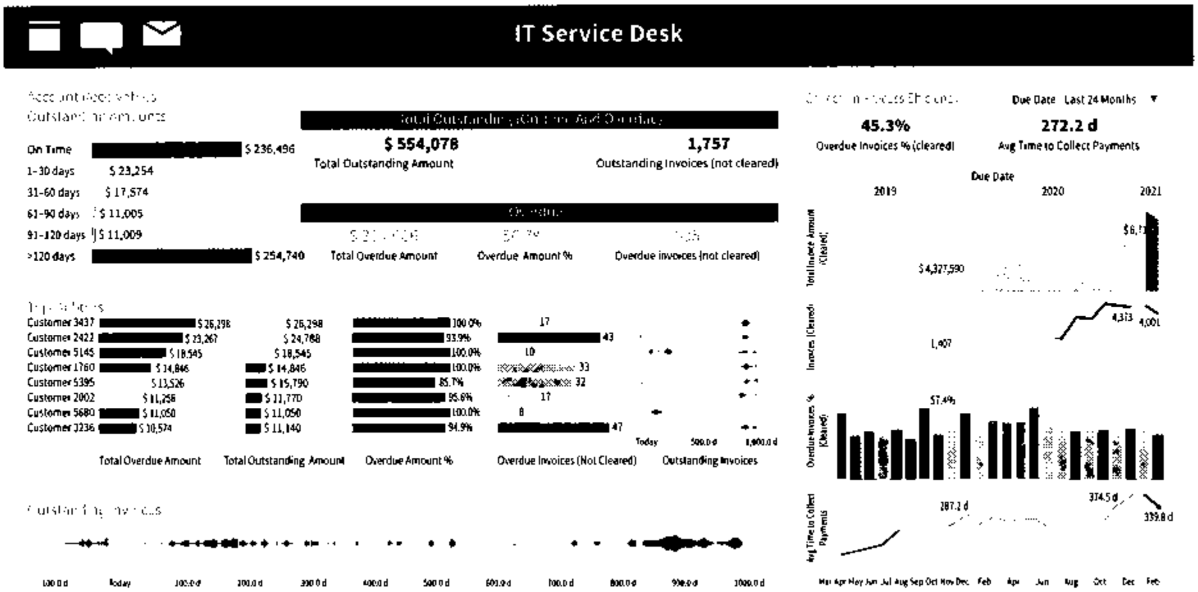
Opportunities abound to improve receivables management through data analytics. Software packages promise increases in working capital, improved revenues, and enhanced customer relations. So-called visualization software, which presents data in sophisticated graph format, enables managers to more quickly identify issues and obtain a deeper understanding of the factors that influence successful receivables management.

- Use of such software helps identify which currencies, sales representatives, customers, product lines, or geographic regions need closer attention.
- This sometimes enables management to do a more granular investigation of the cash-to-cash cycle time (discussed in Chapter 5) to evaluate which product lines are meeting company goals.

Data analytics of receivables is particularly valuable for predictive analysis which allows improved evaluation of customers' risk profiles. In many instances, the company can identify risky customers and take corrective action before problems arise. Software provided by companies such as **Workday** use artificial intelligence to forecast which customers are likely to pay late.

Finally, with Tableau or other visualization software, companies create dashboards that provide dynamic tracking and analysis of their receivables position. The Tableau dashboard shown in **Illustration 8.23** provides an accounts receivable aging schedule, total amount of receivables, number of outstanding invoices, percent of overdue invoices, and average collection time. With this dashboard, the manager can zoom in on detailed information about specific customers, as well as change the due date or time period covered.

ILLUSTRATION 8.23 **Tableau accounts receivable dashboard**



Source: Tableau website.

Keeping an Eye on Cash

A lot of companies report strong sales growth but have cash flow problems. How can this be? The reason for the difference is timing: Sales revenue is recorded when goods are delivered even if cash is not received until later. For example, Nike had sales of $34,350 million during 2017. Does that mean it received cash of $34,350 million from its customers? Most likely not. So how do we determine the amount of cash related to sales revenue that is actually received from customers? We analyze the changes that take place in Accounts Receivable.

To illustrate, suppose Bestor Corporation started the year with $10,000 in accounts receivable. During the year, it had credit sales of $100,000. At the end of the year, the balance in accounts receivable was $25,000. As a result, accounts receivable increased $15,000 during the year. How much cash did Bestor collect from customers during the year? Using the following T-account, we can determine that collections were $85,000.

Accounts Receivable

Beginning balance	10,000	85,000	Collections
Sales	100,000		
Ending balance	25,000		

As shown, the difference between sales and cash collections is explained by the change in Accounts Receivable. Accounts Receivable increased by $15,000. Therefore, since credit sales were $100,000, cash collections were only $85,000.

To illustrate another situation, let's use Nike. Recall that it had net credit sales of $34,350 million. Its ending receivables balance was $3,677 million, and its beginning receivables balance was $3,241 million—an increase of $436 million. Given this change, we can determine that the cash collected from customers during the year was $33,914 million ($34,350 − $436). This is shown in the following T-account.

Accounts Receivable

Beginning balance	3,241	33,914	Collections
Sales	34,350		
Ending balance	3,677		

ACTION PLAN

- **Review the formula to compute the accounts receivable turnover.**
- **Make sure that both the beginning and ending accounts receivable are considered in the computation.**
- **Review the formula to compute the average collection period in days.**

DO IT! 4 Analysis of Receivables

In 2025, Lebron James Company had 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 Lebron James Company's (a) accounts receivable turnover and (b) 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: BE8.11, BE8.12, DO IT! 8.4, E8.18, and E8.19.

USING THE DECISION TOOLS | adidas

Suppose the following information was taken from the financial statements of **adidas**. Similar to **Nike** and **Skechers**, adidas sells shoes as well as other products.

adidas AG
Selected Financial Information
(in millions)

Net credit sales	€14,534
Beginning accounts receivable (net)	1,809
Ending accounts receivable (net)	1,946
Total current assets	7,347
Total current liabilities	4,378

Instructions

Comment on adidas' accounts receivable management and liquidity relative to that of Nike, using (a) the current ratio and (b) the accounts receivable turnover and average collection period. Assume Nike's current ratio was 2.80:1, its accounts receivable turnover was 9.9 times, and its average collection period was 36.9 days.

Solution

a. Here is the current ratio (Current assets ÷ Current liabilities) for each company.

Nike	adidas
2.80:1	$\frac{\$7,347}{\$4,378} = 1.68:1$

Based on the assumed information for adidas, Nike's current ratio far exceeds that of adidas. In fact, Nike's might be excessive. A company of its size would not normally want to have so much capital tied up in current assets.

b. The accounts receivable turnover and average collection period for each company are:

	Nike	adidas
Accounts receivable turnover	9.9 times	$\frac{\$14,534}{(\$1,946 + \$1,809)/2} = 7.7 \text{ times}$
Average collection period	36.9 days	$\frac{365}{7.7} = 47.4 \text{ days}$

Based on the assumed information for adidas, its accounts receivable turnover of 7.7 compared to Nike's 9.9, and its average collection period of 47.4 days versus Nike's 36.9 days, suggest that adidas is able to collect from its customers slightly less quickly. It is important to note, however, that adidas is a German company. It reports under IFRS. A thorough comparison of adidas and Nike would require consideration of differences in the treatment of accounts receivable under IFRS and GAAP.

Review and Practice

Learning Objectives Review

1 Explain how companies recognize accounts receivable.

Receivables are frequently classified as accounts, notes, and other. Accounts receivable are amounts customers owe on account. Notes receivable represent claims that are evidenced by formal instruments of credit. Other receivables include nontrade receivables such as interest receivable, loans to company officers, advances to employees, and income taxes refundable.

Companies record accounts receivable when they perform a service on account or at the point-of-sale of merchandise on account. Sales returns and allowances and cash discounts reduce the amount received on accounts receivable.

2 Describe how companies value accounts receivable and record their disposition.

The two methods of accounting for uncollectible accounts are the allowance method and the direct write-off method. Under the allowance method, companies estimate uncollectible accounts as a percentage of receivables. It emphasizes the cash realizable value of the accounts receivable. An aging schedule is frequently used with this approach.

3 Explain how companies recognize, value, and dispose of notes receivable.

The formula for computing interest is Face value of note × Annual interest rate × Time in terms of one year. Notes can be held to maturity, at which time the borrower (maker) pays the face value plus accrued interest and the payee removes the note from the accounts. In many cases, however, similar to accounts receivable, the holder of the note speeds up the conversion by selling the receivable to another party. In some situations, the maker of the note dishonors the note (defaults), and the note is written off.

4 Describe the statement presentation of receivables and the principles of receivables management.

Companies should identify each major type of receivable in the balance sheet or in the notes to the financial statements. 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, and interest revenue as other revenues and gains in the nonoperating section of the statement.

To properly manage receivables, management must (a) determine to whom to extend credit, (b) establish a payment period, (c) monitor collections, (d) evaluate the liquidity of receivables, and (e) accelerate cash receipts from receivables when necessary. The accounts receivable turnover and the average collection period both are useful in analyzing management's effectiveness in managing receivables. The accounts receivable aging schedule also provides useful information. If the company needs additional cash, management can accelerate the collection of cash from receivables by selling (factoring) its receivables or by allowing customers to pay with bank credit cards.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Is the amount of past due accounts increasing? Which accounts require management's attention?	List of outstanding receivables and their due dates	Prepare an aging schedule showing the receivables in various stages: outstanding 0–30 days, 31–60 days, 61–90 days, and over 90 days.	Accounts in the older categories require follow-up: letters, phone calls, and possible renegotiation of terms.
Is the company's credit risk increasing?	Customer account balances and due dates	Accounts receivable aging schedule	Compute and compare the percentage of receivables over 90 days old.
Does the company have significant concentrations of credit risk?	Note to the financial statements on concentrations of credit risk	If risky credit customers are identified, the financial health of those customers should be evaluated to gain an independent assessment of the potential for a material credit loss.	If a material loss appears likely, the potential negative impact of that loss on the company should be carefully evaluated, along with the adequacy of the allowance for doubtful accounts.

(continues)

(continued)

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Are collections being made in a timely fashion?	Net credit sales and average net accounts receivable balance	$\text{Accounts receivable turnover} = \frac{\text{Net credit sales}}{\text{Average net accounts receivable}}$ $\text{Average collection period} = \frac{\text{365 days}}{\text{Accounts receivable turnover}}$	Average collection period should be consistent with corporate credit policy. An increase may suggest a decline in financial health of customers.

Glossary Review

Accounts receivable Amounts customers owe on account. (p. 8-3).

Accounts receivable turnover A measure of the liquidity of accounts receivable, computed by dividing net credit sales by average net accounts receivable. (p. 8-23).

Aging the accounts receivable A schedule of customer balances classified by the length of time they have been unpaid. (p. 8-10).

Allowance method A method of accounting for bad debts that involves estimating uncollectible accounts at the end of each period. (p. 8-7).

Average collection period The average amount of time that a receivable is outstanding, calculated by dividing 365 days by the accounts receivable turnover. (p. 8-23).

Bad Debt Expense An expense account to record losses from extending credit. (p. 8-6).

Cash (net) realizable value The net amount a company expects to receive in cash from receivables. (p. 8-7).

Concentration of credit risk The threat of nonpayment from a single large customer or class of customers that could adversely affect the financial health of the company. (p. 8-22).

Direct write-off method A method of accounting for bad debts that involves charging receivable balances to Bad Debt Expense at the time receivables from a particular company are determined to be uncollectible. (p. 8-6).

Dishonored (defaulted) note A note that is not paid in full at maturity. (p. 8-18).

Factor A finance company or bank that buys receivables from businesses for a fee and then collects the payments directly from the customers. (p. 8-13).

Maker The party in a promissory note who is making the promise to pay. (p. 8-15).

Notes receivable Written promise (as evidenced by a formal instrument) for amounts to be received. (p. 8-3).

Other receivables Nontrade receivables that generally do not result from the operations of the business such as interest receivable and income taxes refundable. (p. 8-3)

Payee The party to whom payment of a promissory note is to be made. (p. 8-15).

Percentage-of-receivables basis A method of estimating the amount of bad debt expense whereby management establishes a percentage relationship between the amount of receivables and the expected losses from uncollectible accounts. (p. 8-9).

Promissory note A written promise to pay a specified amount of money on demand or at a definite time. (p. 8-15).

Receivables Amounts due from individuals and companies that are expected to be collected in cash. (p. 8-3).

Trade receivables Notes and accounts receivable that result from sales transactions. (p. 8-3).

Practice Multiple-Choice Questions

1. **(LO 1)** A receivable that is evidenced by a formal instrument and that normally requires the payment of interest is:
   - **a.** an account receivable.
   - **b.** a trade receivable.
   - **c.** a note receivable.
   - **d.** a classified receivable.

2. **(LO 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.

3. **(LO 1)** Kersee Company on June 15 sells merchandise on account to Eng Co. for $1,000, terms 2/10, n/30. On June 20, Eng Co. returns merchandise worth $300 to Kersee Company. On June 24, payment is received from Eng Co. for the balance due. What is the amount of cash received?
   - **a.** $700.
   - **b.** $680.
   - **c.** $686.
   - **d.** None of the answer choices is correct.

4. **(LO 2, 4)** Accounts and notes receivable are reported in the current assets section of the balance sheet at:

a. cash (net) realizable value

b. net book value.

c. lower-of-cost-or-market value.

d. invoice cost.

5. **(LO 2)** Net credit sales for the month are $800,000. The accounts receivable balance is $160,000. The allowance is calculated as 7.5% of the receivables balance using the percentage-of-receivables basis. If Allowance for Doubtful Accounts has a credit balance of $5,000 before adjustment, what is the balance after adjustment?

a. $12,000. **c.** $17,000.

b. $7,000. **d.** $31,000.

6. **(LO 2)** In 2025, Patterson Wholesale Company had net credit sales of $750,000. On January 1, 2025, Allowance for Doubtful Accounts had a credit balance of $18,000. During 2025, $30,000 of uncollectible accounts receivable were written off. Past experience indicates that the allowance should be 10% of the balance in receivables (percentage-of-receivables basis). If the accounts receivable balance at December 31 was $200,000, what is the required adjustment to Allowance for Doubtful Accounts at December 31, 2025?

a. $20,000. **c.** $32,000.

b. $75,000. **d.** $30,000.

7. **(LO 2)** An analysis and aging of the accounts receivable of Raja Company at December 31 reveal these data:

Accounts receivable	$800,000
Allowance for doubtful accounts per books before adjustment (credit)	50,000
Amounts expected to become uncollectible	65,000

What is the cash realizable value of the accounts receivable at December 31, after adjustment?

a. $685,000. **c.** $800,000.

b. $750,000. **d.** $735,000.

8. **(LO 2)** Which of these statements about Visa credit card sales is **incorrect?**

a. The credit card issuer conducts the credit investigation of the customer.

b. The retailer is not involved in the collection process.

c. The retailer must wait to receive payment from the issuer.

d. The retailer receives cash more quickly than it would from individual customers.

9. **(LO 2)** Good Stuff 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 Good Stuff 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.

10. **(LO 2)** A company can accelerate its cash receipts by all of the following **except:**

a. offering discounts for early payment.

b. accepting national credit cards for customer purchases.

c. selling receivables to a factor.

d. writing off receivables.

11. **(LO 2)** Hughes Company 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.

12. **(LO 2)** Use the same information as in Question 11, 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.

13. **(LO 3)** Which of these statements about promissory notes is **incorrect?**

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 more liquid than an account receivable.

14. **(LO 3)** Michael Co. accepts a $1,000, 3-month, 12% promissory note in settlement of an account with Tani Co. The entry to record this transaction is:

a. Notes Receivable	1,030	
Accounts Receivable		1,030
b. Notes Receivable	1,000	
Accounts Receivable		1,000
c. Notes Receivable	1,000	
Sales Revenue		1,000
d. Notes Receivable	1,020	
Accounts Receivable		1,020

15. **(LO 3)** Schleis Co. holds Murphy Inc.'s $10,000, 120-day, 9% note. The entry made by Schleis Co. when the note is collected, assuming no interest has previously been accrued, is:

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

16. **(LO 4)** If a company is concerned about extending credit to a risky customer, it could do any of the following **except**:

a. require the customer to pay cash in advance.

b. require the customer to provide a letter of credit or a bank guarantee.

c. contact references provided by the customer, such as banks and other suppliers.

d. provide the customer a lengthy payment period to increase the chance of paying.

17. **(LO 4)** Eddy Corporation had net credit sales during the year of \$800,000 and cost of goods sold of \$500,000. The balance in receivables at the beginning of the year was \$100,000 and at the end of the year was \$150,000. What was the accounts receivable turnover and average collection period in days?

a. 4.0 and 91.3 days. **c.** 6.4 and 57 days.

b. 5.3 and 68.9 days. **d.** 8.0 and 45.6 days.

18. **(LO 4)** Prall Corporation sells its goods on terms of 2/10, n/30. It has an accounts receivable turnover of 7. What is its average collection period (days)?

a. 2,555. **c.** 52.

b. 30. **d.** 210.

Solutions

1. **c.** A note receivable represent claims for which formal instruments of credit are issued as evidence of the debt. The note normally requires the payment of the principal and interest on a specific date. Choices (a) account receivable, (b) trade receivable, and (d) classified receivable rarely require the payment of interest if paid within a 30-day period.

2. **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.

3. **c.** Because payment is made within the discount period of 10 days, the amount received is \$700 (\$1,000 – \$300 return) minus the discount of \$14 (\$700 × 2%), for a cash amount of \$686, not (a) \$700 or (b) \$680. Choice (d) is wrong as there is a correct answer.

4. **a.** Accounts and notes receivable are reported in the current assets section of the balance sheet at cash (net) realizable value, not (b) net book value, (c) lower-of-cost-or-market value, or (d) invoice cost.

5. **a.** The ending balance required in the allowance account is 7.5% × \$160,000, or \$12,000. Since there is already a balance of \$5,000 in Allowance for Doubtful Accounts, the difference of \$7,000 should be added, resulting in a balance of \$12,000, not (b) \$7,000, (c) \$17,000, or (d) \$31,000.

6. **c.** After the write-offs are recorded, Allowance for Doubtful Accounts will have a debit balance of \$12,000 (\$18,000 credit beginning balance combined with a \$30,000 debit for the write-offs). The desired balance, using the percentage-of-receivables basis, is a credit balance of \$20,000 (\$200,000 × 10%). In order to have an ending balance of \$20,000, the required adjustment to Allowance for Doubtful Accounts is \$32,000, not (a) \$20,000, (b) \$75,000, or (d) \$30,000.

7. **d.** The cash realizable value of the accounts receivable is Accounts Receivable (\$800,000) less the expected ending balance in Allowance for Doubtful Accounts after adjustments (\$65,000) = \$735,000, not (a) \$685,000, (b) \$750,000, or (c) \$800,000.

8. **c.** There is no wait for payment. The retailer receives payment at the time the credit card is accepted from the customer. The other choices are true statements.

9. **a.** The entry includes a credit to Sales Revenue for \$50,000, a \$48,000 debit to Cash, and a debit to Service Charge Expense for \$2,000. The other choices are therefore incorrect.

10. **d.** Writing off receivables will result in a company failing to collect any money. Instead, choices (a) offering discounts for early payment, (b) accepting national credit cards for customer purchases, and (c) selling receivables to a factor will all allow a company to accelerate its cash receipts.

11. **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.

12. **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.

13. **c.** Promissory notes are negotiable instruments, meaning if sold, the seller can transfer to another party by endorsement. The other choices are true statements.

14. **b.** On the date Michael accepts the note, Notes Receivable is debited for \$1,000 and Accounts Receivable is credited for \$1,000. Interest is accrued only with the passage of time. The other choices are therefore incorrect.

15. **d.** When Schleis receives payment, it will increase cash, reduce the notes receivable account, and recognize interest earned for the term of the note. Interest = \$10,000 × 9% × 120/360 = \$300. Total cash received = \$10,000 + \$300 = \$10,300. The other choices are therefore incorrect.

16. **d.** A longer payment period will increase the chances the customer will not pay. The other choices are incorrect as companies might require risky customers to (a) pay cash in advance, (b) provide letters of credit or bank guarantees, or (c) ask for references from banks and suppliers to determine their payment history.

17. **c.** Accounts receivable turnover = Net credit sales (\$800,000) ÷ Average net accounts receivable [(\$100,000 + \$150,000)/2] = 6.4. The average collection period in days = (365 ÷ 6.4) = 57 days. The other choices are therefore incorrect.

18. **c.** Average collection period = Number of days in the year (365) ÷ Accounts receivable turnover (7) = 52 days, not (a) 2,555, (b) 30, or (d) 210.

Practice Brief Exercises

Record basic accounts receivable transactions.

1. **(LO 1)** Record the following transactions on the books of Gonzalez Co. **(Omit cost of goods sold entries.)**

   a. On August 1, Gonzalez Co. sold merchandise on account to Miguel Inc. for $15,500, terms 1/10, n/30.
   b. On August 8, Miguel Inc. returned merchandise worth $3,100 to Gonzalez Co.
   c. On August 11, Miguel Inc. paid for the merchandise.

Solution

1. **a.** Accounts Receivable	15,500	
Sales Revenue		15,500
b. Sales Returns and Allowances	3,100	
Accounts Receivable		3,100
c. Cash ($12,400 − $124)	12,276	
Sales Discounts ($12,400 × 1%)	124	
Accounts Receivable ($15,500 − $3,100)		12,400

Prepare entry using percentage-of-receivables method.

2. **(LO 2)** Sanchez Co. uses the percentage-of-receivables basis in 2025 to record bad debt expense. It estimates that 3% of accounts receivable will become uncollectible. Sales revenues are $900,000 for 2025, and sales returns and allowances are $50,000 at December 31, 2025. Accounts receivable has a balance of $139,000, and the allowance for doubtful accounts has a credit balance of $3,000. Prepare the adjusting entry to record bad debt expense in 2025.

Solution

2. Bad Debt Expense [($139,000 × 3%) − $3,000]	1,170	
Allowance for Doubtful Accounts		1,170

Prepare entry for notes receivable exchanged for account receivable.

3. **(LO 3)** On January 20, 2025, Carlos Co. sold merchandise on account to Carson Co. for $20,000, n/30. On February 19, Carson Co. gave Carlos Co. an 8% promissory note in settlement of this account. Prepare the journal entry to record the sale and the settlement of the account receivable.

Solution

3. Jan. 20	Accounts Receivable	20,000	
	Sales Revenue		20,000
Feb. 19	Notes Receivable	20,000	
	Accounts Receivable		20,000

Practice Exercises

Journalize entries to record bad debt expense using two different bases.

1. **(LO 2)** 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.

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 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 6% of accounts receivable.

Solution

	Date	Account	Debit	Credit
1. **a.**	Dec. 31	Bad Debt Expense	1,500	
		Accounts Receivable		1,500
b.	Dec. 31	Bad Debt Expense	12,600	
		Allowance for Doubtful Accounts		
		[($150,000 × 10%) – $2,400]		12,600
c.	Dec. 31	Bad Debt Expense	9,200	
		Allowance for Doubtful Accounts		
		[($150,000 × 6%) + $200]		9,200

2. **(LO 3)** Troope Supply Co. has the following transactions related to notes receivable during the last 3 months of 2025.

Journalize entries for notes receivable transactions.

Oct.	1	Loaned $16,000 cash to Juan Vasquez on a 1-year, 10% note.
Dec.	11	Sold goods to A. Palmer, Inc., receiving a $6,750, 90-day, 8% note.
	16	Received a $6,400, 6-month, 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 Troope Supply Co.

b. Record the collection of the Vasquez note at its maturity in 2026.

Solution

2. **a.**

2025

Date	Account	Debit	Credit
Oct. 1	Notes Receivable	16,000	
	Cash		16,000
Dec. 11	Notes Receivable	6,750	
	Sales Revenue		6,750
Dec. 16	Notes Receivable	6,400	
	Accounts Receivable		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.

2026

Date	Account	Debit	Credit
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 1, 2, 3) Presented here are selected transactions related to B. Dylan Corp.

Mar. 1 Sold $20,000 of merchandise to Potter Company, terms 2/10, n/30.

11 Received payment in full from Potter Company for balance due on existing accounts receivable.

12 Accepted Juno Company's $20,000, 6-month, 12% note for balance due on outstanding account receivable.

13 Made B. Dylan Corp. credit card sales for $13,200.

15 Made Visa credit sales totaling $6,700. A 5% 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 B. Dylan Corp. credit card sales.

May 10 Wrote off as uncollectible $16,000 of accounts receivable. (B. Dylan Corp. uses the percentage-of-receivables basis to estimate bad debts.)

June 30 The balance in accounts receivable at the end of the first 6 months is $200,000. The company estimates that 10% of accounts receivable will become uncollectible. At June 30, the credit balance in the allowance account prior to adjustment is $3,500. Recorded bad debt expense.

July 16 One of the accounts receivable written off in May pays the amount due, $4,000, in full.

Instructions

Prepare the journal entries for the transactions. **(Cost of goods sold entries are omitted here as well as in homework material.)**

Solution

Mar.	1	Accounts Receivable	20,000	
		Sales Revenue		20,000
		(To record sales on account)		
	11	Cash	19,600	
		Sales Discounts (2% × $20,000)	400	
		Accounts Receivable		20,000
		(To record collection of accounts receivable)		
	12	Notes Receivable	20,000	
		Accounts Receivable		20,000
		(To record acceptance of Juno Company note)		
	13	Accounts Receivable	13,200	
		Sales Revenue		13,200
		(To record company credit card sales)		
	15	Cash	6,365	
		Service Charge Expense (5% × $6,700)	335	
		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)		
May	10	Allowance for Doubtful Accounts	16,000	
		Accounts Receivable		16,000
		(To record write-off of accounts receivable)		
June	30	Bad Debt Expense	16,500	
		Allowance for Doubtful Accounts		16,500
		[($200,000 × 10%) − $3,500]		
		(To record estimate of uncollectible accounts)		

			Debit	Credit
July	16	Accounts Receivable	4,000	
		Allowance for Doubtful Accounts		4,000
		(To reverse write-off of accounts receivable)		
		Cash	4,000	
		Accounts Receivable		4,000
		(To record collection of accounts receivable)		

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

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 or notes receivable?

3. What are the essential features of the allowance method of accounting for bad debts?

4. Lance Morrow cannot understand why the cash realizable value does not decrease when an uncollectible account is written off under the allowance method. Clarify this point for Lance.

5. Sarasota Company has a credit balance of $2,200 in Allowance for Doubtful Accounts before adjustment. The estimated uncollectibles under the percentage-of-receivables basis is $5,100. Prepare the adjusting entry.

6. What types of receivables does **Apple** report on its balance sheet? Does it use the allowance method or the direct write-off method to account for uncollectibles?

7. How are bad debts accounted for under the direct write-off method? What are the disadvantages of this method?

8. Tawnya Dobbs, the vice president of sales for Tropical Pools and Spas, wants the company's credit department to be less restrictive in granting credit. "How can we sell anything when you guys won't approve anybody?" she asks. Discuss the pros and cons of "easy credit." What are the accounting implications?

9. **JCPenney Company** accepts both its own credit cards and national credit cards. What are the advantages of accepting both types of cards?

10. An article in the *Wall Street Journal* indicated that companies are selling their receivables at a record rate. Why do companies sell their receivables?

11. **Calico Corners** decides to sell $400,000 of its accounts receivable to Fast Cash Factors Inc. Fast Cash Factors assesses a service charge of 3% of the amount of receivables sold. Prepare the journal entry that Calico Corners 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. Compute the missing amounts for each of the following notes.

Principal	Annual Interest Rate	Time	Total Interest
(a)	6%	60 days	$ 270
$60,000	(b)	5 months	$2,500
$50,000	11%	(c)	$2,750
$30,000	8%	3 years	(d)

15. Mendosa Company dishonors a note at maturity. What are the options available to the lender?

16. **General Motors Company** has accounts receivable and notes receivable. How should the receivables be reported on the balance sheet?

17. What are the steps to good receivables management?

18. How might a company monitor the risk related to its accounts receivable?

19. What is meant by a concentration of credit risk?

20. The president of Ericson Inc. proudly announces her company's improved liquidity since its current ratio has increased substantially from one year to the next. Does an increase in the current ratio always indicate improved liquidity? What other ratio or ratios might you review to determine whether or not the increase in the current ratio is an improvement in financial health?

21. Since hiring a new sales director, Tilton Inc. has enjoyed a 50% increase in sales. The CEO has also noticed, however, that the company's average collection period has increased from 17 days to 38 days. What might be the cause of this increase? What are the implications to management of this increase?

22. Assume **The Coca-Cola Company's** accounts receivable turnover was 9.05, and its average amount of net receivables during the period was $3,424 million. What is the amount of its net credit sales for the period? What is the average collection period in days?

23. Douglas Corp. has experienced tremendous sales growth this year, but it is always short of cash. What is one explanation for this occurrence?

24. How can the amount of collections from customers be determined?

Brief Exercises

Identify different types of receivables.

BE8.1 **(LO 1), C** Presented below are three receivables transactions. Indicate whether these receivables are reported as accounts receivable, notes receivable, or other receivables on a balance sheet.

a. Advanced $10,000 to an employee.

b. Received a promissory note of $34,000 for services performed.

c. Sold merchandise on account for $60,000 to a customer.

Record basic accounts receivable transactions.

BE8.2 **(LO 1), AP** Record the following transactions on the books of Jarvis Co. **(Omit cost of goods sold entries.)**

a. On July 1, Jarvis Co. sold merchandise on account to Stacey Inc. for $23,000, terms 2/10, n/30.

b. On July 8, Stacey Inc. returned merchandise worth $2,400 to Jarvis Co.

c. On July 11, Stacey Inc. paid for the merchandise.

Prepare entry for write-off, and determine cash realizable value.

BE8.3 **(LO 2), AP** At the end of 2024, Safer Co. has accounts receivable of $700,000 and an allowance for doubtful accounts of $25,000. On January 24, 2025, it is learned that the company's receivable from Madonna Inc. is not collectible and therefore management authorizes a write-off of $4,300.

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?

Prepare entries for collection of bad debt write-off.

BE8.4 **(LO 2), AP** Assume the same information as BE8.3 and that on March 4, 2025, Safer Co. receives payment of $4,300 in full from Madonna Inc. Prepare the journal entries to record this transaction.

Prepare entry using percentage-of-receivables method.

BE8.5 **(LO 2), AP** Byrd Co. uses the percentage-of-receivables basis to record bad debt expense and concludes that 2% of accounts receivable will become uncollectible. Accounts receivable are $400,000 at the end of the year, and the allowance for doubtful accounts has a credit balance of $2,800.

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 $900 instead of a credit balance of $2,800, prepare the adjusting journal entry for bad debt expense.

Prepare entry using the percentage-of-receivables method.

BE8.6 **(LO 2), AP** Bayfiew Corp uses the percentage-of-receivables basis to record bad debt expense.

Accounts receivable (ending balance)	$550,000 (debit)
Allowance for doubtful accounts (unadjusted)	4,200 (debit)

The company estimates that 3% of accounts receivable will become uncollectible.

a. Prepare the adjusting journal entry to record bad debt expense for the year.

b. What is the ending (adjusted) balance in Allowance for Doubtful Accounts?

c. What is the cash (net) realizable value?

Prepare entries for credit card sale and sale of accounts receivable.

BE8.7 **(LO 2), AP** Consider these transactions:

a. Tastee Restaurant accepted a Visa card in payment of a $200 lunch bill. The bank charges a 3% fee. What entry should Tastee make?

b. Martin Company sold its accounts receivable of $65,000. What entry should Martin make, given a service charge of 3% on the amount of receivables sold?

Compute interest and determine maturity dates on notes.

BE8.8 **(LO 3), AP** Compute interest and find the maturity date for the following notes.

	Date of Note	Principal	Interest Rate (%)	Terms
a.	June 10	$80,000	6%	60 days
b.	July 14	$50,000	7%	90 days
c.	April 27	$12,000	8%	75 days

Determine maturity dates and compute interest and rates on notes.

BE8.9 **(LO 3), AN** Presented below are data on three promissory notes. Determine the missing amounts.

	Date of Note	Terms	Maturity Date	Principal	Annual Interest Rate	Total Interest
a.	April 1	60 days	?	$600,000	9%	?
b.	July 2	30 days	?	90,000	?	$600
c.	March 7	6 months	?	120,000	10%	?

BE8.10 **(LO 3), AP** On January 10, 2025, Masterson Co. sold merchandise on account to Tompkins for $8,000, terms n/30. On February 9, Tompkins gave Masterson Co. a 7% promissory note in settlement of this account. Prepare the journal entry to record the sale and the settlement of the accounts receivable. **(Omit cost of goods sold entries.)**

Prepare entry for note receivable exchanged for accounts receivable.

BE8.11 **(LO 2, 4), AP** During its first year of operations, Fertig Company had credit sales of $3,000,000, of which $400,000 remained uncollected at year-end. The credit manager estimates that $18,000 of these receivables will become uncollectible.

Prepare entry for estimated uncollectibles and classifications, and compute ratios.

a. Prepare the journal entry to record the estimated uncollectibles. (Assume an unadjusted balance of zero in Allowance for Doubtful Accounts.)

b. Prepare the current assets section of the balance sheet for Fertig Company, assuming that in addition to the receivables it has cash of $90,000, merchandise inventory of $180,000, and supplies of $13,000.

c. Calculate the accounts receivable turnover and average collection period. Assume that average net accounts receivable were $300,000. Explain what these measures tell us.

BE8.12 **(LO 4), AP** Suppose the 2025 financial statements of **3M Company** report net sales of $23.1 billion. Accounts receivable (net) are $3.2 billion at the beginning of the year and $3.25 billion at the end of the year. Compute 3M's accounts receivable turnover. Compute 3M's average collection period for accounts receivable in days.

Analyze accounts receivable.

BE8.13 **(LO 4), AP** Kennewick Corp. had a beginning balance in accounts receivable of $70,000 and an ending balance of $91,000. Credit sales during the period were $598,000. Determine cash collections.

Determine cash collections.

DO IT! Exercises

DO IT! 8.1 **(LO 1), AP** On March 1, Lincoln sold merchandise on account to Amelia Company 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. **(Ignore cost of goods sold entries and explanations.)**

Prepare entries to recognize accounts receivable.

DO IT! 8.2a **(LO 2), AP** Mantle Company has been in business several years. At the end of the current year, the unadjusted trial balance shows:

Prepare entry for uncollectible accounts.

Accounts Receivable	$ 310,000 Dr.
Sales Revenue	2,200,000 Cr.
Allowance for Doubtful Accounts	5,700 Cr.

Bad debts are estimated to be 7% of receivables. Prepare the entry to adjust Allowance for Doubtful Accounts.

DO IT! 8.2b **(LO 2), AP** Neumann Distributors is a growing company whose ability to raise capital has not been growing as quickly as its expanding assets and sales. Neumann's local banker has indicated that the company cannot increase its borrowing for the foreseeable future. Neumann's suppliers are demanding payment for goods acquired within 30 days of the invoice date, but Neumann's customers are slow in paying for their purchases (60–90 days). As a result, Neumann has a cash flow problem.

Prepare entry for factored accounts.

Neumann needs $160,000 to cover next Friday's payroll. Its balance of outstanding accounts receivable totals $800,000. To alleviate this cash crunch, the company sells $170,000 of its receivables. Record the entry that Neumann would make. (Assume a 2% service charge.)

DO IT! 8.3 **(LO 3), AP** Buffet Wholesalers accepts from Gates Stores a $6,200, 4-month, 9% note dated May 31 in settlement of Gates' overdue account. The maturity date of the note is September 30. What entry does Buffet make at the maturity date, assuming Gates pays the note and interest in full at that time?

Prepare entries for notes receivable.

DO IT! 8.4 **(LO 4), AP** In 2025, Bismark Company has net credit sales of $1,600,000 for the year. It had a beginning accounts receivable (net) balance of $108,000 and an ending accounts receivable (net) balance of $120,000. Compute Bismark Company's (a) accounts receivable turnover and (b) average collection period in days.

Compute ratios for receivables.

Exercises

Prepare entries for recognizing accounts receivable.

E8.1 **(LO 1), AP** On January 6, Jacob Co. sells merchandise on account to Harley Inc. for $9,200, terms 1/10, n/30. On January 16, Harley pays the amount due.

Instructions

Prepare the entries on Jacob Co.'s books to record the sale and related collection. **(Omit cost of goods sold entries.)**

Prepare entries for recognizing accounts receivable.

E8.2 **(LO 1), AP** On January 10, Molly Amise uses her Lawton Co. credit card to purchase merchandise from Lawton Co. for $1,700. On February 10, Molly is billed for the amount due of $1,700. On February 12, Molly pays $1,100 on the balance due. On March 10, Molly is billed for the amount due, including interest at 1% per month on the unpaid balance as of February 12.

Instructions

Prepare the entries on Lawton Co.'s books related to the transactions that occurred on January 10, February 12, and March 10. **(Omit cost of goods sold entries.)**

Journalize receivables transactions.

E8.3 **(LO 1, 2), AP** At the beginning of the current period, Rose Corp. had balances in Accounts Receivable of $200,000 and in Allowance for Doubtful Accounts of $9,000 (credit). During the period, it had net credit sales of $800,000 and collections of $763,000. It wrote off as uncollectible accounts receivable of $7,300. However, a $3,100 account previously written off as uncollectible was recovered before the end of the current period. Uncollectible accounts are estimated to total $25,000 at the end of the period. **(Omit cost of goods sold entries.)**

Instructions

a. Prepare the entries to record sales and collections during the period.
b. Prepare the entry to record the write-off of uncollectible accounts during the period.
c. Prepare the entries to record the recovery of the uncollectible account during the period.
d. Prepare the entry to record bad debt expense for the period.
e. Determine the ending balances in Accounts Receivable and Allowance for Doubtful Accounts.
f. What is the net realizable value of the receivables at the end of the period?

Journalize receivables transactions.

E8.4 **(LO1,2), AP** On January 1, 2025, Budd Corporation started the year with a balance in Accounts Receivable of $145,000 and a credit balance in Allowance for Doubtful Accounts of $7,950. During 2025, the company had total sales of $600,000; 75% of these sales were credit sales. Collections (not including the cash sales) during the period were $480,000. Budd wrote off as uncollectible accounts receivable of $8,100. In addition, an account of $840 that was previously written off as uncollectible was recovered during the year. Uncollectible accounts are estimated to be 5% of the end-of-year Accounts Receivable balance. **(Omit cost of goods sold entries.)**

Instructions

a. Prepare the entries to record sales and collections during the period.
b. Prepare the entry to record the write-off of uncollectible accounts during the period.
c. Prepare the entries to record the recovery of the uncollectible account during the period.
d. Determine the ending balance in Accounts Receivable.
e. Determine the ending balance in Allowance for Doubtful Accounts.
f. Prepare the entry to record bad debt expense for the period.
g. What is the net realizable value of the receivables at December 31, 2025?

Journalize receivables transactions.

E8.5 **(LO 1, 2), AP** Assume the following information for Larry Corp.

Accounts receivable (beginning balance)	$142,000
Allowance for doubtful accounts (beginning balance)	11,360
Net credit sales	945,000
Collections	910,000
Write-offs of accounts receivable	5,200
Collections of accounts previously written off	1,900

Uncollectible accounts are expected to be 8% of the ending balance in accounts receivable.

Instructions

a. Prepare the entries to record sales and collections during the period.

b. Prepare the entry to record the write-off of uncollectible accounts during the period.

c. Prepare the entries to record the recovery of the uncollectible account during the period.

d. Determine the ending balance in Accounts Receivable and the unadjusted balance in Allowance for Doubtful Accounts.

e. Prepare the entry to record bad debt expense for the period.

f. Determine the ending (adjusted) balance in Allowance for Doubtful Accounts.

E8.6 **(LO 2), AP** The ledger of Macarty Company at the end of the current year shows Accounts Receivable $78,000, Credit Sales $810,000, and Sales Returns and Allowances $40,000.

Prepare entries to record bad debt expense.

Instructions

a. If Macarty uses the direct write-off method to account for uncollectible accounts, journalize the entry if on July 7 Macarty determines that Matisse Company's $900 balance is uncollectible.

b. Assume Macarty uses the allowance method to account for uncollectible accounts. If Allowance for Doubtful Accounts has a credit balance of $1,100 in the trial balance, journalize the adjusting entry at December 31, assuming bad debts are expected to be 10% of accounts receivable.

c. Assume Macarty uses the allowance method to account for uncollectible accounts. If Allowance for Doubtful Accounts has a debit balance of $500 in the trial balance, journalize the adjusting entry at December 31, assuming bad debts are expected to be 8% of accounts receivable.

E8.7 **(LO2), AP** The following represent different scenarios for Emma Company. Prior to any year-end adjusting entries, Emma Company had a balance in Accounts Receivable of $130,000. Credit sales during the period were $730,000, and Sales Returns and Allowances were $18,000.

Prepare entries to record bad debt expenses.

Instructions

Record the following independent events.

a. If Emma Company uses the direct write-off method to account for uncollectible accounts, journalize the entry if on May 8 Emma determined that Randal Company's $450 balance is uncollectible.

b. If Emma Company uses the allowance method to account for uncollectible accounts, journalize the entry if on May 8 Emma determined that Randal Company's $450 balance is uncollectible.

c. Assume Emma Company uses the allowance method to account for uncollectible accounts. If Allowance for Doubtful Accounts has a debit balance of $890 in the trial balance, journalize the adjusting entry at December 31, assuming bad debts are expected to be 9% of Accounts Receivable.

d. Assume Emma Company uses the allowance method to account for uncollectible accounts. If Allowance for Doubtful Accounts has a credit balance of $1,090 in the trial balance, journalize the adjusting entry at December 31, assuming bad debts are expected to be 7% of Accounts Receivable.

E8.8 **(LO 2), AP** Godfreid Company has accounts receivable of $95,400 at March 31, 2025. Credit terms are 2/10, n/30. At March 31, 2025, there is a $2,100 credit balance in Allowance for Doubtful Accounts prior to adjustment. The company uses the percentage-of-receivables basis for estimating uncollectible accounts. The company's estimates of bad debts are as shown below.

Determine bad debt expense, and prepare the adjusting entry.

	Balance, March 31		Estimated Percentage
Age of Accounts	**2025**	**2024**	**Uncollectible**
Current	$65,000	$75,000	2%
1–30 days past due	12,900	8,000	5
31–90 days past due	10,100	2,400	30
Over 90 days past due	7,400	1,100	50
	$95,400	$86,500	

Instructions

a. Determine the total estimated uncollectibles at March 31, 2025.

b. Prepare the adjusting entry at March 31, 2025, to record bad debt expense.

c. Discuss the implications of the changes in the aging schedule from 2024 to 2025.

Prepare entry for estimated uncollectibles, write-off, and recovery.

E8.9 **(LO 2), AP** On December 31, 2024, when its Allowance for Doubtful Accounts had a debit balance of $1,400, Dallas Co. estimates that 9% of its accounts receivable balance of $90,000 will become uncollectible and records the necessary adjustment to Allowance for Doubtful Accounts. On May 11, 2025, Dallas Co. determined that B. Jared's account was uncollectible and wrote off $1,200. On June 12, 2025, Jared paid the amount previously written off.

Instructions

Prepare the journal entries on December 31, 2024, May 11, 2025, and June 12, 2025.

Prepare entry for sale of accounts receivable.

E8.10 **(LO 2), AP** On March 3, Plume Appliances sells $710,000 of its receivables to Western Factors Inc. Western Factors Inc. assesses a service charge of 4% of the amount of receivables sold.

Instructions

Prepare the entry on Plume Appliances' books to record the sale of the receivables.

Prepare entry for credit card sale.

E8.11 **(LO 2), AP** On May 10, Keene Company sold merchandise for $4,000 and accepted the customer's Best Business Bank MasterCard. At the end of the day, the Best Business Bank MasterCard receipts were deposited in the company's bank account. Best Business Bank charges a 3.8% service charge for credit card sales.

Instructions

Prepare the entry on Keene Company's books to record the sale of merchandise. **(Omit cost of goods sold entries.)**

Prepare entry for credit card sale.

E8.12 **(LO 2), AP** On July 4, Mazie's Restaurant accepts a Visa card for a $250 dinner bill. Visa charges a 4% service fee.

Instructions

Prepare the entry on Mazie's books related to the transaction.

Prepare entries for notes receivable transactions.

E8.13 **(LO 3), AP** Moses Supply Co. has the following transactions related to notes receivable during the last 2 months of the year. The company does not make entries to accrue interest except at December 31.

Nov.	1	Loaned $60,000 cash to C. Bohr on a 12-month, 7% note.
Dec.	11	Sold goods to K. R. Pine, Inc., receiving a $3,600, 90-day, 8% note.
	16	Received a $12,000, 180-day, 9% note to settle an open account from A. Murdock.
	31	Accrued interest revenue on all notes receivable.

Instructions

Journalize the transactions for Moses Supply Co. **(Omit cost of goods sold entries.)**

Journalize notes receivable transactions.

E8.14 **(LO 3), AP** These transactions took place for Bramson Co.

2024

May	1	Received a $5,000, 12-month, 6% note in exchange for an outstanding account receivable from R. Stoney.
Dec.	31	Accrued interest revenue on the R. Stoney note.

2025

May	1	Received principal plus interest on the R. Stoney note. (No interest has been accrued since December 31, 2024.)

Instructions

Record the transactions in the general journal. The company does not make entries to accrue interest except at December 31.

Prepare entries for notes receivable transactions.

E8.15 **(LO 3), AP** Vandiver Company had the following select transactions.

Apr. 1, 2025	Accepted Goodwin Company's 12-month, 6% note in settlement of a $30,000 account receivable.
July 1, 2025	Loaned $25,000 cash to Thomas Slocombe on a 9-month, 10% note.
Dec. 31, 2025	Accrued interest on all notes receivable.
Apr. 1, 2026	Received principal plus interest on the Goodwin note.
Apr. 1, 2026	Thomas Slocombe dishonored its note; Vandiver expects it will eventually collect.

Instructions

Prepare journal entries to record the transactions. Vandiver prepares adjusting entries once a year on December 31.

Prepare a balance sheet presentation of receivables.

E8.16 **(LO 4), AP** Eileen Corp. had the following balances in receivable accounts at October 31, 2025 (in thousands): Allowance for Doubtful Accounts $52, Accounts Receivable $2,910, Other Receivables $189, and Notes Receivable $1,353.

Instructions

Prepare the balance sheet presentation of Eileen Corp.'s receivables in good form.

Identify the principles of receivables management.

E8.17 **(LO 4), K** The following is a list of activities that companies perform in relation to their receivables.

1. Selling receivables to a factor.
2. Reviewing company ratings in *The Dun and Bradstreet Reference Book of American Business.*
3. Collecting information on competitors' payment period policies.
4. Preparing monthly accounts receivable aging schedule and investigating problem accounts.
5. Calculating the accounts receivable turnover and average collection period.

Instructions

Match each of the activities listed above with a purpose of the activity listed below.

a. Determine to whom to extend credit.
b. Establish a payment period.
c. Monitor collections.
d. Evaluate the liquidity of receivables.
e. Accelerate cash receipts from receivable when necessary.

Compute ratios to evaluate a company's receivables balance.

E8.18 **(LO 4), AN** Suppose the following information was taken from the 2025 financial statements of **FedEx Corporation**, a major global transportation/delivery company.

(in millions)	2025	2024
Accounts receivable (gross)	$ 3,587	$ 4,517
Accounts receivable (net)	3,391	4,359
Allowance for doubtful accounts	196	158
Sales revenue	35,497	37,953
Total current assets	7,116	7,244

Instructions

Answer each of the following questions.

a. Calculate the accounts receivable turnover and the average collection period for 2025 for FedEx.
b. Is accounts receivable a material component of the company's total current assets?
c. Evaluate the balance in FedEx's allowance for doubtful accounts.

Evaluate liquidity.

E8.19 **(LO 4), AN** The following ratios are available for Ming Inc.

	2025	2024
Current ratio	1.3:1	1.5:1
Accounts receivable turnover	12 times	10 times
Inventory turnover	11 times	9 times

Instructions

a. Is Ming's short-term liquidity improving or deteriorating in 2025? Be specific in your answer, referring to relevant ratios.
b. Do changes in turnover ratios affect profitability? Explain.
c. Identify any steps Ming might have taken, or might wish to take, to improve its management of its accounts receivable and inventory turnovers.

Identify reason for sale of receivables.

E8.20 **(LO 4), C** In a recent annual report, **Office Depot, Inc.** notes that the company entered into an agreement to sell all of its credit card program receivables to financial service companies.

Instructions

Explain why Office Depot, a financially stable company with positive cash flow, would choose to sell its receivables.

Determine cash flows and evaluate quality of earnings.

E8.21 **(LO 4), AN** Bailey Corp. significantly reduced its requirements for credit sales. As a result, sales during the current year increased dramatically. It had receivables at the beginning of the year of $38,000 and ending receivables of $191,000. Credit sales were $380,000.

Instructions

a. Determine cash collections during the period.

b. Discuss how your findings in part (a) would affect Bailey Corp.'s quality of earnings ratio. (Do not compute.)

c. What concerns might you have regarding Bailey's accounting?

Identify key terms.

E8.22 **(LO 1, 2, 3, 4), K** The following words and phrases were discussed in this chapter.

1. Notes receivable.
2. Cash (net) realizable value.
3. Accounts receivable turnover.
4. Aging the accounts receivable.
5. Percentage-of-receivables basis.
6. Dishonored (defaulted) note.
7. Concentration of credit risk.
8. Allowance method.
9. Direct write-off method.
10. Factor.

Instructions

Match each word or phrase with its description below.

a. ________ Written promise (as evidenced by a formal instrument) for amounts to be received.

b. ________ A method of accounting for bad debts that involves estimating uncollectible accounts at the end of each period.

c. ________ A measure of the liquidity of accounts receivable, computed by dividing net credit sales by average net accounts receivable.

d. ________ A method of accounting for bad debts that involves charging receivable balances to Bad Debt Expense at the time receivables from a particular company are determined to be uncollectible.

e. ________ A finance company or bank that buys receivables from businesses for a fee and then collects the payments directly from the customers.

f. ________ The net amount a company expects to receive in cash from receivables.

g. ________ The threat of nonpayment from a single large customer or class of customers that could adversely affect the financial health of the company.

h. ________ A note that is not paid in full at maturity.

i. ________ A method of estimating the amount of bad debt expense whereby management establishes a percentage relationship between the amount of receivables and the expected losses from uncollectible accounts.

j. ________ A schedule of customer balances classified by the length of time they have been unpaid.

Problems

Journalize transactions related to bad debts.

P8.1 **(LO 2), AP** Rianna.com uses the allowance method of accounting for bad debts. The company produced the following aging of the accounts receivable at year-end.

		Number of Days Outstanding				
	Total	**0–30**	**31–60**	**61–90**	**91–120**	**Over 120**
Accounts receivable	$377,000	$222,000	$90,000	$38,000	$15,000	$12,000
% uncollectible		1%	4%	5%	8%	10%
Estimated bad debts						

Instructions

a. Tot. est. bad debts $10,120

a. Calculate the total estimated bad debts based on the above information.

b. Prepare the year-end adjusting journal entry to record the bad debts using the aged uncollectible accounts receivable determined in (a). Assume the unadjusted balance in Allowance for Doubtful Accounts is a $4,000 debit.

c. Of the above accounts, $5,000 is determined to be specifically uncollectible. Prepare the journal entry to write off the uncollectible account.

d. The company collects $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 Rianna.com 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?

P8.2 (LO 2, 4), AP At December 31, 2024, Suisse Imports reported this information on its balance sheet.

Prepare journal entries related to bad debt expense, and compute ratios.

Accounts receivable	$600,000
Less: Allowance for doubtful accounts	37,000

During 2025, the company had the following transactions related to receivables.

1.	Sales on account	$2,500,000
2.	Sales returns and allowances	50,000
3.	Collections of accounts receivable	2,200,000
4.	Write-offs of accounts receivable deemed uncollectible	41,000
5.	Recovery of bad debts previously written off as uncollectible	15,000

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. **(Omit cost of goods sold entries.)**

b. Enter the January 1, 2025, balances in Accounts Receivable and Allowance for Doubtful Accounts, post the entries to the two accounts (use T-accounts), and determine the balances.

b. A/R bal. $[illegible]

c. Prepare the journal entry to record bad debt expense for 2025, assuming that aging the accounts receivable indicates that estimated bad debts are $46,000.

d. Compute the accounts receivable turnover and average collection period.

P8.3 (LO 2), AP Presented below is an aging schedule for Bryan Company at December 31, 2024.

Journalize transactions related to bad debts.

Excel

		Not Yet	Number of Days Past Due			
Customer	**Total**	**Due**	**1–30**	**31–60**	**61–90**	**Over 90**
Aneesh	$ 24,000		$ 9,000	$15,000		
Bird	30,000	$ 30,000				
Cope	50,000	5,000	5,000		$40,000	
DeSpears	38,000					$38,000
Others	120,000	72,000	35,000	13,000		
	$262,000	$107,000	$49,000	$28,000	$40,000	$38,000
Estimated percentage uncollectible		3%	7%	12%	24%	60%
Total estimated bad debts	$ 42,400	$ 3,210	$ 3,430	$ 3,360	$ 9,600	$22,800

At December 31, 2024, the unadjusted balance in Allowance for Doubtful Accounts is a credit of $8,000.

Instructions

a. Journalize and post the adjusting entry for bad debts at December 31, 2024. (Use T-accounts.)

a. Bad Debt Exp. $34,400

b. Journalize and post to the allowance account these 2025 events and transactions:

1. March 1, a $600 customer balance originating in 2024 is judged uncollectible.
2. May 1, a check for $600 is received from the customer whose account was written off as uncollectible on March 1.

c. Journalize the adjusting entry for bad debts at December 31, 2025, assuming that the unadjusted balance in Allowance for Doubtful Accounts is a debit of $1,400 and the aging schedule indicates that total estimated bad debts will be $36,700.

P8.4 (LO 2), AP **Writing** Here is information related to Morgane Company for 2025.

Compute bad debt amounts.

Total credit sales	$1,500,000
Accounts receivable at December 31	840,000
Bad debts written off	37,000

Instructions

a. What amount of bad debt expense will Morgane Company report if it uses the direct write-off method of accounting for bad debts?

b. Bad Debt Exp. $30,600

b. Assume that Morgane Company uses the percentage-of-receivables basis to record bad debt expense and concludes that 4% of accounts receivable will become uncollectible. What amount of bad debt expense will the company record if Allowance for Doubtful Accounts has a credit balance of $3,000?

c. Assume the same facts as in part (b), except that there is a $1,000 debit balance in Allowance for Doubtful Accounts. What amount of bad debt expense will Morgane record?

d. What is a weakness of the direct write-off method of reporting bad debt expense?

Journalize entries to record transactions related to bad debts.

P8.5 **(LO 2), AP** **Writing** At December 31, 2025, the trial balance of Malone Company contained the following amounts before adjustment.

	Debit	Credit
Accounts Receivable	$180,000	
Allowance for Doubtful Accounts		$ 1,500
Sales Revenue		875,000

Instructions

a. Prepare the adjusting entry at December 31, 2025, to record bad debt expense, assuming that the aging schedule indicates that $10,200 of accounts receivable will be uncollectible.

b. Bad Debt Exp. $11,700

b. Repeat part (a), assuming that instead of a credit balance there is a $1,500 debit balance in Allowance for Doubtful Accounts.

c. During the next month, January 2026, a $2,100 account receivable is written off as uncollectible. Prepare the journal entry to record the write-off.

d. Repeat part (c), assuming that Malone Company 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?

Journalize various receivables transactions.

P8.6 **(LO 1, 3), AP** On January 1, 2025, Harvee Company had Accounts Receivable of $54,200 and Allowance for Doubtful Accounts of $3,700. Harvee Company prepares financial statements annually. During the year, the following selected transactions occurred.

Jan.	5	Sold $4,000 of merchandise to Rian Company, terms n/30.
Feb.	2	Accepted a $4,000, 4-month, 9% promissory note from Rian Company for balance due.
	12	Sold $12,000 of merchandise to Cato Company and accepted Cato's $12,000, 2-month, 10% note for the balance due.
	26	Sold $5,200 of merchandise to Malcolm Co., terms n/10.
Apr.	5	Accepted a $5,200, 3-month, 8% note from Malcolm Co. for balance due.
	12	Collected Cato Company note in full.
June	2	Collected Rian Company note in full.
	15	Sold $2,000 of merchandise to Gerri Inc. and accepted a $2,000, 6-month, 12% note for the amount due.

Instructions

Journalize the transactions. **(Omit cost of goods sold entries.)**

Explain the impact of transactions on ratios.

P8.7 **(LO 4), C** The president of Mossy Enterprises asks if you could indicate the impact certain transactions have on the following ratios.

Transaction	Current Ratio (2:1)	Accounts Receivable Turnover (10×)	Average Collection Period (36.5 days)
1. Received $5,000 on cash sale. The cost of the goods sold was $2,600.			
2. Recorded bad debt expense of $500 using allowance method.			
3. Wrote off a $100 account receivable as uncollectible (Uses allowance method.)			
4. Recorded $2,500 sales on account. The cost of the goods sold was $1,500.			

Instructions

Complete the table, indicating whether each transaction will increase (I), decrease (D), or have no effect (NE) on the specific ratios provided for Mossy Enterprises.

P8.8 **(LO 1, 2, 3, 4), AP** Milton Company closes its books on its July 31 year-end. The company does not make entries to accrue for interest except at its year-end. On June 30, the Notes Receivable account balance is $23,800. Notes Receivable include the following.

Prepare entries for various credit card and notes receivable transactions.

Date	Maker	Face Value	Term	Maturity Date	Interest Rate
April 21	Coote Inc.	$ 6,000	90 days	July 20	8%
May 25	Brady Co.	7,800	60 days	July 24	10%
June 30	BMG Corp.	10,000	6 months	December 31	6%

During July, the following transactions were completed.

July 5 Made sales of $4,500 on Milton credit cards.
14 Made sales of $600 on Visa credit cards. The credit card service charge is 3%.
20 Received payment in full from Coote Inc. on the amount due.
24 Received payment in full from Brady Co. on the amount due.

Instructions

a. Journalize the July transactions and the July 31 adjusting entry for accrued interest receivable (interest is computed using 360 days) **(omit cost of goods sold entries.)**

b. Enter the balances at July 1 in the receivable accounts and post the entries to all of the receivable accounts. (Use T-accounts.)

b. A/R bal. $ 4,500

c. Show the balance sheet presentation of the receivable accounts at July 31.

c. Tot. receivables $14,550

P8.9 **(LO 4), AN** Suppose the amounts presented here are basic financial information (in millions) from the 2025 annual reports of **Nike** and **adidas**.

Calculate and interpret various ratios.

	Nike	adidas
Sales revenue	$19,176.1	€10,381
Allowance for doubtful accounts, beginning	78.4	119
Allowance for doubtful accounts, ending	110.8	124
Accounts receivable balance (gross), beginning	2,873.7	1,743
Accounts receivable balance (gross), ending	2,994.7	1,553

Instructions

Calculate the accounts receivable turnover and average collection period for both companies. Comment on the difference in their collection experiences.

Continuing Case

Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 through 7.)

CC8 One of Natalie'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 Natalie'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 Natalie if she would be willing to sell him the mixer on credit. Natalie comes to you for advice.

Go to Wiley Course Resources for complete case details and instructions.

leungchopan/
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Comprehensive Accounting Cycle Review

ACR8 Hudson Corporation's balance sheet at December 31, 2024, is presented below.

Hudson Corporation
Balance Sheet
December 31, 2024

Cash	$13,100	Accounts payable	$ 8,750
Accounts receivable	19,780	Common stock	20,000
Allowance for doubtful accounts	(800)	Retained earnings	12,730
Inventory	9,400		
	$41,480		$41,480

During January 2025, the following transactions occurred. Hudson uses the perpetual inventory method.

Jan.	1	Hudson accepted a 4-month, 8% note from Betheny Company in payment of Betheny's $1,200 account.
	3	Hudson wrote off as uncollectible the accounts of Walter Corporation ($450) and Drake Company ($280).
	8	Hudson purchased $17,200 of inventory on account.
	11	Hudson sold for $25,000 on account inventory that cost $17,500.
	15	Hudson sold inventory that cost $700 to Jack Rice for $1,000. Rice charged this amount on his Visa First Bank card. The service fee charged Hudson by First Bank is 3%.
	17	Hudson collected $22,900 from customers on account.
	21	Hudson paid $16,300 on accounts payable.
	24	Hudson received payment in full ($280) from Drake Company on the account written off on January 3.
	27	Hudson purchased advertising supplies for $1,400 cash.
	31	Hudson 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 6% of the January 31, 2025, accounts receivable.
3. A count of advertising supplies on January 31, 2025, reveals that $560 remains unused.
4. The income tax rate is 30%. (*Hint:* Prepare the income statement up to Income before taxes and multiply by 30% to compute the amount; round to whole dollars.)

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. **(Include entries for cost of goods sold using the perpetual inventory system.)**

b. Prepare an adjusted trial balance at January 31, 2025.

c. Prepare an income statement and a retained earnings statement for the month ending January 31, 2025, and a classified balance sheet as of January 31, 2025.

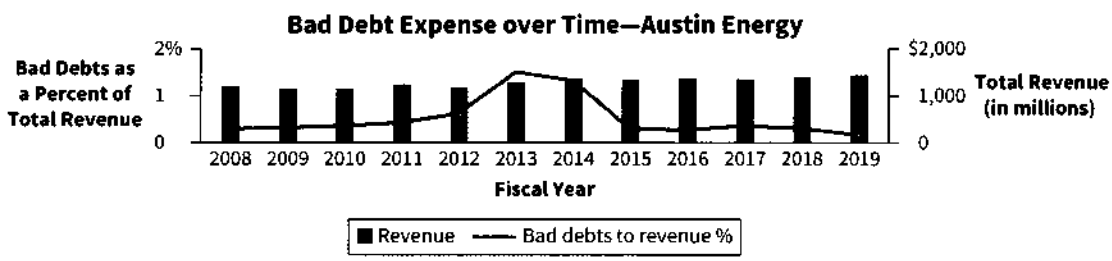
Data Analytics in Action

Using Data Visualization to Understand Accounts Receivable and Bad Debts over Time

Excel

DA8.1 Data visualization can be used to understand accounts receivable and bad debts.

Example: Many stakeholders are interested in bad debt information. Under transparency rules, cities, states, and other governments publicize financial data. Using data visualization, we can see trends in the data from the city of Austin, Texas, regarding energy revenue and bad debt, as the following chart shows.



Source: City of Austin open data portal.

The chart indicates a steady increase in bad debt expense as a percent of total revenue from 2008 to 2011, followed by a steep peak in 2014. The expense percentage declined sharply in 2015, followed by a slight increase in 2016 and a decline to the lowest level in 2019. Over the entire 12-year period, revenue increased steadily. However, the trend in revenue does not explain the spike in bad debt expense, so there is likely some other cause of the increase in bad debt expense from 2012 to 2013.

What conclusions can we make about the city of Austin's ability to collect amounts owed by energy customers? Except for the peak in 2013 and 2014, Austin appears to be efficient in collecting amounts due. While the highest percent uncollectible is 1.51%, this amount is relatively low compared to many industries, which experience higher rates of uncollectibility. Austin's lower bad debt expense rate may be due to the nature of the industry-providing service—viewed by most people as essential. Customers are more likely to pay their energy bills while foregoing payments to other obligations they may owe.

In this case, you will use the data to calculate the relationships of accounts receivable to revenue and assets, and prepare a combo column and line chart to visualize those relationships for each of the largest revenue-producing companies in the United States.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Analytics to Understand Notes Receivable over Time

DA8.2 Banks have large loan portfolios that result from loans to customers. Analytics can help us understand the proportion of these notes receivables to the bank's total assets. For this case, you will use the assets section of **JP Morgan Chase**'s balance sheet for 2 years to (1) calculate the proportion of each asset as a percent of total assets for both years (this is often called common size financial statements), (2) create pie charts, and (3) analyze the differences.

Go to Wiley Course Resources for complete case details and instructions.

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT8.1 Refer to the financial statements of **Apple Inc.** in Appendix A.

Instructions

a. Calculate the accounts receivable turnover and average collection period for 2020. (Assume all sales were credit sales.)

b. Did Apple have any potentially significant credit risks in 2020?

c. What conclusions can you draw from the information in parts (a) and (b)?

Comparative Analysis Problem: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT8.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements of **Under Armour** are presented in Appendix C.

Instructions

a. Based on the information contained in these financial statements, compute the following 2020 values for each company.

1. Accounts receivable turnover.
2. Average collection period for accounts receivable.

b. What conclusions concerning the management of accounts receivable can be drawn from these data?

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT8.3 The financial statements of **Amazon.com, Inc.** are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

a. Based on the information contained in these financial statements, compute the following values for each company for the most recent fiscal year provided.

1. Accounts receivable turnover. (For Amazon.com, use "Net product sales." Assume all sales were credit sales.)
2. Average collection period for accounts receivable.

b. What conclusions concerning the management of accounts receivable can be drawn from these data?

Interpreting Financial Statements

CT8.4 Suppose the information below is from the 2025 financial statements and accompanying notes of **The Scotts Company**, a major manufacturer of lawn-care products.

(in millions)	2025	2024
Accounts receivable	$ 270.4	$ 259.7
Allowance for uncollectible accounts	10.6	11.4
Sales revenue	2,981.8	2,871.8
Total current assets	1,044.9	999.3

The Scotts Company
Notes to the Financial Statements

Note 19. Concentrations of Credit Risk

Financial instruments which potentially subject the Company to concentration of credit risk consist principally of trade accounts receivable. The Company sells its consumer products to a wide variety of retailers, including mass merchandisers, home centers, independent hardware stores, nurseries, garden outlets, warehouse clubs, food and drug stores and local and regional chains. Professional products are sold to commercial nurseries, greenhouses, landscape services and growers of specialty agriculture crops. Concentrations of accounts receivable at September 30, net of accounts receivable pledged under the terms of the New MARP Agreement whereby the purchaser has assumed the risk associated with the debtor's financial inability to pay ($146.6 million and $149.5 million for 2025 and 2024, respectively), were as follows.

	2025	2024
Due from customers geographically located in North America	53%	52%
Applicable to the consumer business	61%	54%
Applicable to Scotts LawnService®, the professional businesses (primarily distributors), Smith & Hawken® and Morning Song®	39%	46%
Top 3 customers within consumer business as a percent of total consumer accounts receivable	0%	0%

The remainder of the Company's accounts receivable at September 30, 2025 and 2024, were generated from customers located outside of North America, primary retailers, distributors, nurseries and growers in Europe. No concentrations of customers or individual customers within this group account for more than 10% of the Company's accounts receivable at either balance sheet date.

The Company's three largest customers are reported within the Global Consumer segment, and are the only customers that individually represent more than 10% of reported consolidated net sales for each of the last three fiscal years. These three customers accounted for the following percentages of consolidated net sales for the fiscal years ended September 30:

	Largest Customer	2nd Largest Customer	3rd Largest Customer
2025	21.0%	13.5%	13.4%
2024	20.2%	10.9%	10.2%
2023	21.5%	11.2%	10.5%

Instructions

Answer each of the following questions.

a. Calculate the accounts receivable turnover and average collection period for 2025 for the company.

b. Is accounts receivable a material component of the company's total 2025 current assets?

c. Scotts sells seasonal products. How might this affect the accuracy of your answer to part (a)?

d. Evaluate the credit risk of Scotts' 2025 concentrated receivables.

e. Comment on the informational value of Scotts' Note 19 on concentrations of credit risk.

Real-World Focus

CT8.5 As we discussed in the chapter, companies often have an effective factoring strategy.

Instructions

Go to the **Commercial Capital LLC** website, click on **Invoice Factoring**, and then 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?

CT8.6 The October 31, 2017, issue of the *Wall Street Journal* includes an article by Suzanne Kapner entitled "Inside the Decline of Sears, the Amazon of the 20th Century."

Instructions

Read the article and then answer the following questions.

a. Describe some of the steps that suppliers took in response to the decline of Sears' credit quality.

b. As its suppliers took the steps described in part (a), what were the implications for Sears' ability to compete as a retailer?

c. How did companies that provide factoring services respond to Sears' troubles?

Decision-Making Across the Organization

CT8.7 Emilio and René Santos own Club Fandango. From its inception, Club Fandango has sold merchandise on either a cash or credit basis, but no credit cards have been accepted. During the past several months, the Santos have begun to question their credit-sales policies. First, they have lost some sales because of their refusal to allow customers to pay with credit cards. Second, representatives of two metropolitan banks have convinced them to accept their national credit cards. One bank, Business National Bank, has stated that (1) its credit card fee is 4% and (2) it pays the retailer 96 cents on each $1 of sales within 3 days of receiving the credit card billings.

The Santos decide that they should determine the cost of carrying their own credit sales. From the accounting records of the past 3 years, they accumulate these data:

	2025	2024	2023
Net credit sales	$500,000	$600,000	$400,000
Collection agency fees for slow-paying customers	2,900	2,600	1,600
Salary of part-time accounts receivable clerk	4,400	4,400	4,400

Credit and collection expenses as a percentage of net credit sales are as follows: uncollectible accounts 1.6%, billing and mailing costs .5%, and credit investigation fee on new customers .2%.

Emilio and René also determine that the average accounts receivable balance outstanding during the year is 5% of net credit sales. The Santos estimate that they could earn an average of 10% annually on cash invested in other business opportunities.

Instructions

With the class divided into groups, answer the following.

a. Prepare a tabulation for each year showing total credit and collection expenses in dollars and as a percentage of net credit sales.

b. Determine the net credit and collection expenses in dollars and as a percentage of sales after considering the revenue not earned from other investment opportunities. (*Note:* The income lost on the cash held by the bank for 3 days is considered to be immaterial.)

c. Discuss both the financial and nonfinancial factors that are relevant to the decision.

Communication Activity

CT8.8 Chien Corporation is a recently formed business selling the "World's Best Doormat." The corporation is selling doormats faster than Chien can make them. It has been selling the product on a credit basis, telling customers to "pay when they can." Oddly, even though sales are tremendous, the company is having trouble paying its bills.

Instructions

Write a memo to the president of Chien Corporation discussing these questions:

a. What steps should be taken to improve the company's ability to pay its bills?

b. What accounting steps should be taken to measure its success in improving collections and in recording its collection success?

c. If the corporation is still unable to pay its bills, what additional steps can be taken with its receivables to ease its liquidity problems?

Ethics Case

CT8.9 As its year-end approaches, it appears that Mendez Corporation's net income will increase 10% this year. The president of Mendez Corporation, nervous that the stockholders might expect the company to sustain this 10% growth rate in net income in future years, suggests that the controller increase the allowance for doubtful accounts to 4% of receivables in order to lower this year's net income. The president thinks that the lower net income, which reflects a 6% growth rate, will be a more sustainable rate of growth for Mendez Corporation in future years. The controller of Mendez Corporation believes that the company's yearly allowance for doubtful accounts should be 2% of receivables.

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 Mendez Corporation's growth rate in estimating the allowance? Explain your answer.

All About You

CT8.10 Credit card usage in the United States is substantial. Many startup companies use credit cards as a way to help meet short-term financial needs. The most common forms of debt for startups are use of credit cards and loans from relatives.

Suppose that you start up Fantastic Sandwich Shop. You invested your savings of $20,000 and borrowed $70,000 from your relatives. Although sales in the first few months are good, you see that you may not have sufficient cash to pay expenses and maintain your inventory at acceptable levels, at least in the short term. You decide you may need to use one or more credit cards to fund the possible cash shortfall.

Instructions

a. Go to the Internet and find two sources that provide insight into how to compare credit card terms.

b. Develop a list, in descending order of importance, as to what features are most important to you in selecting a credit card for your business.

c. Examine the features of your present credit card. (If you do not have a credit card, select a likely one online for this exercise.) Given your analysis above, what are the three major disadvantages of your present credit card?

FASB Codification Activity

CT8.11 If your school has a subscription to the FASB Codification, log in and prepare responses to the following.

a. How are receivables defined in the Codification?

b. What are the conditions under which losses from uncollectible receivables (Bad Debt Expense) should be reported?

Answers to Insight and Accounting Across the Organization Questions

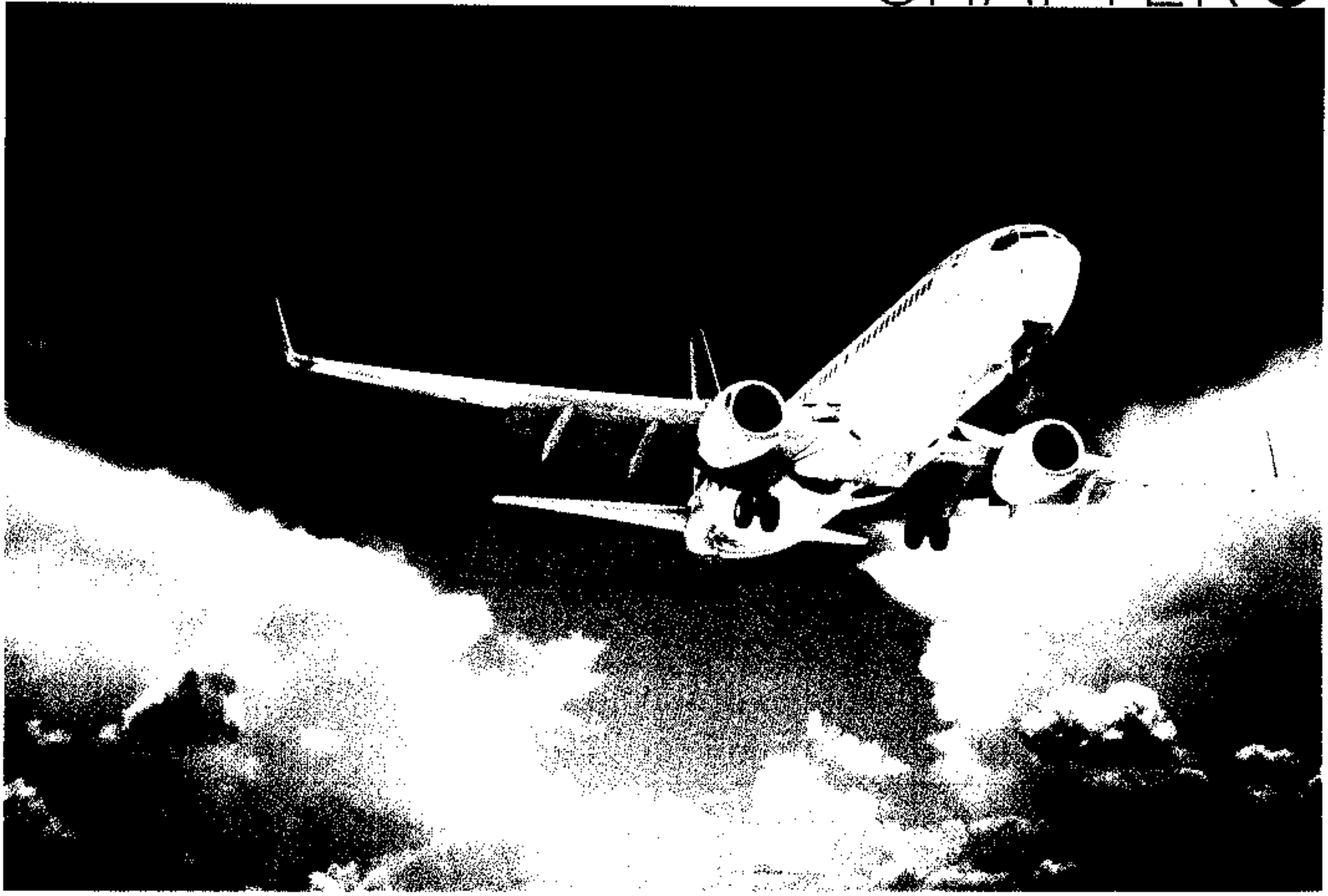
Cookie Jar Allowances **Q:** How might investors determine that a company is managing its earnings? **A:** If the balance sheet reflects an increase in Accounts Receivable and a decrease in Allowance for Doubtful Accounts, this could indicate an attempt to manage earnings by reducing the estimated uncollectible percentage.

How Does a Credit Card Work? **Q:** Assume that Foot Locker prepares a bank reconciliation at the end of each month. If some credit card sales have not been processed by the bank, how should Foot Locker treat these transactions on its bank reconciliation? **A:** Foot Locker would treat the credit card receipts as deposits in transit. It has already recorded the receipts as cash. Its bank will increase Foot Locker's cash account when it receives the receipts.

Bad Information Can Lead to Bad Loans **Q:** What steps should the banks have taken to ensure the accuracy of financial information provided on loan applications? **A:** At a minimum, the bank should have requested copies of recent income tax forms and contacted the listed employer to verify income. To verify ownership and value of assets, it should have examined bank statements, investment statements, and title documents, and should have employed appraisers.

They've Got Your Number **Q:** Why might a company want to consider a customer's social media network when deciding whether to grant the customer credit? **A:** A customer's social media network might indicate if the applicant's contacts have had some negative experiences with the applicant, such as the applicant having a history of paying very slowly or not at all.

CHAPTER **9**



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Reporting and Analyzing Long-Lived Assets

Chapter Preview

For airlines and many other companies, making the right decisions regarding long-lived assets is critical because these assets represent huge investments. The discussion in this chapter is in two parts: plant assets and intangible assets. **Plant assets** are the property, plant, and equipment (physical assets) that commonly come to mind when we think of what a company owns. **Intangible assets**, such as copyrights and patents, lack physical substance but can be extremely valuable and vital to a company's success.

Feature Story

A Tale of Two Airlines

So, you're interested in starting a new business. Have you thought about the airline industry? Today, many of the most profitable airlines are not well-known majors like **American Airlines** and **United**. In fact, most giant, older airlines seem to have a history of bankruptcy. In one year, five major airlines representing 24% of total U.S. capacity were operating under bankruptcy protection.

Not all airlines are hurting. The growth and profitability in the airline industry today is found at relative newcomers like **Southwest Airlines** and **JetBlue Airways**. These and other newer airlines compete primarily on ticket prices. During a recent five-year period, the low-fare airline market share increased by 47%, reaching 22% of U.S. airline capacity.

Southwest was the first upstart to make it big. It did so by taking a different approach. It bought small, new, fuel-efficient planes. Also, instead of the "hub-and-spoke" approach used by the majors, it opted for direct, short hop, no frills flights. It was all about controlling costs—getting the most out of its efficient new planes.

Discount airlines such as **Sun Country** and **Allegiant Travel** chose an approach quite different from that of Southwest. They buy low-priced used planes that are 20 to 30 years old. When Covid-19 caused a sharp reduction in travel, the price of used planes plummeted. Both of these airlines took advantage of this opportunity by buying even more used planes during this time. Older planes have higher fuel and maintenance costs, but these airlines say the lower initial equipment cost outweighs the additional operating costs.

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Explain the accounting for plant asset expenditures.	• Determining the cost of plant assets • Expenditures during useful life • To buy or lease?	**DO IT! 1** Cost of Plant Assets
LO 2 Apply depreciation methods to plant assets.	• Factors in computing depreciation • Depreciation methods • Revising depreciation • Impairments	**DO IT! 2a** Straight-Line Depreciation **2b** Revised Depreciation
LO 3 Explain how to account for the disposal of plant assets.	• Sale of plant assets • Retirement of plant assets	**DO IT! 3** Plant Asset Disposals
LO 4 Identify the basic issues related to reporting intangible assets.	• Accounting for intangible assets • Types of intangible assets • Research and development costs	**DO IT!** 4 Classification Concepts
LO 5 Discuss how long-lived assets are reported and analyzed.	• Presentation • Analysis	**DO IT! 5** Asset Turnover

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.
Visit Wiley Course Resources for additional tutorials and practice opportunities.

9.1 Plant Asset Expenditures

LEARNING OBJECTIVE 1

Explain the accounting for plant asset expenditures.

Plant assets are resources that have three characteristics.

1. They have physical substance (a definite size and shape).
2. They are used in the operations of the business.
3. They are not intended for sale to customers.

Plant assets 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.

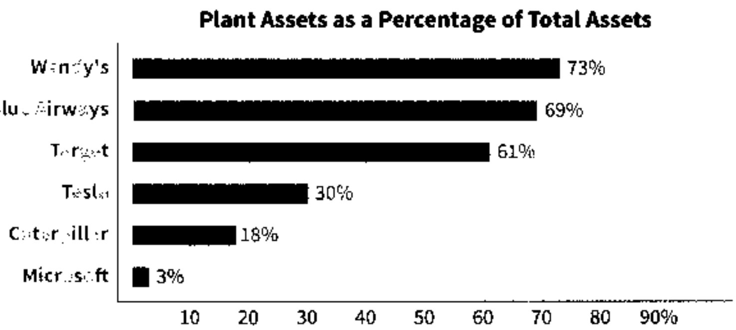


ILLUSTRATION 9.1
Percentages of plant assets in relation to total assets

Determining the Cost of Plant Assets

The **historical cost principle** requires that companies record plant assets at cost. Thus, JetBlue Airways and Southwest Airlines record their planes at cost. **Cost consists of all expenditures necessary to acquire an asset and make it ready for its intended use.** For example, when **Boeing** buys equipment, the purchase price, freight costs paid by Boeing, and installation costs are all part of the cost of the equipment.

Cost is measured by the cash paid in a cash transaction or by the **cash equivalent price** paid when companies use noncash assets in payment.

- **The cash equivalent price is equal to the fair value of the asset given up or the fair value of the asset received, whichever is more clearly determinable.**
- Once cost is established, it becomes the basis of accounting for the plant asset over its useful life. Current fair value is not used to increase the recorded cost after acquisition.

We explain the application of the historical cost principle to each of the major classes of plant assets in the following sections (see **International Note**).

International Note
IFRS is more flexible regarding asset valuation. Companies revalue to fair value when they believe this information is more relevant.

Land

Companies often purchase **land** as a building site for a manufacturing plant or office building. The cost of land includes the following.

1. The cash purchase price.
2. Closing costs such as title and attorney fees.
3. Real estate broker commissions.
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** (see Helpful Hint). 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 illustrate, assume that Hayes Company acquires real estate at a cash cost of $100,000. The property contains an old warehouse that is razed at a net cost of $6,000 ($7,500 in demolition costs less $1,500 proceeds from salvaged materials). Additional expenditures are the attorney's fee, $1,000, and the real estate broker's commission, $8,000. The cost of the land is $115,000, computed as shown in **Illustration 9.2**.

ILLUSTRATION 9.2
Computation of cost of land

Land	
Cash price of property	$100,000
Net removal cost of warehouse ($7,500 − $1,500)	6,000
Attorney's fee	1,000
Real estate broker's commission	8,000
Cost of land	$115,000

Hayes makes the following entry to record the acquisition of the land.

A	=	L	+	SE
+115,000				
−115,000				

Cash Flows
−115,000

Land	115,000	
Cash		115,000
(To record purchase of land)		

Land Improvements

Land improvements are structural additions with limited lives that are made to land.

- Examples are driveways, parking lots, fences, 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 **Home Depot** includes the amount paid for paving, fencing, and lighting. Thus, Home Depot debits to Land Improvements the total of all of these costs.

Land improvements have limited useful lives. Even when well-maintained, they will eventually need to 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 fee, 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**, its cost consists 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 interest costs incurred during 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, computers, printers, and delivery trucks. JetBlue Airways' equipment includes aircraft, in-flight entertainment systems, and trucks for ground operations.

- The cost of equipment consists of the cash purchase price, sales taxes, freight charges, and insurance during transit paid by the purchaser.
- The cost also includes expenditures required in assembling, installing, and testing the equipment.

However, companies treat as expenses the costs of motor vehicle licenses and accident insurance on company trucks and cars. Such items are **annual recurring expenditures and do not benefit future periods**. Two criteria apply in determining the cost of equipment:

1. The frequency of the cost—one time or recurring.
2. The benefit period—the life of the asset or one year.

To illustrate, assume that Lenard Company purchases a delivery truck on January 1 at a cash price of $22,000. Related expenditures are sales taxes $1,320, painting and lettering $500, motor vehicle license $80, and a three-year accident insurance policy $1,600. The cost of the delivery truck is $23,820, computed as shown in **Illustration 9.3**.

ILLUSTRATION 9.3
Computation of cost of delivery truck

Delivery Truck	
Cash price	$22,000
Sales taxes	1,320
Painting and lettering	500
Cost of delivery truck	$23,820

Lenard treats the cost of a motor vehicle license as an expense and the cost of an insurance policy as a prepaid asset. Thus, the company records the purchase of the truck and related expenditures as follows.

				A	= L +	SE
Equipment		23,820		+23,820		
License Expense		80				−80 Exp
Prepaid Insurance		1,600		+1,600		
	Cash		25,500	−25,500		
	(To record purchase of delivery truck and related expenditures)					

Cash Flows
−25,500

For another example, assume Merten Company purchases factory machinery at a cash price of $50,000. Related expenditures are sales taxes $3,000, insurance during shipping $500, and installation and testing $1,000. The cost of the factory machinery is $54,500, computed as shown in **Illustration 9.4**.

ILLUSTRATION 9.4
Computation of cost of factory machinery

Factory Machinery	
Cash price	$50,000
Sales taxes	3,000
Insurance during shipping	500
Installation and testing	1,000
Cost of factory machinery	**$54,500**

Thus, Merten records the purchase and related expenditures as follows.

A	=	L	+	SE
+54,500				
−54,500				

Cash Flows
−54,500

Equipment	54,500	
Cash		54,500
(To record purchase of factory machinery and related expenditures)		

Expenditures During Useful Life

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 asset.
- They usually are 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 whether to treat an item as a revenue expenditure or as a capital expenditure. Some companies, in order to boost income, have improperly capitalized expenditures that should have been treated as revenue expenditures. By "capitalizing" these costs, they spread the expense over a number of years rather than expensing all the costs in the current year.

Alternatively, assume that Rodriguez Co. purchases a number of wastepaper baskets. The proper accounting would appear to be to capitalize and then depreciate these wastepaper baskets over their useful lives. However, Rodriguez will generally expense these wastepaper baskets immediately. This practice is justified on the basis of **materiality**. Materiality refers to the impact of an item on a company's financial operations. Recall that the materiality concept states that if an item would not make a difference in decision-making, the company does not have to follow GAAP in reporting that item.

Anatomy of a Fraud

Bernie Ebbers was the founder and CEO of the phone company **WorldCom**. 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 stock 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 stock 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.

To Buy or Lease?

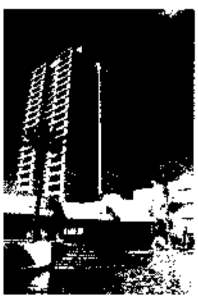
In this chapter, we focus on purchased assets, but we want to expose you briefly to an alternative—leasing. A **lease** is a contractual agreement in which the owner of an asset (the **lessor**) allows another party (the **lessee**) to use the asset for a period of time at an agreed price. In many industries, leasing is quite common. For example, one-third of heavy-duty commercial trucks are leased.

Some advantages of leasing an asset versus purchasing it are as follows.

1. **Reduced risk of obsolescence.** Frequently, lease terms allow the party using the asset (the lessee) to exchange the asset for a more modern one if it becomes outdated. This is much easier than trying to sell an obsolete asset.
2. **Little or no down payment.** To purchase an asset, most companies must borrow money, which usually requires a down payment of at least 20%. Leasing an asset requires little or no down payment.
3. **Shared tax advantages.** Startup companies typically earn little or no profit in their early years, and so they have little need for the tax deductions available from owning an asset. In a lease, the lessor gets the tax advantage because it owns the asset. It often will pass part of these tax savings on to the lessee in the form of lower lease payments.

Airlines often choose to lease many of their airplanes in long-term lease agreements. In recent financial statements, **JetBlue Airways** stated that it leased 50 of its 243 planes.

Accounting Across the Organization



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Many U.S. Firms Use Leases

Leasing is big business for U.S. companies. For example, in a recent year leasing accounted for about 33% of all business investment ($264 billion).

Who does the most leasing? Interestingly, major banks such as **Bank of America Leasing**, **Wells Fargo Equipment Finance**, and **U.S. Bank Equipment Finance** are the major lessors. Also, many companies have established separate leasing companies, such as **Boeing Capital Corporation**, **Dell Financial Services**, and **John Deere Capital Corporation**. As an example of the magnitude of leasing, leased planes account for nearly 40% of the U.S. fleet of commercial airlines. **Lease Finance Corporation** in Los Angeles owns more planes than any airline in the world.

Leasing is also becoming increasingly common in the hotel industry. **Marriott**, **Hilton**, and **Hyatt** are increasingly choosing to lease hotels that are owned by someone else.

Why might airline managers choose to lease rather than purchase their planes? (Answer is available at the end of the chapter.)

DO IT! 1 Cost of Plant Assets

Assume that Drummond Corp. purchases a delivery truck for $15,000 cash plus sales taxes of $900 and delivery costs of $500. The buyer also pays $200 for painting and lettering, $600 for an annual insurance policy, and $80 for a motor vehicle license. Explain how the company should account for each of these costs.

ACTION PLAN

- **Identify expenditures made in order to get delivery equipment ready for its intended use.**
- **Expense operating costs incurred during the useful life of the equipment.**

Solution

The first four payments ($15,000 purchase price, $900 sales taxes, $500 delivery, and $200 painting and lettering) are expenditures necessary to make the truck ready for its intended use. Thus, the cost of the truck is $16,600. The payments for insurance and the license are operating expenses incurred annually during the useful life of the asset.

Related exercise material: BE9.1, BE9.2, BE9.3, DO IT! 9.1, E9.1, E9.2, and E9.3.

9.2 Depreciation Methods

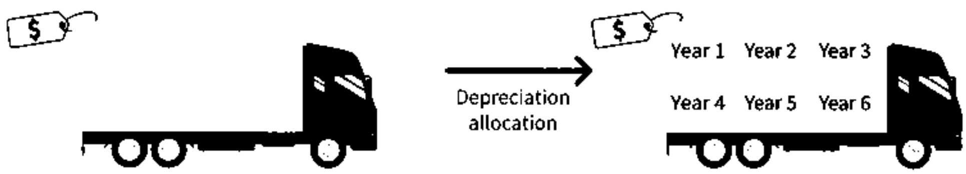
LEARNING OBJECTIVE 2

Apply depreciation methods to plant assets.

As explained in Chapter 4, **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.** Such cost allocation is designed to properly record expenses (efforts) with associated revenues (results) (see **Illustration 9.5**).

ILLUSTRATION 9.5

Depreciation as a cost allocation concept



Depreciation affects the balance sheet through accumulated depreciation, which companies report as a deduction from plant assets. It affects the income statement through depreciation expense.

It is important to understand that **depreciation is a cost allocation process, not an asset valuation process.** No attempt is made to measure the change in an asset's fair value during ownership.

- The **book value**—cost less accumulated depreciation—of a plant asset may differ significantly from its **fair value**.
- If an asset is fully depreciated, it can have zero book value but still have a significant fair value.

ETHICS NOTE

When a business is acquired, proper allocation of the purchase price to various asset classes is important since different depreciation treatment 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 (see Ethics Note). Each of these classes is considered to be a **depreciable asset** because the usefulness to the company and the revenue-producing ability of each class decline over the asset's useful life. Depreciation **does not apply to land** because its usefulness and revenue-producing ability generally remain intact as long as the land is owned. In fact, in many cases, the usefulness of land increases over time because of the scarcity of good 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.
- A decline in revenue-producing ability may also occur because of obsolescence. **Obsolescence** is the process by which an asset becomes out of date before it physically wears out.

The rerouting of major airlines from Chicago's Midway Airport to Chicago-O'Hare International Airport because Midway's runways were too short for giant jets is an example. Similarly, many companies replace their computers long before they originally planned to do so because technological improvements make their old hardware obsolete.

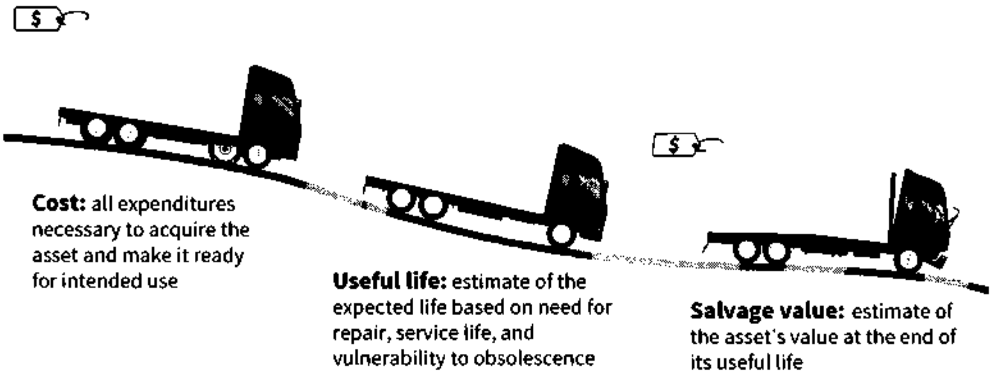
Recognizing depreciation for an asset does not result in the accumulation of cash for replacement of the asset. The balance in Accumulated Depreciation represents the total amount of the asset's cost that the company has charged to expense to date; **it is not a cash fund.**

Factors in Computing Depreciation

Three factors affect the computation of depreciation, as shown in **Illustration 9.6** (see **Helpful Hint**).

ILLUSTRATION 9.6

Three factors in computing depreciation



HELPFUL HINT

Depreciation expense is reported on the income statement. Accumulated depreciation is reported on the balance sheet as a deduction from plant assets.

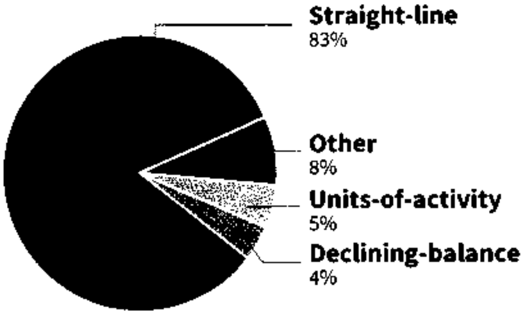
1. **Cost.** Earlier in the chapter, we explained the considerations that affect the cost of a depreciable asset. Remember that companies record plant assets at cost, in accordance with the historical cost principle.
2. **Useful life.** Useful life is an estimate of the expected productive life, also 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, repair and maintenance policies, and vulnerability of the asset to obsolescence. The company's past experience with similar assets is often helpful in deciding on expected useful life.
3. **Salvage value.** Salvage value is an estimate of the asset's value at the end of its useful life for its owner. Companies may base the value on the asset's worth as scrap or on its expected trade-in value. Like useful life, salvage value is an estimate. In making the estimate, management considers how it plans to dispose of the asset and its experience with similar assets.

Depreciation Methods

Although a number of methods exist, depreciation is generally computed using one of three methods:

1. Straight-line
2. Declining-balance

ILLUSTRATION 9.7 Use of depreciation methods in major U.S. companies



Like the alternative inventory methods discussed in Chapter 6, each of these depreciation methods is acceptable under generally accepted accounting principles. Management selects the method it believes best measures an asset's contribution to revenue over its useful life. Once a company chooses a method, it should apply that method consistently over the useful life of the asset. Consistency enhances the ability to analyze financial statements over multiple years.

Illustration 9.7 shows the distribution of the primary depreciation methods in a sample of the largest U.S. companies. Clearly, straight-line depreciation is the most widely used approach. In fact, because some companies use more than one method, **straight-line depreciation is used for some or all of the depreciation taken by more than 95% of U.S. companies**. For this reason, we illustrate procedures for straight-line depreciation and discuss the alternative depreciation approaches only at a conceptual level. This coverage introduces you to the basic idea of depreciation as an allocation concept without entangling you in too much procedural detail. (Also, note that many calculators are preprogrammed to perform the basic depreciation methods.) Details on the alternative approaches are presented in Appendix 9A.

- No matter what 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 salvage value.

Our illustration of depreciation methods, both here and in the chapter appendix, is based on the following data relating to a small delivery truck purchased by Bill's Pizzas on January 1, 2025.

Cost	$13,000
Estimated salvage value	$1,000
Estimated useful life (in years)	5
Estimated useful life (in miles)	100,000

Straight-Line Method

Under the straight-line method, companies expense an equal amount of depreciation each year of the asset's useful life. Management must choose the useful life of an asset based on its own expectations and experience.

To compute the annual depreciation expense, we divide depreciable cost by the estimated useful life. As indicated above, **depreciable cost** represents the total amount subject to depreciation; it is calculated as the cost of the plant asset less its salvage value. Illustration 9.8 shows the computation of depreciation expense in the first year for Bill's Pizzas' delivery truck.

ILLUSTRATION 9.8

Formula for straight-line method

Cost	−	Salvage Value	=	Depreciable Cost
$13,000	−	$1,000	=	$12,000

Depreciable Cost	÷	Useful Life (in years)	=	Depreciation Expense
$12,000	÷	5	=	$2,400

Alternatively, we can compute an annual **rate** at which the company depreciates the delivery truck. In this case, the rate is 20% (100% ÷ 5 years). When an annual rate is used under the straight-line method, the company applies the percentage rate to the depreciable cost of the asset, as shown in the **depreciation schedule** in Illustration 9.9.

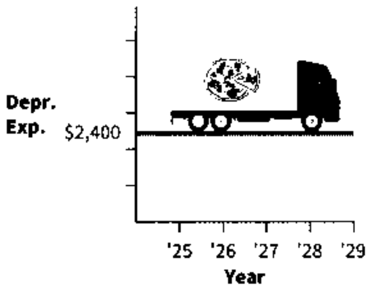
Bill's Pizzas

	Computation			Annual	End of Year	
Year	**Depreciable Cost**	× **Depreciation Rate**	=	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
2025	$12,000	20%		$ 2,400	$ 2,400	$10,600*
2026	12,000	20		2,400	4,800	8,200
2027	12,000	20		2,400	7,200	5,800
2028	12,000	20		2,400	9,600	3,400
2029	12,000	20		2,400	12,000	1,000
			Total	$12,000		

*$13,000 − $2,400

ILLUSTRATION 9.9

Straight-line depreciation schedule



Note that the depreciation expense of $2,400 is the same each year. The book value at the end of the useful life is equal to the estimated $1,000 salvage value.

What happens when an asset is purchased **during** the year, rather than on January 1 as in our example? In that case, it is necessary to **prorate the annual depreciation** for the portion of the year the asset is used.

- If Bill's Pizzas had purchased the delivery truck on April 1, 2025, the company would use the truck for 9 months in 2025.
- The depreciation for 2025 would be $1,800 ($12,000 × 20% × $\frac{9}{12}$ of a year).

As indicated earlier, the straight-line method predominates in practice. For example, such large companies as **Tesla**, **Nike**, and **General Mills** use the straight-line method. It is simple to compute, and it records expenses with associated revenues appropriately when the use of the asset is reasonably uniform throughout the service life. Generally, the types of assets that give equal benefits over their useful lives are those for which daily use does not affect productivity. Examples are office furniture and fixtures, buildings, warehouses, and garages for motor vehicles.

DO IT! 2a Straight-Line Depreciation

On January 1, 2025, Iron Mountain Ski Corporation purchased a new snow-grooming machine for $50,000. The machine is estimated to have a 10-year life with a $2,000 salvage value. What journal entry would Iron Mountain Ski Corporation make at December 31, 2025, if it uses the straight-line method of depreciation?

ACTION PLAN

- **Calculate depreciable cost (Cost − Salvage value).**
- **Divide the depreciable cost by the asset's estimated useful life.**

Solution

$$\text{Depreciation expense} = \frac{\text{Cost} - \text{Salvage value}}{\text{Useful life}} = \frac{\$50{,}000 - \$2{,}000}{10} = \$4{,}800$$

Iron Mountain would record the first year's depreciation as follows.

Dec. 31	Depreciation Expense	4,800	
	Accumulated Depreciation—Equipment		4,800
	(To record annual depreciation on snow-grooming machine)		

Related exercise material: BE9.4, DO IT! 9.2a, E9.4, E9.5, E9.7, and E9.8.

Declining-Balance Method

The **declining-balance method** computes depreciation expense using a constant rate applied to a declining book value. This method is called an **accelerated-depreciation method** because it results in higher depreciation in the early years of an asset's life than does the straight-line approach.

- Because the total amount of depreciation (the depreciable cost) taken over an asset's life is the same **no matter what approach** is used, the declining-balance method produces a decreasing annual depreciation expense over the asset's useful life.
- In early years, declining-balance depreciation expense will exceed straight-line. In later years, it will be less than straight-line.

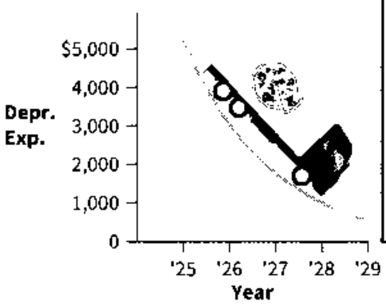
Managers might choose an accelerated approach if they think that an asset's utility will decline quickly.

Companies can apply the declining-balance approach at different rates, which result in varying speeds of depreciation. A common declining-balance rate is double the straight-line rate. Using that rate, the method is referred to as the **double-declining-balance method**.

If we apply the double-declining-balance method to Bill's Pizzas' delivery truck, assuming a five-year life, we get the pattern of depreciation shown in Illustration 9.10. **Illustration 9A.2 presents the computations behind these numbers.** Again, note that total depreciation over the life of the truck is $12,000, the depreciable cost.

ILLUSTRATION 9.10

Declining-balance depreciation schedule



Bill's Pizzas

	Annual	End of Year	
Year	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
2025	$ 5,200	$ 5,200	$7,800
2026	3,120	8,320	4,680
2027	1,872	10,192	2,808
2028	1,123	11,315	1,685
2029	685	12,000	1,000
Total	$12,000		

Units-of-Activity Method

As indicated earlier, useful life can be expressed in ways other than a time period. Under the **units-of-activity method**, useful life is expressed in terms of the total units of production or the use expected from the asset.

- The units-of-activity method is ideally suited to factory machinery: Companies can measure production in terms of units of output or in terms of machine hours used in operating the machinery.
- It is also possible to use the method for such items as delivery equipment (miles driven) and airplanes (hours in use).

The units-of-activity method is generally not suitable for such assets as buildings or furniture because activity levels are difficult to measure for these assets.

Applying the units-of-activity method to the delivery truck owned by Bill's Pizzas, we first must know some basic information. Bill's expects to be able to drive the truck a total of 100,000 miles. Illustration 9.11 shows depreciation over the five-year life based on an assumed mileage pattern. **Illustration 9A.4 presents the computations used to arrive at these results.**

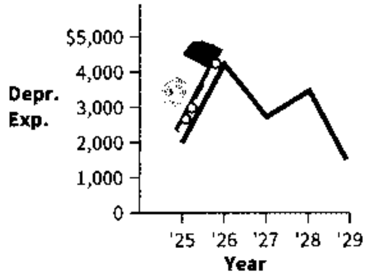
As the name implies, under units-of-activity depreciation, the amount of depreciation is proportional to the activity that took place during that period. For example, the delivery truck was driven twice as many miles in 2026 as in 2025, and depreciation was exactly twice as much in 2026 as it was in 2025.

Bill's Pizzas

Year	Units of Activity (miles)	Annual Depreciation Expense	End of Year Accumulated Depreciation	End of Year Book Value
2025	15,000	$ 1,800	$ 1,800	$11,200
2026	30,000	3,600	5,400	7,600
2027	20,000	2,400	7,800	5,200
2028	25,000	3,000	10,800	2,200
2029	10,000	1,200	12,000	1,000
Total	$100,000	$12,000		

ILLUSTRATION 9.11

Units-of-activity depreciation schedule



Management's Choice: Comparison of Methods

Illustration 9.12 compares annual and total depreciation expense for Bill's Pizzas under the three methods.

Year	Straight-Line	Declining-Balance	Units-of-Activity
2025	$ 2,400	$ 5,200	$ 1,800
2026	2,400	3,120	3,600
2027	2,400	1,872	2,400
2028	2,400	1,123	3,000
2029	2,400	685	1,200
	$12,000	$12,000	$12,000

ILLUSTRATION 9.12

Comparison of depreciation methods

Annual depreciation expense varies considerably among the methods, but **total depreciation expense is the same ($12,000) for the five-year period**. Each method is acceptable in accounting because each recognizes the decline in service potential of the asset in a rational and systematic manner. **Illustration 9.13** graphs the depreciation expense pattern under each method.

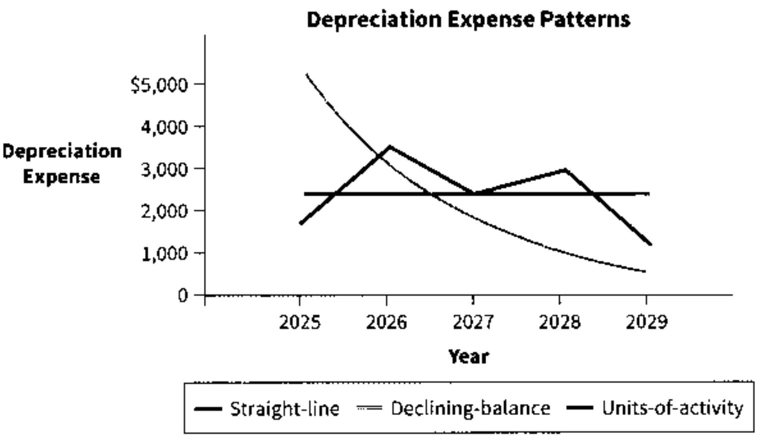


ILLUSTRATION 9.13

Patterns of depreciation

Depreciation and Income Taxes

The Internal Revenue Service (IRS) allows corporate taxpayers to deduct depreciation expense when computing taxable income. However, the tax regulations of the IRS do not require the taxpayer to use the same depreciation method on the tax return that it uses in preparing financial statements (see **Helpful Hint**).

HELPFUL HINT

Depreciation per financial statements is usually different from depreciation per tax returns.

- Many large corporations use straight-line depreciation in their financial statements in order to maximize net income.

- At the same time, they use a special accelerated-depreciation method on their tax returns in order to minimize their income taxes.

For tax purposes, taxpayers must use on their tax returns either the straight-line method or a special accelerated-depreciation method called the **Modified Accelerated Cost Recovery System** (MACRS).

Depreciation Disclosure in the Notes

Companies must disclose the choice of depreciation method in their financial statements or in related notes that accompany the statements. **Illustration 9.14** shows excerpts from the "Property and equipment" notes from the financial statements of **Southwest Airlines**.

ILLUSTRATION 9.14

Disclosure of depreciation policies

Real World

Southwest Airlines
Notes to the Financial Statements

Property and equipment Depreciation is provided by the straight-line method to estimated residual values over periods generally ranging from 23 to 25 years for flight equipment.

From this note, we learn that Southwest Airlines uses the straight-line method to depreciate its planes over periods of 23 to 25 years.

Revising Periodic Depreciation

Management should periodically review annual depreciation expense. If wear and tear or obsolescence indicates that annual depreciation is either inadequate or excessive, the company should change the depreciation expense amount.

When a change in an estimate is required, the company makes the change in **current and future years but not to prior periods.**

1. The company does not change previously recorded depreciation expense.
2. The company revises depreciation expense for current and future years.

HELPFUL HINT

Use a step-by-step approach: (1) determine new depreciable cost; (2) divide by remaining useful life.

The rationale for this treatment is that continual restatement of prior periods would adversely affect users' confidence in financial statements.

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 (see **Helpful Hint**).

To illustrate, assume that Bill's Pizzas decides on January 1, 2028, to extend the estimated useful life of the truck one year (a total life of six years) and increase its salvage 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 (2025–2027) is $7,200 ($2,400 × 3), and book value is $5,800 ($13,000 − $7,200). The new annual depreciation is $1,200, computed on December 31, 2028, as shown in **Illustration 9.15**.

ILLUSTRATION 9.15

Revised depreciation computation

Book value, 1/1/28	$ 5,800	
Less: Revised salvage value	2,200	
Depreciable cost	$ 3,600	
Revised remaining useful life	3 years	(2028–2030)
Revised annual depreciation ($3,600 ÷ 3)	**$ 1,200**	

Bill's Pizzas does not make a special entry for the change in estimate. On December 31, 2028, during the preparation of adjusting entries, it records depreciation expense of $1,200 instead of the amount recorded in previous years.

Companies must disclose in the financial statements significant changes in estimates.

- Although a company may have a legitimate reason for changing an estimated life, financial statement users should be aware that some companies might change an estimate simply to achieve financial statement goals.
- For example, extending an asset's estimated life reduces depreciation expense and increases current period income.

At one time, **AirTran Airways** (subsequently acquired by **Southwest Airlines**) increased the estimated useful lives of some of its planes from 25 to 30 years and increased the estimated lives of related aircraft parts from 5 years to 30 years. It disclosed that the change in estimate decreased its net loss for the year by approximately $0.6 million, or about $0.01 per share. Whether these changes were appropriate depends on how reasonable it is to assume that planes will continue to be used for a long time. Our Feature Story suggests that although in the past many planes lasted a long time, it is also clear that because of high fuel costs, airlines have disposed of most of their old, inefficient planes.

Impairments

As noted earlier, the book value of plant assets is rarely the same as the fair value. In instances where the value of a plant asset declines substantially, its fair value might fall materially below book value. This may happen because a machine has become obsolete, or the market for the product made by the machine has dried up or has become very competitive.

- A **permanent decline** in the fair value of an asset is referred to as an **impairment**.
- So as not to overstate the asset on the books, the company records a write-down, whereby the asset's book value is reduced to its new fair value during the year in which the decline in value occurs. This is recorded by debiting a loss and crediting accumulated depreciation.

For example, **Disney** recorded a $200 million write-down on its action movie *John Carter*. Disney spent more than $300 million producing the film.

In the past, some companies **improperly** delayed recording losses on impairments until a year when it was "convenient" to do so—when the impact on the company's reported results was minimized. For example, in a year when a company has record profits, it can afford to write down some of its bad assets without hurting its reported results too much.

- As discussed in Chapter 4, the practice of timing the recognition of gains and losses to achieve certain income results is known as **earnings management**. Earnings management reduces earnings quality.
- To minimize earnings management, accounting standards now require immediate loss recognition on impaired assets.

Write-downs can create problems for users of financial statements. Critics of write-downs note that after a company writes down assets, its depreciation expense will be lower in all subsequent periods. Some companies improperly inflate asset write-downs in bad years, when they are going to report poor results anyway. (This practice is referred to as "taking a big bath.") Then in subsequent years, when the company recovers, its results will look even better because of lower depreciation expense.

DO IT! 2b Revised Depreciation

Chambers Corporation purchased a piece of equipment for $36,000. It estimated a 6-year life and $6,000 salvage 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 salvage 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 salvage value	2,000
Depreciable cost	\$24,000
Remaining useful life	8 years
Revised annual depreciation (\$24,000 ÷ 8)	\$ 3,000

Related exercise material: BE9.6, DO IT! 9.2b, E9.9, and E9.10.

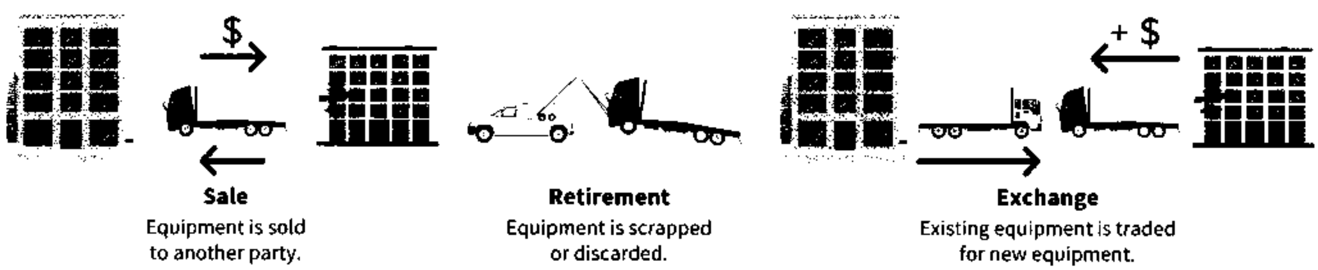
9.3 Plant Asset Disposals

LEARNING OBJECTIVE 3

Explain how to account for the disposal of plant assets.

Companies dispose of plant assets that are no longer useful to them. Illustration 9.16 shows the three ways in which companies make plant asset disposals.

ILLUSTRATION 9.16 **Methods of plant asset disposal**



Whatever the disposal method, the company must determine the book value of the plant asset at the time of disposal in order 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.

A gain or loss on disposal may be needed to balance this entry, as discussed next.

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 from the sale **exceed** the book value of the plant asset, a **gain on disposal** occurs.
- If the proceeds from 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 at the time the asset is sold. Gains and losses on sales of plant assets are therefore quite common. As an example, **Delta Air Lines** at one time reported a $94 million gain on the sale of five Boeing B-727-200 aircraft and five Lockheed L-1011-1 aircraft.

Gain on Sale

To illustrate a gain on sale of plant assets, assume that on July 1, 2025, Wright Company sells its used office furniture for $16,000 cash. The office furniture originally cost $60,000 and as of January 1, 2025, had accumulated depreciation of $41,000. Depreciation for the first six months of 2025 is $8,000. Wright records depreciation expense and updates accumulated depreciation to July 1 as follows.

July 1	Depreciation Expense	8,000	
	Accumulated Depreciation—Equipment		8,000
	(To record depreciation expense for the first 6 months of 2025)		

A	=	L	+	SE
				−8,000 Exp
−8,000				

Cash Flows
no effect

After the accumulated depreciation balance is updated, the company computes the gain or loss as the difference between the proceeds from sale and the book value at the date of disposal. Wright Company has a gain on disposal of $5,000, as computed in **Illustration 9.17**.

ILLUSTRATION 9.17
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 sale 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	+	SE
+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 revenues and gains" section of the income statement.

Loss on Sale

Assume that instead of selling its used office furniture for $16,000, Wright sells it for $9,000. In this case, Wright experiences a loss of $2,000, as computed in **Illustration 9.18**.

ILLUSTRATION 9.18
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	+	SE
+9,000				
+49,000				
				−2,000 Exp
−60,000				

Cash Flows
+9,000

Wright records the sale and the loss on sale 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 the plant asset in the "Other expenses and losses" section of the income statement.

Retirement of Plant Assets

Companies simply retire, rather than sell, some assets at the end of their useful lives. For example, some productive assets used in manufacturing may have very specific uses, and they consequently have no ready market when the company no longer needs them. In such a case, the asset is simply retired.

- Companies record retirement of an asset as a special case of a disposal where no cash is received.
- They decrease (debit) Accumulated Depreciation for the full amount of depreciation taken over the life of the asset and decrease (credit) the asset account for the original cost of the asset.

The loss (a gain is not possible on a retirement) is equal to the asset's book value on the date of retirement.[1]

ACTION PLAN

- **Compare the asset's book value and its fair value to determine whether a gain or loss has occurred.**
- **Make sure that both the Equipment account and Accumulated Depreciation—Equipment are reduced upon disposal.**

DO IT! 3 Plant Asset Disposals

Overland Trucking has an old truck that cost $30,000 and has accumulated depreciation of $16,000. Assume two different situations:

1. The company sells the old truck for $17,000 cash.
2. The truck is worthless, so the company simply retires it.

What entry should Overland use to record each scenario?

Solution

1. Sale of truck for cash:

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)		

2. Retirement of truck:

Accumulated Depreciation—Equipment	16,000	
Loss on Disposal of Plant Assets	14,000	
Equipment		30,000
(To record retirement of truck at a loss)		

Related exercise material: BE9.7, BE9.8, DO IT! 9.3, E9.12, E9.13, E9.14, and E9.15.

[1]More advanced courses discuss the accounting for exchanges, the third method of plant asset disposal.

9.4 Intangible Assets

LEARNING OBJECTIVE 4

Identify the basic issues related to reporting intangible assets.

Intangible assets are rights, privileges, and competitive advantages, that is, without physical substance, that result from ownership of long-lived assets. Many companies' most valuable assets are intangible. Some widely known intangible assets are **Microsoft**'s patents, **McDonald**'s franchises, the trade name iPhone, and Nike's trademark "swoosh."

Financial statements report numerous intangible assets. Yet, many other financially significant intangibles are not reported. To give an example, according to its financial statements in a recent year, Google had total stockholders' equity of around $201 billion. But its market value—the total market value of all its shares on that same date—was roughly $920 billion. Thus, its actual market value was about $719 billion greater than the amount reported for stockholders' equity on the balance sheet.

- It is not uncommon for a company's reported book value to differ from its market value because balance sheets are reported at historical cost.
- But such an extreme difference seriously diminishes the usefulness of the balance sheet to decision-makers.

In the case of Google, the difference is due to unrecorded intangibles. For many high-tech or so-called intellectual-property companies, most of their value is from intangibles, many of which are not reported under current accounting rules.

Intangibles may be evidenced by contracts, licenses, and other documents. They 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.

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** (see **Helpful Hint**).
- 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 natural resources.**

To record amortization of an intangible asset, a company increases (debits) Amortization Expense and decreases (credits) the specific intangible asset. (Alternatively, some companies choose to credit a contra account, such as Accumulated Amortization. *For homework purposes, you should directly credit the specific intangible asset.*)

Intangible assets are typically amortized on a straight-line basis. For example, the legal life of a patent is 20 years. 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 $60,000 on June 30. If National estimates the useful life of the patent to be eight years, the annual amortization expense is $7,500

A	=	L	+	SE
				−3,750 Exp
−3,750				

Cash Flows
no effect

($60,000 ÷ 8) per year. National records $3,750 ($7,500 × $\frac{6}{12}$) of amortization for the six-month period ended December 31 as follows.

Dec. 31	Amortization Expense	3,750	
	Patents		3,750
	(To record patent amortization)		

Companies classify Amortization Expense as an operating expense in the income statement.

There is a difference between intangible assets and plant assets in determining cost.

- For plant assets, cost includes both the purchase price of the asset and the costs incurred in designing and constructing the asset.
- In contrast, the initial cost for an intangible asset includes **only the purchase price**.
- Companies expense any costs incurred in developing an intangible asset.

When a company has significant intangibles, analysts evaluate the reasonableness of the useful life estimates that the company discloses in the notes to its financial statements. In determining useful life, the company should consider obsolescence, inadequacy, and other factors. These may cause a patent or other intangible to become economically ineffective before the end of its legal life (see **Decision Tools**).

Decision Tools
Evaluating a company's amortization of intangibles helps users determine if net income is overstated.

For example, suppose **Apple** purchased a patent on a new computer chip. The legal life of the patent is 20 years. From experience, however, we know that the useful life of a computer chip patent is rarely more than five years. Because new superior chips are developed so rapidly, existing chips become obsolete. Consequently, we would question the amortization expense of Apple if it amortized its patent on a computer chip for a life significantly longer than a five-year period. Amortizing an intangible over a period that is too long will understate amortization expense, overstate Apple's net income, and overstate its assets.

Types of Intangible Assets

Patents

A **patent** is an exclusive right issued by the U.S. Patent Office that enables the recipient to manufacture, sell, or otherwise control an invention for a period of 20 years from the date of the grant. A patent is nonrenewable.

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 such as cases between **Apple** and **Samsung**. 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 initial cost of a patent is the cash or cash equivalent price paid to acquire the patent.**
- **The owner adds the legal costs of successfully defending a patent to the Patents account and amortizes them over the remaining life of the patent. (Costs of unsuccessful defenses are expensed.)**

The patent holder amortizes the cost of a patent over its 20-year 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

The federal government grants **copyrights**, which give the owner the exclusive right to reproduce and sell an artistic or published work. Copyrights last for the life of the creator plus 70 years.

- The cost of a copyright is the **cost of acquiring and successfully defending it.**
- The cost may be only the small fee paid to the U.S. Copyright Office, or it may amount to a great deal more if a copyright is acquired from another party.

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 PlayStation, YouTube, Big Mac, TikTok, Coca-Cola, and Jeep create immediate product identification and 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 the U.S. Patent Office. Such registration provides 20 years of protection. 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.

Accounting Across the Organization Google

Hattanas/ Shutterstock.com

We Want to Own Glass

Google, which trademarked the term "Google Glass," then wanted to trademark the term "Glass." Why? Because the simple word Glass has marketing advantages over the term Google Glass. It is easy to remember and is more universal.

Regulators, however, balked at Google's request. They said that the possible trademark is too similar to other existing or pending software trademarks that contain the word "glass." Also, regulators suggested that the term Glass is merely descriptive and therefore lacks trademark protection. For example, regulators noted that a company that makes salsa could not trademark the term "Spicy Salsa."

BorderStylo LLC, which developed a Web-browser extension called Write on Glass, filed a notice of opposition to Google's request. In the end, the case will probably never be resolved because Google Glass as a company product appears to have failed.

Source: Based on Jacob Gershman, "Google Wants to Own 'Glass'," *Wall Street Journal* (April 4, 2014), p. B5.

If Google had been successful in registering the term Glass, where would this trademark have been reported on its financial statements? (Answer is available at the end of the chapter.)

Franchises

When you fill up your tank at the corner **Shell** station, eat lunch at **Subway**, or make a hotel reservation at a **Marriott**, 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, to perform specific services, or to use certain trademarks or trade names, usually within a designated geographic area.
- Another type of franchise is a **license**. A license granted by a governmental body permits a company to use public property in performing its services.

Examples of licenses are the use of city streets for a bus line or taxi service; the use of public land for telephone, electric, and cable television lines; and the use of airwaves for radio or TV broadcasting. In a recent license agreement, FOX, CBS, and NBC agreed to pay $27.9 billion for the right to broadcast NFL football games over an eight-year period. Franchises and licenses may be granted for a definite period of time, an indefinite period, or perpetually.

When a company incurs costs in connection with the acquisition of the franchise or license, it should recognize an intangible asset.

- Companies record as **operating expenses** annual payments made under a franchise agreement in the period in which they are incurred.

- In the case of a limited life, a company amortizes the cost of a franchise (or license) as an operating expense over the useful life.
- If the life is indefinite or perpetual, the cost is not amortized.

Goodwill

Often, the largest intangible asset that appears on a company's balance sheet is goodwill.

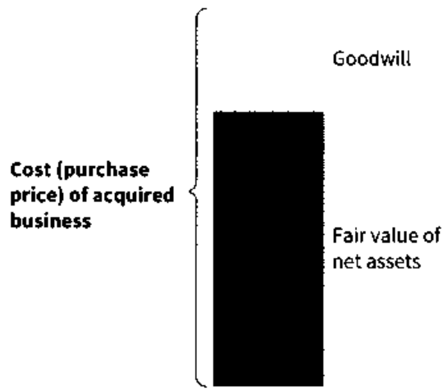
- Goodwill represents the value of all favorable attributes that relate to a company that are not attributable to any other specific asset. These include exceptional management, desirable location, good customer relations, skilled employees, high-quality products, and harmonious relations with labor 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? One could try to put a dollar 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.
- When the entire business is purchased, goodwill is the excess of cost over the fair value of the net assets (assets less liabilities) acquired, as shown in **Illustration 9.19**.

ILLUSTRATION 9.19

Determining goodwill at acquisition



In recording the purchase of a business, the company debits (increases) the identifiable acquired assets at their fair values, credits liabilities at their fair values, credits cash for the purchase price, and records the difference as the cost of goodwill. **Goodwill is not amortized** because it is considered to have an indefinite life. However, goodwill must be written down if a company determines that its value has been permanently impaired. GE recorded one of the largest goodwill write-downs ever with a recent impairment of $22 billion.

Research and Development Costs

> HELPFUL HINT
> **Research and development (R&D) costs are not intangible assets. But because they may lead to patents and copyrights, we discuss them in this section.**

Research and development costs are expenditures that may lead to patents, copyrights, new processes, and new products (see **Helpful Hint**). Many companies spend considerable sums of money on research and development (R&D). For example, in a recent year, **Google** spent over $26 billion on R&D.

Research and development costs present accounting challenges.

- It is sometimes difficult to assign the costs to specific projects.
- There are uncertainties in identifying the extent and timing of future benefits.

- As a result, companies usually record R&D costs **as an expense when incurred** (instead of as an asset), whether the research and development is successful or not.

To illustrate, assume that Laser Scanner Company spent $3 million on R&D that resulted in two highly successful patents. It spent $20,000 on legal fees for the patents. The company would add the lawyers' fees to the Patents account. The R&D costs, however, cannot be included in the cost of the patents. Instead, the company would record the R&D costs as an expense when incurred.

Many disagree with this accounting approach (see International Note). They argue that expensing R&D costs leads to understated assets and net income. Others believe that capitalizing these costs will lead to highly speculative assets on the balance sheet. It is a difficult issue to resolve.

International Note

IFRS allows capitalization of some development costs. This may contribute to differences in R&D expenditures across nations.

DO IT! 4 Classification Concepts

Match the following terms or phrases with the statement most directly associated with it.

1. Copyright.
2. Intangible assets.
3. Research and development costs.
4. Amortization.
5. Franchise.

a. ________ The allocation to expense of the cost of an intangible asset over the asset's useful life.

b. ________ Rights, privileges, and competitive advantages that result from the ownership of long-lived assets that do not possess physical substance.

c. ________ An exclusive right granted by the federal government to reproduce and sell an artistic or published work.

d. ________ A right to sell certain products or services or to use certain trademarks or trade names within a designated geographic area.

e. ________ 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 plant assets and intangible assets.**

Solution

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

Related exercise material: **BE9.9, DO IT! 9.4, E9.17, E9.18, and E9.19.**

9.5 Statement Presentation and Analysis

LEARNING OBJECTIVE 5

Discuss how long-lived assets are reported and analyzed.

Presentation

Usually, companies show plant assets in the financial statements under "Property, plant, and equipment," and they show intangibles separately under "Intangible assets." Illustration 9.20 shows a typical balance sheet presentation of long-lived assets.

ILLUSTRATION 9.20

Presentation of property, plant, and equipment, and intangible assets

Artex Company Balance Sheet (partial) (in thousands)			
Current assets			
Cash		$ 430	
Accounts receivable		100	
Inventory		910	
Total current assets			$ 1,440
Property, plant, and equipment			
Land		920	
Buildings	$7,600		
Less: Accumulated depreciation—buildings	500	7,100	
Equipment	3,870		
Less: Accumulated depreciation—equipment	620	3,250	
Total property, plant, and equipment			11,270
Intangible assets			
Patents		440	
Trademarks		180	
Goodwill		900	1,520
Total assets			$14,230

When a plant asset is fully depreciated, the plant asset and related accumulated depreciation should continue to be reported on the balance sheet without further depreciation or adjustment until the asset is retired.

- Intangibles do not usually use a contra asset account like the contra asset account Accumulated Depreciation used for plant assets.
- Instead, companies record amortization of intangibles as a direct decrease (credit) to the asset account.
- Companies should report goodwill as a separate line item.

Either within the balance sheet or in the notes, companies should disclose the balances of the major classes of assets, such as land, buildings, and equipment, and of accumulated depreciation by major classes or in total. In addition, they should describe the depreciation and amortization methods used and disclose the amount of depreciation and amortization expense for the period.

People, Planet, and Profit Insight **Nike**

Jeff Bukowski/ Shutterstock.com

Sustainability Report Please

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 Disney, Best Buy, Microsoft, Ford, and ConocoPhilips issue these reports. Presented below is an adapted section of a recent Nike sustainability report on its environmental impact. The report describes how Nike measures the success or failure of some of these goals.

Metric	Unit of Meas.	FY15 BL	FY16	FY17	FY18	FY19	FY19 Change vs. Baseline	Target
Key ▲ *Increase* (▲ *Unfavorable* *Favorable*) ▼ *Decrease* (▼ *Unfavorable* *Favorable*)								
Average product carbon footprint	kg CO_2e/unit	7.33	7.19	7.15	7.45	**7.33**	0%	▼ 10%
Product scored on sustainability performance	%	27%	68%	71%	73%	**69%**	42 p.p.	80%

In addition to the environment, Nike has sections in its sustainability report that discuss issues related to people, safety, health, and community. You can access Nike's sustainability report at its website.

Why do you believe companies issue sustainability reports? (Answer is available at the end of the chapter.)

Analysis

The presentation of financial statement information about plant assets enables decision makers to analyze the company's use of its plant assets. We will use two measures to analyze plant assets: return on assets and asset turnover. We also show how profit margin relates to both.

Return on Assets

An overall measure of profitability is the **return on assets** (see **Decision Tools**).

- Return on assets is computed by dividing net income by average total assets. (Average assets are commonly calculated by adding the beginning and ending values of assets and dividing by 2.)
- Return on assets indicates the amount of net income generated by each dollar of assets. Thus, the higher the return on assets, the more profitable the company.

Decision Tools

Return on assets helps users determine if a company is using its assets effectively.

Information is provided below related to **JetBlue Airways**.

	JetBlue (in millions)
Net income	$ 569
Beginning total assets	10,959
Ending total assets	11,918
Net sales	8,094

Illustration 9.21 presents the return on assets of JetBlue Airways and Southwest Airlines.

ILLUSTRATION 9.21

Return on assets for JetBlue and Southwest

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

JetBlue Airways ($ in millions)	Southwest Airlines
$\frac{\$569}{(\$10,959 + \$11,918) \div 2} = 5.0\%$	8.8%

JetBlue's return on assets was less than that of Southwest's. At one time, the airline industry experienced financial difficulties as it attempted to cover high labor, fuel, and security costs while offering fares low enough to attract customers. Such difficulties were reflected in a low industry average for return on assets. In response, Southwest announced that it would not add additional planes beyond the 700 it already had until it met its investment-return targets. Instead, the company added seats to existing planes and replaced some smaller planes with larger ones.

Accounting Across the Organization


Walter G Arce/Cal Sport Media/Topeka KS United States/Newscom

Marketing ROI as Profit Indicator

Marketing executives use the basic finance concept underlying return on assets to determine "marketing return on investment (ROI)." They calculate *marketing ROI* as the profit generated by a marketing initiative divided by the investment in that initiative.

It can be tricky to determine what to include in the "investment" amount and how to attribute profit to a particular marketing initiative. However, many firms feel that measuring marketing ROI is worth the effort because it allows managers to evaluate the relative effectiveness of various programs. In addition, it helps quantify the benefits that marketing provides to the organization. In periods of tight budgets, the marketing ROI number can provide particularly valuable evidence to help a marketing manager avoid budget cuts.

Sources: James O. Mitchel, "Marketing ROI," *LIMRA's MarketFacts Quarterly* (Summer 2004), p. 15; and Adam Uzaialka, "How to Maximize ROI for Digital Marketing Campaigns (and When You Shouldn't," *Business.com* (November 5, 2020).

How does measuring marketing ROI support the overall efforts of the organization? (Answer is available at the end of the chapter.)

Asset Turnover

Decision Tools

The asset turnover helps users determine how effectively a company is generating sales from its assets.

Asset turnover indicates how efficiently a company uses its assets to generate sales—that is, how many dollars of sales a company generates for each dollar invested in assets (see **Decision Tools**).

- Asset turnover is calculated by dividing net sales by average total assets.
- When we compare two companies in the same industry, the one with the higher asset turnover is operating more efficiently. It is generating more sales per dollar invested in assets.

Illustration 9.22 presents the asset turnovers for JetBlue Airways and Southwest Airlines.

ILLUSTRATION 9.22

Asset turnovers for JetBlue and Southwest

$$\text{Asset Turnover} = \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

JetBlue Airways ($ in millions)	Southwest Airlines
$\frac{\$8,094}{(\$10,959 + \$11,918) \div 2} = 0.71$ times	0.86 times

These asset turnover values tell us that for each dollar of assets, JetBlue generates sales of $0.71 and Southwest $0.86. Southwest is more successful in generating sales per dollar invested in assets. In recent years, airlines have reduced both the number of planes used and routes flown to try to pack more customers on a plane. This would increase the asset turnover.

Asset turnovers vary considerably across industries. During a recent year, the average asset turnover for electric utility companies was 0.34. The grocery industry had an average asset turnover of 2.89. Asset turnover values, therefore, are only comparable within—not between—industries.

Profit Margin Revisited

In Chapter 5, you learned about **profit margin**.

- Profit margin is calculated by dividing net income by net sales.
- It tells how effective a company is in turning its sales into income—that is, how much income each dollar of sales provides.

Illustration 9.23 shows that return on assets can be computed as the product of profit margin and asset turnover.

Profit Margin	×	Asset Turnover	=	Return on Assets
$\frac{\text{Net Income}}{\text{Net Sales}}$	×	$\frac{\text{Net Sales}}{\text{Average Total Assets}}$	=	$\frac{\text{Net Income}}{\text{Average Total Assets}}$

ILLUSTRATION 9.23

Composition of return on assets

This relationship has very important strategic implications for management. From Illustration 9.23, we can see that if a company wants to increase its return on assets, it can do so in two ways:

1. Increase the margin it generates from each dollar of goods that it sells (the profit margin).
2. Increase the volume of goods that it sells (the asset turnover).

For example, most grocery stores have very low profit margins, often in the range of 1 or 2 cents for every dollar of goods sold. Grocery stores, therefore, focus on asset turnover: They rely on high turnover to increase their return on assets.

Alternatively, a store selling luxury goods, such as expensive jewelry, does not generally have a high turnover. Consequently, a seller of luxury goods focuses on having a high profit margin. If **Apple** decided to offer a more expensive version of its popular iPhone, this new product would provide a higher margin but lower volume than Apple's less expensive version.

Let's evaluate the return on assets of JetBlue and Southwest by evaluating its components—profit margin and asset turnover. See Illustration 9.24.

	Profit Margin	×	Asset Turnover	=	Return on Assets
JetBlue Airways	7.0%	×	0.71	=	5.0%
Southwest Airlines	10.2%	×	0.86	=	8.8%

ILLUSTRATION 9.24

Components of return on assets for JetBlue and Southwest

JetBlue's return on assets of 5.0% versus Southwest's 8.8% means that JetBlue generates 5.0 cents per each dollar invested in assets, while Southwest generates 8.8 cents. Illustration 9.24 reveals the components of the return on asset values. JetBlue's profit margin of 7.0% versus Southwest's 10.2% means that for every dollar of sales, JetBlue generates approximately 7.0 cents of net income, while Southwest generates approximately 10.2 cents. JetBlue's asset turnover of 0.71 means that it generates 71 cents of sales per each dollar invested in assets, while Southwest generates 86 cents. Therefore, Southwest was more effective at both generating sales from its assets and deriving profit from its sales.

Keeping an Eye on Cash

Depreciation and amortization expense are among the biggest causes of differences between accrual-accounting net income and net cash provided by operating activities. Depreciation and amortization reduce net income, but they do not use up any cash. Therefore, to determine net cash provided by operating activities under a common approach referred to as the indirect method, companies add depreciation and amortization back to net income.

For example, if a company reported net income of $175,000 during the year and had depreciation expense of $40,000, net cash provided by operating activities would be $215,000 (assuming no other accrual-accounting differences). The operating activities section of a recent statement of cash flows for The Coca-Cola Company reports the following adjustment for depreciation and amortization.

The Coca-Cola Company
Statement of Cash Flows (partial)
(in millions)

Cash flow from operating activities	
Net income	$7,124
Plus: Depreciation and amortization	1,976

Note that the adjustment for depreciation and amortization was more than twice as big as any other adjustment required to convert net income to net cash provided by operating activities.

It is also interesting to examine the statement of cash flows to determine the amount of property, plant, and equipment a company purchased and the cash it received from property, plant, and equipment sold in a given year. For example, the investing activities section of Coca-Cola reports the following.

The Coca-Cola Company
Statement of Cash Flows (partial)
(in millions)

Cash flow from investing activities	
Acquisitions and investments	$(17,800)
Purchases of property, plant, and equipment	(2,406)
Proceeds from disposals of property, plant, and equipment	223
Other	(268)

As indicated, Coca-Cola made significant purchases and sales of property, plant, and equipment. The level of purchases suggests that Coca-Cola believes that it can earn a reasonable rate of return on these assets.

ACTION PLAN

- **Recognize that the asset turnover analyzes the productivity of a company's assets.**
- **Know the formula Net sales ÷ Average total assets = Asset turnover.**

DO IT! 5 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, 2025, and total assets on December 31, 2025, of $540,000. Determine Paramour's asset turnover for 2025.

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 times

Related exercise material: BE9.10, DO IT! 9.5, E9.21, E9.22, and E9.23.

USING THE DECISION TOOLS | Delta Air Lines

Delta Air Lines, Inc., headquartered in Atlanta, Georgia, is one of the largest airlines in the world. It serves 342 destinations in 61 countries. Delta provided the following information in recent annual report.

Delta Air Lines, Inc.
Notes to the Financial Statements (partial)

Long-Lived Assets
The following table summarizes our property and equipment:

(in millions, except for estimated useful life)	Estimated Useful Life	
Flight equipment	20–32 years	$28,135
Ground property and equipment	3–40 years	6,581
Flight and ground equipment under capital leases	Shorter of lease term or estimated useful life	1,056
Advance payments for equipment		1,059
Less: accumulated depreciation and amortization[1]		(12,456)
Total property and equipment, net		$24,375

[1]Includes accumulated amortization for flight and ground equipment under capital leases in the amount of $757 million.

We record property and equipment at cost and depreciate or amortize these assets on a straight-line basis to their estimated residual values over their estimated useful lives.

Instructions

Use the information provided to answer the following questions.

a. What method does the company use to depreciate its aircraft? Over what period is the company depreciating these aircraft?

b. Compute the company's return on assets ratio, asset turnover ratio, and profit margin ratio.

(in millions)	
Net income (loss)	$ 4,373
Net sales	39,639
Beginning total assets	53,134
Ending total assets	51,261

Solution

a. The company depreciates property and equipment using the straight-line approach. It depreciates aircraft over a 20–32-year life.

b.

Return on assets $\dfrac{\$4,373}{(\$53,134 + \$51,261) \div 2} = 8.4\%$

Asset turnover $\dfrac{\$39,639}{(\$53,134 + \$51,261) \div 2} = 0.76 \text{ times}$

Profit margin $\dfrac{\$4,373}{\$39,639} = 11.0\%$

Appendix 9A Other Depreciation Methods

LEARNING OBJECTIVE *6

Compute periodic depreciation using the declining-balance method and the units-of-activity method.

In this appendix, we show the calculations of the depreciation expense amounts that we used in the chapter for the declining-balance and units-of-activity methods.

Declining-Balance Method

The **declining-balance method** produces a decreasing annual depreciation expense over the useful life of the asset. The method is so named because the computation of periodic depreciation is based on a **declining book value** (cost less accumulated depreciation) of the asset.

- Annual depreciation expense is computed 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.

Book value for the first year is the cost of the asset 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 at the beginning of the year.

- Unlike other depreciation methods, the declining-balance method ignores salvage value in determining the amount to which the declining-balance rate is applied.
- Salvage value, however, does limit the total depreciation that can be taken. Depreciation stops when the asset's book value equals its expected salvage value.

Depreciation must be completed by the end of the asset's useful life. Therefore, in the last year of the asset's useful life, it is sometimes necessary to adjust the amount of depreciation expense so that the book value equals the expected salvage value. For example, note the adjustment to the final year in Illustration 9A.2.

HELPFUL HINT

The straight-line rate is approximated as 1 ÷ Estimated life. In this case, it is 1 ÷ 5 = 20%.

As noted in the chapter, a common declining-balance rate is double the straight-line rate—the **double-declining-balance method** (see Helpful Hint). If Bill's Pizzas uses the double-declining-balance method, the depreciation rate is 40% (2 × the straight-line rate of 20%). Illustration 9A.1 presents the formula and computation of depreciation for the first year on the delivery truck.

ILLUSTRATION 9A.1

Formula for declining-balance method

Book Value at Beginning of Year	×	Declining-Balance Rate	=	Depreciation Expense
$13,000	×	40%	=	$5,200

HELPFUL HINT

Depreciation stops when the asset's book value equals its expected salvage value.

Illustration 9A.2 presents the depreciation schedule under this method (see Helpful Hint).

The delivery equipment is 69% depreciated ($8,320 ÷ $12,000) at the end of the second year. Under the straight-line method, it 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 method is compatible with the expense recognition principle.

- The declining-balance method recognizes the higher depreciation expense in early years with the associated higher benefits received in these years.
- Conversely, it recognizes lower depreciation expense in later years when the asset's contribution to revenue is likely to be lower.

ILLUSTRATION 9A.2
Double-declining-balance depreciation schedule

Bill's Pizzas

	Computation					End of Year	
Year	**Book Value Beginning of Year**	×	**Depreciation Rate**	=	**Annual Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
2025	$13,000		40%		$5,200	$ 5,200	$7,800*
2026	7,800		40		3,120	8,320	4,680
2027	4,680		40		1,872	10,192	2,808
2028	2,808		40		1,123	11,315	1,685
2029	1,685		40		685**	12,000	1,000

*$13,000 − $5,200
**Computation of $674 ($1,685 × 40%) is adjusted to $685 in order for book value to equal salvage value at the end of the asset's estimated useful life.

Also, some assets lose their usefulness rapidly because of obsolescence. In these cases, the declining-balance method provides a more appropriate depreciation amount.

When an asset is purchased during the year, it is necessary to prorate the declining-balance depreciation in the first year on a time basis. For example, if Bill's Pizzas had purchased the delivery equipment on April 1, 2025, depreciation for 2025 would be $3,900 ($13,000 × 40% × $\frac{9}{12}$). The book value for computing depreciation in 2026 then becomes $9,100 ($13,000 − $3,900), and the 2026 depreciation is $3,640 ($9,100 × 40%).

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 (see **Alternative Terminology**). The units-of-activity method is ideally suited to equipment whose activity can be measured in units of output, miles driven, or hours in use. The units-of-activity method is generally not suitable for assets for which depreciation is a function more of time than of use.

ALTERNATIVE TERMINOLOGY
Another term often used is the *units-of-production method*.

- To use the units-of-activity method, a company estimates the total units of activity for the entire useful life and divides that amount into the depreciable cost to determine the depreciation cost per unit.
- It then multiplies the depreciation cost per unit by the units of activity during the year to find the annual depreciation for that year.

To illustrate, assume that Bill's Pizzas estimates it will drive its new delivery truck 15,000 miles in the first year. **Illustration 9A.3** presents the formula and computation of depreciation expense in the first year.

ILLUSTRATION 9A.3
Formula for units-of-activity method

Depreciable Cost	÷	**Estimated Total Units of Activity**	=	**Depreciation Cost per Unit**
$12,000	÷	100,000 miles	=	$0.12

Depreciation Cost per Unit	×	**Units of Activity during the Year**	=	**Depreciation Expense**
$0.12	×	15,000 miles	=	$1,800

Illustration 9A.4 shows the depreciation schedule, using assumed mileage data (see **Helpful Hint**).

HELPFUL HINT
Depreciation stops when the asset's book value equals its expected salvage value.

The units-of-activity method is not nearly as popular as the straight-line method, primarily because it is often difficult to make a reasonable estimate of total activity. However, this method is used by some very large companies, such as **Standard Oil Company of California**

ILLUSTRATION 9A.4

Units-of-activity depreciation schedule

Bill's Pizzas

	Computation				Annual	End of Year	
Year	**Units of Activity**	×	**Depreciation Cost/Unit**	=	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
2025	15,000		$0.12		$1,800	$ 1,800	$11,200*
2026	30,000		0.12		3,600	5,400	7,600
2027	20,000		0.12		2,400	7,800	5,200
2028	25,000		0.12		3,000	10,800	2,200
2029	10,000		0.12		1,200	12,000	1,000

*$13,000 – $1,800

and Boise Cascade Corporation. When the productivity of the asset varies significantly from one period to another, the units-of-activity method results in the best association of expenses (efforts) with related revenues (results).

This method is easy to apply when assets are purchased during the year. In such a case, companies use the productivity of the asset for the partial year in computing the depreciation.

Review and Practice

Learning Objectives Review

1 Explain the accounting for plant asset expenditures.

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 Apply depreciation methods to plant assets.

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. Depreciation is not a process of valuation, and it is not a process that results in an accumulation of cash. Depreciation reflects an asset's decreasing usefulness and revenue-producing ability, resulting from wear and tear and from obsolescence.

The formula for straight-line depreciation is:

$$\frac{\text{Cost} - \text{Salvage value}}{\text{Useful life (in years)}}$$

The expense patterns of the three depreciation methods are as follows.

Method	Annual Depreciation Pattern
Straight-line	Constant amount
Declining-balance	Decreasing amount
Units-of-activity	Varying amount

Companies make revisions of periodic depreciation in present and future periods, not retroactively.

3 Explain how to account for the disposal of plant assets.

The procedure for accounting for the disposal of a plant asset through sale or retirement is (a) eliminate the book value of the plant asset at the date of disposal; (b) record cash proceeds, if any; and (c) account for the difference between the book value and the cash proceeds as a gain or a loss on disposal.

4 Identify the basic issues related to reporting intangible assets.

Companies report intangible assets at their cost less any amounts amortized. If an intangible asset has a limited life, its cost should be allocated (amortized) over its useful life. Intangible assets with indefinite lives should not be amortized.

5 Discuss how long-lived assets are reported and analyzed.

Companies usually show plant assets under "Property, plant, and equipment"; they show intangibles separately under "Intangible assets." Either within the balance sheet or in the notes, companies 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 describe the depreciation and amortization methods used, and disclose the amount of depreciation and amortization expense for the period.

In the statement of cash flows, under the indirect method, depreciation and amortization expense are added back to net income to determine net cash provided by operating activities. The investing section reports cash paid or received to purchase or sell property, plant, and equipment.

Plant assets may be analyzed using return on assets and asset turnover. Return on assets consists of two components: asset turnover and profit margin.

***6 Compute periodic depreciation using the declining-balance method and the units-of-activity method.**

The depreciation expense calculation for each of these methods is:

Declining-balance:

$$\text{Book value at beginning of year} \times \text{Declining-balance rate} = \text{Depreciation expense}$$

Units-of-activity:

$$\text{Depreciable cost} \div \text{Total units of activity} = \text{Depreciation cost per unit}$$

$$\text{Depreciation cost per unit} \times \text{Units of activity during year} = \text{Depreciation expense}$$

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Is the company's amortization of intangibles reasonable?	Estimated useful life of intangibles from notes to financial statements of this company and its competitors	If the company's estimated useful life significantly exceeds that of competitors or does not seem reasonable in light of the circumstances, the reason for the difference should be investigated.	Too high an estimated useful life will result in understating amortization expense and overstating net income.
Is the company using its assets effectively?	Net income and average total assets	$\text{Return on assets} = \dfrac{\text{Net income}}{\text{Average total assets}}$	Higher value suggests favorable efficiency (use of assets).
How effective is the company at generating sales from its assets?	Net sales and average total assets	$\text{Asset turnover} = \dfrac{\text{Net sales}}{\text{Average total assets}}$	Indicates the sales dollars generated per dollar of assets. A high value suggests the company is effective in using its resources to generate sales.

Glossary Review

Accelerated-depreciation method A depreciation method that produces higher depreciation expense in the early years than the straight-line approach. (p. 9-11).

Additions and improvements Costs incurred to increase the operating efficiency, productive capacity, or expected useful life of a plant asset. (p. 9-6).

Amortization The process of allocating to expense the cost of an intangible asset. (p. 9-19).

Asset turnover Indicates how efficiently a company uses its assets to generate sales; calculated as net sales divided by average total assets. (p. 9-26).

Capital expenditures Expenditures that increase the company's investment in plant assets. (p. 9-6).

Cash equivalent price An amount equal to the fair value of the asset given up or the fair value of the asset received, whichever is more clearly determinable. (p. 9-3).

Copyright An exclusive right granted by the federal government allowing the owner to reproduce and sell an artistic or published work. (p. 9-20).

Declining-balance method A depreciation method that applies a constant rate to the declining book value of the asset and produces a decreasing annual depreciation expense over the asset's useful life. (pp. 9-11, 9-30).

Depreciable cost The cost of a plant asset less its salvage value. (p. 9-10).

Depreciation The process of allocating to expense the cost of a plant asset over its useful life in a rational and systematic manner. (p. 9-8).

Franchise A contractual arrangement under which the franchisor grants the franchisee the right to sell certain products, to perform specific services, or to use certain trademarks or trade names, usually within a designated geographic area. (p. 9-21).

Goodwill The value of all favorable attributes that relate to a company that are not attributable to any other specific asset. (p. 9-22).

Impairment A permanent decline in the fair value of an asset. (p. 9-15).

Intangible assets Rights, privileges, and competitive advantages, that is, without physical substance, that result from the ownership of long-lived assets. (p. 9-19).

Lease A contractual agreement allowing one party (the lessee) to use the asset of another party (the lessor) for a period of time at an agreed price. (p. 9-7).

Lessee A party that has made contractual arrangements to use another party's asset for a period at an agreed price. (p. 9-7).

Lessor A party that has agreed contractually to let another party use its asset for a period at an agreed price. (p. 9-7).

Ordinary repairs Expenditures to maintain the operating efficiency and expected productive life of the asset. (p. 9-6).

Patent An exclusive right issued by the U.S. Patent Office that enables the recipient to manufacture, sell, or otherwise control an invention for a period of 20 years from the date of the grant. (p. 9-20).

Plant assets Resources that have physical substance, are used in the operations of a business, and are not intended for sale to customers. (p. 9-3).

Research and development costs Expenditures that may lead to patents, copyrights, new processes, and new products; must be expensed as incurred. (p. 9-22).

Return on assets A profitability measure that indicates the amount of net income generated by each dollar of assets; computed as net income divided by average total assets. (p. 9-25).

Revenue expenditures Expenditures that are immediately charged against revenues as an expense. (p. 9-6).

Straight-line method A depreciation method in which companies expense an equal amount of depreciation for each year of the asset's useful life. (p. 9-10).

Trademark (trade name) A word, phrase, jingle, or symbol that distinguishes or identifies a particular enterprise or product. (p. 9-21).

Units-of-activity method A depreciation method in which useful life is expressed in terms of the total units of production or use expected from the asset. (pp. 9-12, 9-31).

Practice Multiple-Choice Questions

1. **(LO 1, 6)** Corrieten Company purchased equipment and incurred these 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.

2. **(LO 1)** The benefits to leasing include each of the following **except**:
   a. higher resale value.
   b. reduced risk of obsolescence.
   c. little or no down payment.
   d. shared tax advantages.

3. **(LO 1)** 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.

4. **(LO 2)** Depreciation is a process of:
   a. valuation. **c.** cash accumulation.
   b. cost allocation. **d.** appraisal.

5. **(LO 2)** Cuso Company purchased equipment on January 1, 2024, at a total invoice cost of $400,000. The equipment has an estimated salvage value of $10,000 and an estimated useful life of 5 years. What is the amount of accumulated depreciation at December 31, 2025, if the straight-line method of depreciation is used?
   a. $80,000. **c.** $78,000.
   b. $160,000. **d.** $156,000.

6. **(LO 2)** A company would minimize its depreciation expense in the first year of owning an asset if it used:
   a. a high estimated life, a high salvage value, and declining-balance depreciation.
   b. a low estimated life, a high salvage value, and straight-line depreciation.
   c. a high estimated life, a high salvage value, and straight-line depreciation.
   d. a low estimated life, a low salvage value, and declining-balance depreciation.

7. **(LO 2)** 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 answer choices is correct.

8. **(LO 2)** Able Towing Company purchased a tow truck for $60,000 on January 1, 2025. It was originally depreciated on a straight-line basis over 10 years with an assumed salvage value of $12,000. On December 31, 2027, before adjusting entries had been made, the company decided to change the remaining estimated life to 4 years (including 2027) and the salvage value to $2,000. What was the depreciation expense for 2027?
   a. $6,000. **c.** $15,000.
   b. $4,800. **d.** $12,100.

9. **(LO 3)** Bennie Razor Company has decided to sell one of its old manufacturing machines on June 30, 2025. The machine was purchased for $80,000 on January 1, 2021, and was depreciated on a straight-line basis for 10 years assuming no salvage 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 loss. **c.** $22,000 gain.
   b. $54,000 loss. **d.** $46,000 gain.

10. (LO 4) Pierce Company incurred $150,000 of research and development costs in its laboratory to develop a new product. It spent $20,000 in legal fees for a patent granted on January 2, 2025. On July 31, 2025, Pierce paid $15,000 for legal fees in a successful defense of the patent. What is the total amount that should be debited to Patents through July 31, 2025?

a. $150,000.
b. $35,000.
c. $185,000.
d. $170,000.

11. (LO 4) Indicate which one of these statements is **true**.

a. Since intangible assets lack physical substance, they need to be disclosed only in the notes to the financial statements.
b. Goodwill should be reported as a contra account in the stockholders' equity section.
c. Totals of major classes of assets can be shown in the balance sheet, with asset details disclosed in the notes to the financial statements.
d. Intangible assets are typically combined with plant assets and inventory and then shown in the property, plant, and equipment section.

12. (LO 4) If a company reports goodwill as an intangible asset on its books, what is the one thing you know with certainty?

a. The company is a valuable company worth investing in.
b. The company has a well-established brand name.
c. The company purchased another company.
d. The goodwill will generate a lot of positive business for the company for many years to come.

13. (LO 4) Which of the following statements is **false**?

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. Research and development costs are expensed when incurred, except when the research and development expenditures result in a successful patent.

14. (LO 5) Which of the following measures provides an indication of how efficient a company is in employing its assets?

a. Current ratio.
b. Profit margin.
c. Debt to assets ratio.
d. Asset turnover.

15. (LO 5) Lake Coffee Company reported net sales of $180,000, net income of $54,000, beginning total assets of $200,000, and ending total assets of $300,000. What was the company's asset turnover?

a. 0.90
b. 0.20
c. 0.72
d. 1.39

*16. (LO 6) Kant Enterprises purchased a truck for $11,000 on January 1, 2024. The truck will have an estimated salvage value of $1,000 at the end of 5 years. If you use the units-of-activity method, the balance in accumulated depreciation at December 31, 2025, can be computed by the following formula:

a. ($11,000 ÷ Total estimated activity) × Units of activity for 2025.
b. ($10,000 ÷ Total estimated activity) × Units of activity for 2025.
c. ($11,000 ÷ Total estimated activity) × Units of activity for 2024 and 2025.
d. ($10,000 ÷ Total estimated activity) × Units of activity for 2024 and 2025.

*17. (LO 6) Jefferson Company purchased a piece of equipment on January 1, 2025. The equipment cost $60,000 and has an estimated life of 8 years and a salvage value of $8,000. What was the depreciation expense for the asset for 2026 under the double-declining-balance method?

a. $6,500.
b. $11,250.
c. $15,000.
d. $6,562.

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. **a.** Higher resale value is not a benefit of leasing. The benefits of leasing include (b) reduced risk of obsolescence, (c) little or no down payment, and (d) shared tax advantages.

3. **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).

4. **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.

5. **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.

6. **c.** A high estimated life spreads the cost over a longer period of time, resulting in a smaller expense each year. The high salvage value limits the cost to be allocated. Straight-line depreciation yields a smaller depreciation charge in the first year than the declining-balance method. The other choices are therefore incorrect.

7. **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.

8. **d.** First, calculate accumulated depreciation from January 1, 2025, through December 31, 2026, 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 2027 is $12,100 ($48,400 ÷ 4), not (a) $6,000, (b) $4,800, or (c) $15,000.

9. **a.** First, the book value needs to be determined. The accumulated depreciation as of June 30, 2025, 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.

10. **b.** Because the $150,000 was spent developing the patent rather than buying it from another firm, it is debited to Research and Development Expense. Only the $35,000 spent on legal fees ($20,000 for granting patent and $15,000 for defense) can be debited to Patents, not (a) $150,000, (c) $185,000, or (d) $170,000.

11. **c.** Reporting only totals of major classes of assets in the balance sheet is appropriate. Additional details can be shown in the notes to the financial statements. The other choices are false statements.

12. **c.** In order to report goodwill, a company must have entered into an exchange transaction that involves the purchase of another business. Choices (a) the company is a valuable company worth investing in, (b) the company has a well-established brand name, and (d) the goodwill will generate a lot of positive business for the company for many years to come are not necessarily valid assumptions.

13. **d.** Research and development (R&D) costs are expensed when incurred, regardless of whether the research and development expenditures result in a successful patent or not. The other choices are true statements.

14. **d.** The asset turnover indicates how efficiently a company is employing its assets. The other choices are incorrect because (a) the current ratio is an indicator of liquidity and the company's ability to pay its obligations when they come due, (b) the profit margin is an indicator of how profitable a company is, and (c) the debt to assets ratio indicates the proportion of assets that are financed by debt rather than by equity.

15. **c.** Asset turnover = Net sales ($180,000) ÷ Average total assets [($200,000 + $300,000) ÷ 2] = 0.72 times, not (a) 0.90, (b) 0.20, or (d) 1.39 times.

*16. **d.** The units-of-activity method takes salvage 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 2024 and 2025 to compute the accumulated depreciation at the end of 2025, the second year of the asset's use. The other choices are therefore incorrect.

*17. **b.** For the double-declining method, the depreciation rate would be 25% or (1/8 × 2). For 2025, annual depreciation expense is $15,000 ($60,000 book value × 25%); for 2026, annual depreciation expense is $11,250 [($60,000 − $15,000) × 25%], not (a) $6,500, (c) $15,000, or (d) $6,562.

Practice Brief Exercises

Compute straight-line and declining-balance depreciation.

1. **(LO 2, 6)** Fulmer Company acquires a delivery truck at a cost of $50,000. The truck is expected to have a salvage value of $5,000 at the end of its 5-year useful life.

a. Compute annual depreciation expense for the first and second years using the straight-line method.

***b.** Compute annual depreciation expense for the first and second years using double-declining balance.

Solution

1. **a.** Depreciable cost of $45,000, ($50,000 − $5,000). With a 5-year useful life, annual depreciation is $9,000, ($45,000 ÷ 5). Under the straight-line method, depreciation is the same each year. Thus, depreciation is $9,000 for both the first and second years.

***b.** The declining-balance rate is 40% (20% × 2), which is applied to book value at the beginning of the year. The computations are:

	Book Value	×	Rate	=	Depreciation
Year 1	$50,000		40%		$20,000
Year 2	($50,000 − $20,000)		40%		$12,000

Prepare entries for disposal by sale.

2. **(LO 3)** Giolito Company sells equipment on August 31, 2025, for $20,000 cash. The equipment originally cost $60,000 and as of January 1, 2025, had accumulated depreciation of $38,000. Depreciation for the first 8 months of 2025 is $6,000. Prepare the journal entries to (a) update depreciation to August 31, 2025, and (b) record the sale of the equipment.

Solution

		Debit	Credit
2. a.	Depreciation Expense	6,000	
	Accumulated Depreciation—Equipment		6,000
b.	Cash	20,000	
	Accumulated Depreciation—Equipment	44,000*	
	Equipment		60,000
	Gain on Disposal of Plant Assets		4,000

*$38,000 + $6,000

Cost of equipment	$60,000
Less: Accumulated depreciation	44,000*
Book value at date of disposal	16,000
Proceeds from sale	20,000
Gain on disposal	$ 4,000

*$38,000 + $6,000

3. (LO 4) Lucas Company acquires a limited-life franchise for $200,000 on January 2, 2025. Its estimated useful life is 10 years. (a) Prepare the journal entry to record amortization expense for the first year. (b) Show how this franchise is reported on the balance sheet at the end of the first year.

Prepare amortization expense entry and balance sheet presentation for intangibles.

Solution

3. **a.**	Amortization Expense ($200,000 ÷ 10)	20,000	
	Franchises		20,000

b. Intangible assets
Franchises $180,000

Practice Exercises

1. (LO 2) Will Smith, the new controller of Alexandria Company, has reviewed the expected useful lives and salvage values of selected depreciable assets at the beginning of 2025. Here are his findings:

Compute revised annual depreciation.

Type of Asset	Date Acquired	Cost	Accumulated Depreciation, Jan. 1, 2025	Useful Life (in Years) Old	Useful Life (in Years) Proposed	Salvage Value Old	Salvage Value Proposed
Building	Jan. 1, 2017	$900,000	$172,000	40	50	$40,000	$47,600
Warehouse	Jan. 1, 2019	120,000	27,600	25	20	5,000	3,600

All assets are depreciated by the straight-line method. Alexandria Company uses a calendar year in preparing annual financial statements. After discussion, management has agreed to accept Will's proposed changes. (The "Proposed" useful life is total life, not remaining life.)

Instructions

a. Compute the revised annual depreciation on each asset in 2025. (Show computations.)

b. Prepare the entry (or entries) to record depreciation on the building in 2025.

Solution

1.

a.

	Type of Asset: Building	Type of Asset: Warehouse
Book value, 1/1/25	$728,000[a]	$92,400[b]
Less: Salvage value	47,600	3,600
Depreciable cost (1)	$680,400	$88,800
Revised remaining useful life in years (2)	42[c]	14[d]
Revised annual depreciation (1) ÷ (2)	$16,200	$6,343

[a]$900,000 − $172,000; [b]$120,000 − $27,600; [c]50 − 8; [d]20 − 6

b. Dec.31	Depreciation Expense	16,200	
	Accumulated Depreciation—Buildings		16,200

Prepare entries to set up appropriate accounts for different intangibles; amortize intangible assets.

2. **(LO 4)** Lake Company, organized in 2025, has the following transactions related to intangible assets.

1/2/25	Purchased patent (8-year life)	$560,000
4/1/25	Goodwill purchased (indefinite life)	360,000
7/1/25	10-year franchise; expiration date 7/1/2035	440,000
9/1/25	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, 2025, recording any necessary amortization and reflecting all balances accurately as of that date.

Solution

2. 1/2/25	Patents	560,000	
	Cash		560,000
4/1/25	Goodwill	360,000	
	Cash		360,000
	(Part of the entry to record purchase of another company)		
7/1/25	Franchises	440,000	
	Cash		440,000
9/1/25	Research and Development Expense	185,000	
	Cash		185,000
12/31/25	Amortization Expense		
	($560,000 ÷ 8) + [($440,000 ÷ 10) × 1/2]	92,000	
	Patents		70,000
	Franchises		22,000

Ending balances, 12/31/25:
Patents = $490,000 ($560,000 − $70,000)
Goodwill = $360,000
Franchises = $418,000 ($440,000 − $22,000)
R&D expense = $185,000

Practice Problems

Compute depreciation under different methods.

1. **(LO 2, 6)** DuPage Company purchases a factory machine at a cost of $18,000 on January 1, 2025. DuPage expects the machine to have a salvage value of $2,000 at the end of its 4-year useful life.

During its useful life, the machine is expected to be used 160,000 hours. Actual annual hourly use was 2025, 40,000; 2026, 60,000; 2027, 35,000; and 2028, 25,000.

Instructions

a. Prepare a depreciation schedule for the straight-line method.

***b.** Prepare a depreciation schedule for the units-of-activity method.

***c.** Prepare a depreciation schedule for the declining-balance method using double the straight-line rate.

Solution

1. **a.** **Straight-Line Method**

	Computation				Annual	End of Year	
Year	Depreciable Cost*	×	Depreciation Rate**	=	Depreciation Expense	Accumulated Depreciation	Book Value
2025	$16,000		25%		$4,000	$ 4,000	$14,000***
2026	16,000		25%		4,000	8,000	10,000
2027	16,000		25%		4,000	12,000	6,000
2028	16,000		25%		4,000	16,000	2,000

*$18,000 − $2,000
**1/4 years
***$18,000 − $4,000

*b. **Units-of-Activity Method**

	Computation				Annual	End of Year	
Year	Units of Activity	×	Depreciable Cost/Unit	=	Depreciation Expense	Accumulated Depreciation	Book Value
2025	40,000		$0.10*		$4,000	$ 4,000	$14,000
2026	60,000		0.10		6,000	10,000	8,000
2027	35,000		0.10		3,500	13,500	4,500
2028	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
2025	$18,000		50%		$9,000	$ 9,000	$9,000
2026	9,000		50%		4,500	13,500	4,500
2027	4,500		50%		2,250	15,750	2,250
2028	2,250		50%		250**	16,000	2,000

*¼ × 2.
**Adjusted to $250 because ending book value should not be less than expected salvage value.

2. (LO 3) On January 1, 2022, Skyline Limousine Co. purchased a limousine at an acquisition cost of $28,000. Skyline depreciated the vehicle by the straight-line method using a 4-year service life and a $4,000 salvage value. The company's fiscal year ends on December 31.

Record disposal of plant asset.

Instructions

Prepare the journal entry or entries to record the disposal of the limousine, assuming that it was:

a. Retired and scrapped with no salvage value on January 1, 2026.

b. Sold for $5,000 on July 1, 2025.

Solution

	Date	Account	Debit	Credit
2. a.	Jan. 1, 2026	Accumulated Depreciation—Equipment	24,000*	
		Loss on Disposal of Plant Assets	4,000	
		Equipment		28,000
		(To record retirement of limousine)		

*[($28,000 − $4,000) ÷ 4] × 4

	Date	Account	Debit	Credit
b.	July 1, 2025	Depreciation Expense	3,000*	
		Accumulated Depreciation—Equipment		3,000
		(To record depreciation to date of disposal)		

*[($28,000 − $4,000) ÷ 4] × $\frac{1}{2}$

Account	Debit	Credit
Cash	5,000	
Accumulated Depreciation—Equipment	21,000*	
Loss on Disposal of Plant Assets	2,000	
Equipment		28,000
(To record sale of limousine)		

*[($28,000 − $4,000) ÷ 4] × 3.5

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Note: All asterisked Questions, Exercises, and Problems relate to material in the appendix to the chapter.

Questions

1. Mrs. Harcross is uncertain about how the historical cost principle applies to plant assets. Explain the principle to Mrs. Harcross.

2. How is the cost for a plant asset measured in a cash transaction? In a noncash transaction?

3. Barrister Company acquires the land and building owned by Ansel Company. What types of costs may be incurred to make the asset ready for its intended use if Barrister Company wants to use only the land? If it wants to use both the land and the building?

4. Distinguish between ordinary repairs and capital expenditures during an asset's useful life.

5. Breton Inc. needs to upgrade its diagnostic equipment. At the time of purchase, Breton had expected the equipment to last 8 years. Unfortunately, it was obsolete after only 4 years. Nolan Rush, CFO of Breton Inc., is considering leasing new equipment rather than buying it. What are the potential benefits of leasing?

6. In a recent newspaper release, the president of Magnusson Company 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?

7. Melanie is studying for the next accounting examination. She asks your help on two questions: (a) What is salvage value? (b) How is salvage value used in determining depreciable cost under the straight-line method? Answer Melanie's questions.

8. Contrast the straight-line method and the units-of-activity method in relation to (a) useful life and (b) the pattern of periodic depreciation over useful life.

9. Contrast the effects of the three depreciation methods on annual depreciation expense.

10. 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?

11. How is a gain or a loss on the sale of a plant asset computed?

12. Marsh Corporation owns a machine that is fully depreciated but is still being used. How should Marsh account for this asset and report it in the financial statements?

13. What does **Apple** use as the estimated useful life on its buildings? On its machinery and equipment? (*Hint:* You will need to use the notes to Apple's financial statements, available at the company's website.)

14. What are the similarities and differences between depreciation and amortization?

15. During a recent management meeting, Bruce Dunn, director of marketing, proposed that the company begin capitalizing its marketing expenditures as goodwill. In his words, "Marketing expenditures create goodwill for the company which benefits the company for multiple periods. Therefore it doesn't make good sense to have to expense it as it is incurred. Besides, if we capitalize it as goodwill, we won't have to amortize it, and this will boost reported income." Discuss the merits of Bruce's proposal.

16. Warwick Company hires an accounting intern who says that intangible assets should always be amortized over their legal lives. Is the intern correct? Explain.

17. Goodwill has been defined as the value of all favorable attributes that relate to a business enterprise. What types of attributes could result in goodwill?

18. Kathy Malone, a business major, is working on a case problem for one of her classes. In this case problem, the company needs to raise cash to market a new product it developed. Doug Price, an engineering major, takes one look at the company's balance sheet and says, "This company has an awful lot of goodwill. Why don't you recommend that they sell some of it to raise cash?" How should Kathy respond to Doug?

19. Under what conditions is goodwill recorded? What is the proper accounting treatment for amortizing goodwill?

20. 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, generally accepted accounting principles require that such costs be recorded as an expense when incurred. Why?

21. Suppose in 2025 that **Campbell Soup Company** reported average total assets of $6,265 million, net sales of $7,586 million, and net income of $736 million. What was Campbell Soup's return on assets?

22. Cassy Dominic, a marketing executive for Fresh Views Inc., has proposed expanding its product line of framed graphic art by producing a line of lower-quality products. These would require less processing by the company and would provide a lower profit margin. Mel Joss, the company's CFO, is concerned that this new product line would reduce the company's return on assets. Discuss the potential effect on return on assets that this product might have.

23. Give an example of an industry that would be characterized by (a) a high asset turnover and a low profit margin, and (b) a low asset turnover and a high profit margin.

24. Peyton Corporation and Rogers Corporation operate in the same industry. Peyton uses the straight-line method to account for depreciation, whereas Rogers uses an accelerated method. Explain what complications might arise in trying to compare the results of these two companies.

25. Mesa Corporation 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 Mesa Corporation's motivation for doing this?

26. You are comparing two companies in the same industry. You have determined that Gore Corp. depreciates its plant assets over a 40-year life, whereas Ross Corp. depreciates its plant assets over a 20-year life. Discuss the implications this has for comparing the results of the two companies.

27. Explain how transactions related to plant assets and intangibles are reported in the statement of cash flows under the indirect method.

Brief Exercises

BE9.1 **(LO 1), AP** These expenditures were incurred by Dobbin Company in purchasing land: cash price $60,000, assumed accrued taxes $5,000, attorney's fees $2,100, real estate broker's commission $3,300, and clearing and grading $3,500. What is the cost of the land?

Determine the cost of land.

BE9.2 **(LO 1), AP** Thoms Company incurs these expenditures in purchasing a truck: cash price $24,000, accident insurance (during use) $2,000, sales taxes $1,080, motor vehicle license $300, and painting and lettering $1,700. What is the cost of the truck?

Determine the cost of a truck.

BE9.3 **(LO 1), AP** Krieg Company had the following two transactions related to its delivery truck.

Prepare entries for equipment expenditures.

1. Paid $38 for an oil change.
2. Paid $400 to install special shelving units, which increase the operating efficiency of the truck.

Prepare Krieg's journal entries to record these two transactions.

BE9.4 **(LO 2), AP** Gordon Chemicals Company acquires a delivery truck at a cost of $31,000 on January 1, 2025. The truck is expected to have a salvage value of $4,000 at the end of its 4-year useful life. Compute annual depreciation for the first and second years using the straight-line method.

Compute straight-line depreciation.

BE9.5 **(LO 2), AN** Ivy Company purchased land and a building on January 1, 2025. Management's best estimate of the value of the land was $100,000 and of the building $250,000. However, management told the accounting department to record the land at $230,000 and the building at $120,000. The building is being depreciated on a straight-line basis over 20 years with no salvage value. Why do you suppose management requested this accounting treatment? Is it ethical?

Compute depreciation and evaluate treatment.

BE9.6 **(LO 2), AP** On January 1, 2025, the Hermann Company general ledger shows Equipment $36,000 and Accumulated Depreciation $13,600. The depreciation resulted from using the straight-line method with a useful life of 10 years and a salvage value of $2,000. On this date, the company concludes that the equipment has a remaining useful life of only 2 years with the same salvage value. Compute the revised annual depreciation.

Compute revised depreciation.

BE9.7 **(LO 3), AP** Prepare journal entries to record these transactions. (a) Echo Company retires its delivery equipment, which cost $41,000. Accumulated depreciation is also $41,000 on this delivery equipment. No salvage value is received. (b) Assume the same information as in part (a), except that accumulated depreciation for the equipment is $37,200 instead of $41,000.

Journalize entries for disposal of plant assets.

BE9.8 **(LO 3), AP** Antone Company sells office equipment on July 31, 2025, for $21,000 cash. The office equipment originally cost $72,000 and as of January 1, 2025, had accumulated depreciation of $42,000. Depreciation for the first 7 months of 2025 is $4,600. Prepare the journal entries to (a) update depreciation to July 31, 2025, and (b) record the sale of the equipment.

Journalize entries for sale of plant assets.

BE9.9 **(LO 4), AP** Abner Company purchases a patent for $156,000 on January 2, 2025. Its estimated useful life is 6 years.

Account for intangibles—patents.

a. Prepare the journal entry to record amortization expense for the first year.

b. Show how this patent is reported on the balance sheet at the end of the first year.

BE9.10 **(LO 5), AP** Suppose in its 2025 annual report that McDonald's Corporation reports beginning total assets of $28.46 billion, ending total assets of $30.22 billion, net sales of $22.74 billion, and net income of $4.55 billion.

Compute return on assets and asset turnover.

a. Compute McDonald's return on assets.

b. Compute McDonald's asset turnover.

BE9.11 **(LO 5), AP** Suppose Nike, Inc. reported the following plant assets and intangible assets for the year ended May 31, 2025 (in millions): other plant assets $965.8, land $221.6, patents and trademarks (at cost) $515.1, machinery and equipment $2,094.3, buildings $974.0, goodwill (at cost) $193.5, accumulated amortization $47.7, and accumulated depreciation $2,298.0. Prepare a partial balance sheet for Nike for these items.

Classification of long-lived assets on balance sheet.

BE9.12 **(LO 5), AP** Hunt Company reported net income of $157,000. It reported depreciation expense of $12,000 and accumulated depreciation of $47,000. Amortization expense was $8,000. Hunt purchased new equipment during the year for $50,000. Show how this information would be used to determine net cash provided by operating activities under the indirect method.

Determine net cash provided by operating activities.

*BE9.13 **(LO 6), AP** Depreciation information for Gordon Chemicals Company is given in BE9.4. 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 declining-balance depreciation.

Compute depreciation using units-of-activity method.

*BE9.14 (LO 6), AP Kwik 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 10 cost $27,500 and is expected to have a salvage value of $500. Taxi 10 was driven 32,000 miles in 2024 and 33,000 miles in 2025. Compute the depreciation for each year.

DO IT! Exercises

Explain accounting for cost of plant assets.

DO IT! 9.1 (LO 1), C Hummer Company purchased a delivery truck. The total cash payment was $30,020, including the following items.

Negotiated purchase price	$24,000
Installation of special shelving	1,100
Painting and lettering	900
Motor vehicle license	180
Two- year insurance policy	2,400
Sales tax	1,440
Total paid	$30,020

Explain how each of these costs would be accounted for.

Calculate depreciation expense and make journal entry.

DO IT! 9.2a (LO 2), AP On January 1, 2025, Salt Creek Country Club purchased a new riding mower for $15,000. The mower is expected to have a 10-year life with a $1,000 salvage value. What journal entry would Salt Creek make on December 31, 2025, if it uses straight-line depreciation?

Calculated revised depreciation

DO IT! 9.2b (LO 2), AP Fordon Corporation purchased a piece of equipment for $50,000. It estimated an 8-year life and $2,000 salvage value. At the end of year four (before the depreciation adjustment), it estimated the new total life to be 10 years and the new salvage value to be $4,000. Compute the revised depreciation.

Make journal entries to record plant asset disposal.

DO IT! 9.3 (LO 3), AP Bylie Company has an old factory machine that cost $50,000. The machine has accumulated depreciation of $28,000. Bylie has decided to sell the machine.

a. What entry would Bylie make to record the sale of the machine for $25,000 cash?

b. What entry would Bylie make to record the sale of the machine for $15,000 cash?

Match intangible assets with concepts.

DO IT! 9.4 (LO 4), C Match the statement with the term most directly associated with it.

Goodwill	Amortization
Intangible assets	Franchise
Research and 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 by a company that often lead to patents or new products. These costs must be expensed as incurred.
5. _______ The excess of the cost of a company over the fair value of the net assets required.

Calculate asset turnover.

DO IT! 9.5 (LO 5), AP For 2025, 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 2025.

Exercises

Determine cost of plant acquisitions.

E9.1 (LO 1), C **Writing** The following expenditures relating to plant assets were made by Glenn Company during the first 2 months of 2025.

1. Paid $7,000 of accrued taxes at the time the plant site was acquired.
2. Paid $200 insurance to cover a possible accident loss on new factory machinery while the machinery was in transit.

3. Paid $850 sales taxes on a new delivery truck.
4. Paid $21,000 for parking lots and driveways on the new plant site.
5. Paid $250 to have the company name and slogan painted on the new delivery truck.
6. Paid $8,000 for installation of new factory machinery.
7. Paid $900 for a 2-year accident insurance policy on the new delivery truck.
8. Paid $75 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 transactions, and opposite each indicate the account title to which each expenditure should be debited.

E9.2 **(LO 1), C** Adama Company incurred the following costs.

Determine property, plant, and equipment 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	880
6.	Cost of fence constructed 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	13,300
9.	Architect's fees on self-constructed building	10,000

Instructions

Indicate to which account Adama would debit each of the costs.

E9.3 **(LO 1), AP** On March 1, 2025, Boyd Company acquired real estate, on which it planned to construct a small office building, by paying $80,000 in cash. An old warehouse on the property was demolished at a cost of $8,200; the salvaged materials were sold for $1,700. Additional expenditures before construction began included $1,900 attorney's fee for work concerning the land purchase, $5,200 real estate broker's fee, $9,100 architect's fee, and $14,000 to put in driveways and a parking lot.

Determine acquisition costs of land.

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 **(LO 1, 2), AP** Hohnberger Enterprises purchased equipment on March 15, 2025, for $75,000. The company also paid the following amounts: $500 for freight charges, $200 for insurance while the equipment was in transit, $1,800 for a one-year insurance policy, $2,100 to train employees on how to use the new equipment, and $2,800 for equipment testing and installation. The company began to use the equipment on April 1. Hohnberger has estimated the equipment will have a 10-year useful life with no salvage value. It expects to consume the equipment's economic benefits evenly over its useful life. The company has a December 31 year-end.

Calculate cost and depreciation; recommend method.

Instructions

a. Calculate the cost of the equipment.

b. Which depreciation method should the company use? Why?

c. Using the method chosen in part (b), calculate the depreciation on the equipment for 2025.

E9.5 **(LO 2), AP** Kelly Machines reported the following information about two of its machines as of December 31, 2023.

Calculate straight-line depreciation.

Machine	Date Acquired	Cost	Useful Life (in years)	Salvage Value
#1	Jan. 1, 2014	$800,000	20	$40,000
#2	July 1, 2023	120,000	5	5,000

Instructions

a. Calculate the annual depreciation for each asset using the straight-line method.

b. Calculate the accumulated depreciation and book value of each asset on December 31, 2024.

c. If the company determined during 2025 that machine #2 now has a salvage value of $10,000, would you expect the accumulated depreciation as of December 31, 2024, to change? If so, would it likely increase or decrease?

Understand depreciation concepts.

E9.6 **(LO 2), C** Alysha Monet has prepared the following list of statements about depreciation.

1. Depreciation is a process of asset valuation, not cost allocation.
2. Depreciation provides for the proper recording of expenses (efforts) with revenues (results).
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 since placing the asset in service.
9. Depreciation expense and accumulated depreciation are reported on the income statement.
10. Three factors affect the computation of depreciation: cost, useful life, and salvage value.

Instructions

Identify each statement as true or false. If false, indicate how to correct the statement.

Determine straight-line depreciation for partial period.

Excel

E9.7 **(LO 2), AP** Gotham Company purchased a new machine on October 1, 2025, at a cost of $90,000. The company estimated that the machine has a salvage value of $8,000. The machine is expected to be used for 70,000 working hours during its 10-year life.

Instructions

Compute the depreciation expense under the straight-line method for 2025 and 2026, assuming a December 31 year-end.

Compute depreciation using the straight-line method.

E9.8 **(LO 2), AP** Linton Company purchased a delivery truck for $34,000 on July 1, 2025. The truck has an expected salvage value of $2,000, and is expected to be driven 100,000 miles over its estimated useful life of 8 years. Actual miles driven were 15,000 in 2025 and 12,000 in 2026. Linton uses the straight-line method of depreciation.

Instructions

a. Compute depreciation expense for 2025 and 2026.

b. Prepare the journal entry to record 2025 depreciation.

c. Prepare the journal entry to record 2026 depreciation.

d. Show how the truck would be reported in the December 31, 2026, balance sheet.

Compute revised annual depreciation.

E9.9 **(LO 2), AN** Victor Mineli, the new controller of Santorini Company, has reviewed the expected useful lives and salvage values of selected depreciable assets at the beginning of 2025. Here are his findings:

Type of Asset	Date Acquired	Cost	Accumulated Depreciation, Jan. 1, 2025	Useful Life (in years)		Salvage Value	
				Old	Proposed	Old	Proposed
Building	Jan. 1, 2017	$700,000	$130,000	40	58	$50,000	$35,000
Warehouse	Jan. 1, 2020	120,000	23,000	25	20	5,000	3,600

All assets are depreciated by the straight-line method. Santorini Company uses a calendar year in preparing annual financial statements. After discussion, management has agreed to accept Victor's proposed changes. (The "Proposed" useful life is total life, not remaining life.)

Instructions

a. Compute the revised annual depreciation on each asset in 2025. (Show computations.)

b. Prepare the entry (or entries) to record depreciation on the building in 2025.

Compute revised depreciation and record entries.

E9.10 (LO 2), AP On July 1, 2022, April Company purchased new equipment for $80,000. Its estimated useful life was 7 years with a $10,000 salvage value. On January 1, 2025, the company estimated that the equipment's remaining useful life was 10 years, with a revised salvage value of $5,000.

Instructions

a. Prepare the journal entry to record depreciation on December 31, 2022.

b. Prepare the journal entry to record depreciation on December 31, 2023.

c. Compute the revised annual depreciation on December 31, 2025.

d. Prepare the journal entry to record depreciation on December 31, 2025.

e. Compute the balance in Accumulated Depreciation—Equipment for this equipment after depreciation expense has been recorded on December 31, 2025.

Reconstruct equipment transactions.

E9.11 (LO 2, 3), AP Shown below are the T-accounts relating to equipment that was purchased for cash by a company on the first day of the current year. The T-accounts show the balance in the accounts on January 1, along with the effects of transactions recorded on December 31 of the current year. The equipment was depreciated on a straight-line basis with an estimated useful life of 10 years and a salvage value of $100. Part of the equipment was sold on the last day of the current year for cash proceeds; the remaining equipment that was not sold became impaired.

Cash	
	Jan. 1 (a)
Dec. 31 450	

Equipment	
Jan. 1 1,100	
	Dec. 31 440

Accumulated Depreciation—Equipment	
	Dec. 31 100
Dec. 31 40	31 55

Depreciation Expense	
Dec. 31 (b)	

Gain on Disposal	
	Dec. 31 (c)

Impairment Loss	
Dec. 31 (d)	

Instructions

Reconstruct the journal entries to record the following and derive the missing amounts.

a. Purchase of equipment on January 1. What was the cash paid?

b. Depreciation recorded on December 31. What was the depreciation expense?

c. Sale of part of the equipment on December 31. What was the gain on disposal?

d. Partial impairment loss on the remaining equipment on December 31. What was the impairment?

Journalize transactions related to disposals of plant assets.

Excel

E9.12 (LO 3), AP Thieu Co. has delivery equipment that cost $50,000 and has accumulated depreciation of $24,000.

Instructions

Record entries for the disposal under the following assumptions.

a. It was scrapped as having no value.

b. It was sold for $37,000.

c. It was sold for $20,000.

Record disposal of equipment.

E9.13 (LO 3), AP Here are selected 2025 transactions of Akron Corporation.

Jan. 1	Retired a piece of machinery that was purchased on January 1, 2015. The machine cost $62,000 and had a useful life of 10 years with no salvage value.
June 30	Sold a computer that was purchased on January 1, 2023. The computer cost $36,000 and had a useful life of 3 years with no salvage value. The computer was sold for $5,000 cash.
Dec. 31	Sold a delivery truck for $9,000 cash. The truck cost $25,000 when it was purchased on January 1, 2022, and was depreciated based on a 5-year useful life with a $4,000 salvage value.

Instructions

Journalize all entries required on the above dates, including entries to update depreciation on assets disposed of, where applicable. Akron Corporation uses straight-line depreciation.

Journalize entries for disposal of equipment.

E9.14 (LO 3), AP Pryce Company owns equipment that cost $65,000 when purchased on January 1, 2022. It has been depreciated using the straight-line method based on an estimated salvage value of $5,000 and an estimated useful life of 5 years.

Instructions

Prepare Pryce Company's journal entries to record the sale of the equipment in these four independent situations.

a. Sold for $31,000 on January 1, 2025.

b. Sold for $31,000 on May 1, 2025.

c. Sold for $11,000 on January 1, 2025.

d. Sold for $11,000 on October 1, 2025.

Record equipment transactions and determine missing amounts.

E9.15 (LO 1, 2, 3), AN Shown below are the T-accounts relating to equipment that was purchased for cash by a company on the first day of the current year. The equipment was depreciated on a straight-line basis with an estimated useful life of 10 years and a salvage value of $200. Part of the equipment was sold on the last day of the current year for cash proceeds.

Cash		Equipment		Accumulated Depreciation—Equipment	
	Jan. 1 (a)	Jan. 1 2,200			Dec. 31 200
Dec. 31 500			Dec. 31 630	Dec. 31 60	

Depreciation Expense		Loss on Disposal of Plant Assets	
Dec. 31 (b)		Dec. 31 (c)	

Instructions

Prepare the journal entries to record the following and derive the missing amounts:

a. Purchase of equipment on January 1. What was the cash paid?

b. Depreciation recorded on December 31. What was the depreciation expense?

c. Sale of part of the equipment on December 31. What was the loss on disposal?

Apply accounting concepts.

E9.16 (LO 1, 2, 3, 4), C **Writing** The following situations are independent of one another.

1. An accounting student recently employed by a small company doesn't understand why the company is only depreciating its buildings and equipment, but not its land. The student prepared journal entries to depreciate all the company's property, plant, and equipment for the current year-end.
2. The same student also thinks the company's amortization policy on its intangible assets is wrong. The company is currently amortizing its patents but not its goodwill. As a result, the student added goodwill to her adjusting entry for amortization at the end of the current year. She told a fellow employee that she felt she had improved the consistency of the company's accounting policies by making these changes.
3. The same company has a building still in use that has a zero book value but a substantial fair value. The student felt that this practice didn't benefit the company's users—especially the bank—and wrote the building up to its fair value. After all, she reasoned, you can write down assets if fair values are lower. Writing them up if fair value is higher is yet another example of the improved consistency that she has brought to the company's accounting practices.

Instructions

Explain whether or not the accounting treatment in each of the above situations is in accordance with generally accepted accounting principles. Explain what accounting principle or assumption, if any, has been violated and what the appropriate accounting treatment should be.

Prepare adjusting entries for amortization.

E9.17 (LO 4), AN These are selected 2025 transactions for Wyle Corporation:

Jan. 1	Purchased a copyright for $120,000. The copyright has a useful life of 6 years and a remaining legal life of 30 years.
Mar. 1	Purchased a patent with an estimated useful life of 4 years and a legal life of 20 years for $54,000.
Sept. 1	Purchased a small company and recorded goodwill of $150,000. Its useful life is indefinite.

Instructions

Prepare all adjusting entries at December 31 to record amortization required by the events.

Prepare entries to set up appropriate accounts for different intangibles; calculate amortization.

E9.18 (LO 4), AN On January 1, 2025, Haley Company had a balance of $360,000 of goodwill on its balance sheet that resulted from the purchase of a small business in a prior year. The goodwill had an indefinite life. During 2025, the company had the following additional transactions.

Jan. 2	Purchased a patent (5-year life) $280,000.
July 1	Acquired a 9-year franchise; expiration date July 1, 2034, $540,000.
Sept. 1	Research and development costs $185,000.

Instructions

a. Prepare the necessary entries to record the transactions related to intangibles. All costs incurred were for cash.

b. Make the entries as of December 31, 2025, recording any necessary amortization.

c. Indicate what the intangible asset account balances should be on December 31, 2025.

Discuss implications of amortization period.

E9.19 **(LO 4), C** **Writing** Alliance Atlantis Communications Inc. changed its accounting policy to amortize broadcast rights over the contracted exhibition period, which is based on the estimated useful life of the program. Previously, the company amortized broadcast rights over the lesser of 2 years or the contracted exhibition period.

Instructions

Write a short memo to your client explaining the implications this has for the analysis of Alliance Atlantis's results.

Answer questions on depreciation and intangibles.

E9.20 **(LO 2, 4), C** The questions listed below are independent of one another.

Instructions

Provide a brief answer to each question.

a. Why should a company depreciate its buildings?

b. How can a company have a building that has a zero reported book value but substantial fair value?

c. What are some examples of intangibles that you might find on your college campus?

d. Give some examples of company or product trademarks or trade names. Are trade names and trademarks reported on a company's balance sheet?

Calculate asset turnover and return on assets.

E9.21 **(LO 5), AP** Suppose during 2025 that Federal Express reported the following information (in millions): net sales of $35,497 and net income of $98. Its balance sheet also showed total assets at the beginning of the year of $25,633 and total assets at the end of the year of $24,244.

Instructions

Calculate the (a) asset turnover and (b) return on assets.

Calculate and interpret ratios.

E9.22 **(LO 5), AP** Lymen International is considering a significant expansion to its product line. The sales force is excited about the opportunities that the new products will bring. The new products are a significant step up in quality above the company's current offerings, but offer a complementary fit to its existing product line. Fred Ridtdick, senior production department manager, is very excited about the high-tech new equipment that will have to be acquired to produce the new products. Barbara Dyson, the company's CFO, has provided the following projections based on results with and without the new products.

	Without New Products	**With New Products**
Sales revenue	$10,000,000	$16,000,000
Net income	$500,000	$960,000
Average total assets	$5,000,000	$12,000,000

Instructions

a. Compute the company's return on assets, profit margin, and asset turnover, both with and without the new product line.

b. Discuss the implications that your findings in part (a) have for the company's decision.

Calculate and interpret ratios.

E9.23 **(LO 5), AP** Linley Company reports the following information (in millions) during a recent year: net sales, $11,408.5; net earnings, $264.8; total assets, ending, $4,312.6; and total assets, beginning, $4,254.3.

Instructions

a. Calculate the (1) return on assets, (2) asset turnover, and (3) profit margin.

b. Prove mathematically how the profit margin and asset turnover work together to explain return on assets, by showing the appropriate calculation.

c. Linley Company owns Northgate (grocery), Linley Theaters, Oz Drugstores, and Ransome (heavy equipment), and manages commercial real estate, among other activities. Does this diversity of activities affect your ability to interpret the ratios you calculated in (a)? Explain.

Determine net cash provided by operating activities.

E9.24 **(LO 5), AN** Mendez Corporation reported net income of $58,000. Depreciation expense for the year was $132,000. The company calculates depreciation expense using the straight-line method, with a useful life of 10 years. Top management would like to switch to a 15-year useful life because depreciation expense would be reduced to $88,000. The CEO says, "Increasing the useful life would increase net income and net cash provided by operating activities."

Instructions

Provide a comparative analysis showing net income and net cash provided by operating activities (ignoring other accrual adjustments) under the indirect method using a 10-year and a 15-year useful life. (Ignore income taxes.) Evaluate the CEO's suggestion.

Identify key terms.

E9.25 **(LO 1, 2, 3, 4), K** The following is a list of words or phrases introduced in the chapter.

1. Capital expenditures.
2. Goodwill.
3. Plant assets.
4. Lessor.
5. Patent.
6. Copyright.
7. Impairment.
8. Accelerated-depreciation method.
9. Intangible assets.
10. Declining-balance method.
11. Amortization.
12. Lessee.
13. Trademark (trade name).
14. Ordinary repairs.
15. Units-of-activity method.

Instructions

Match the word or phrase above with its description below.

a. ________ Any depreciation method that produces higher depreciation expense in the early years than the straight-line approach.

b. ________ The process of allocating to expense the cost of an intangible asset.

c. ________ Expenditures that increase the company's investment in plant assets.

d. ________ A depreciation method that applies a constant rate to the declining book value of the asset and produces a decreasing annual depreciation expense over the asset's useful life.

e. ________ A permanent decline in the fair value of an asset.

f. ________ Rights, privileges, and competitive advantages that result from the ownership of long-lived assets that do not possess physical substance.

g. ________ A party that has made contractual arrangements to use another party's asset for a period at an agreed price.

h. ________ A party that has agreed contractually to let another party use its asset for a period at an agreed price.

i. ________ Expenditures to maintain the operating efficiency and expected productive life of the asset.

j. ________ Resources that have physical substance, are used in the operations of a business, and are not intended for sale to customers.

k. ________ A depreciation method in which useful life is expressed in terms of the total units of production or use expected from the asset.

l. ________ An exclusive right granted by the federal government allowing the owner to reproduce and sell an artistic or published work.

m. ________ A word, phrase, jingle, or symbol that distinguishes or identifies a particular enterprise or product.

n. ________ An exclusive right issued by the U.S. Patent Office that enables the recipient to manufacture, sell, or otherwise control an invention for a period of 20 years from the date of the grant.

o. ________ The value of all favorable attributes that relate to a company that are not attributable to any other specific asset.

Compute depreciation under units-of-activity method.

*E9.26 **(LO 6), AP** Whippet Bus Lines uses the units-of-activity method in depreciating its buses. One bus was purchased on January 1, 2025, at a cost of $100,000. Over its 4-year useful life, the bus is expected to be driven 160,000 miles. Salvage value is expected to be $8,000.

Instructions

a. Compute the depreciation cost per unit.

b. Prepare a depreciation schedule assuming actual mileage was 2025, 40,000; 2026, 52,000; 2027, 41,000; and 2028, 27,000.

*E9.27 **(LO 6), AP** Basic information relating to a new machine purchased by Gotham Company is presented in E9.7.

Compute declining-balance and units-of-activity depreciation.

Instructions

Using the facts presented in E9.7, compute depreciation using the following methods in the year indicated.

a. Declining-balance using double the straight-line rate for 2025 and 2026.

b. Units-of-activity for 2025, assuming machine usage was 480 hours. (Round depreciation per unit to the nearest cent.)

Problems

P9.1 (LO 1), C Peete Company 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.

Debit	
1. Excavation costs for new building	$ 23,000
2. Architect's fees on building plans	33,000
3. Full payment to building contractor	640,000
4. Cost of real estate purchased as a plant site (land $255,000 and building $25,000)	280,000
5. Cost of parking lots and driveways	29,000
6. Accrued real estate taxes paid at time of purchase of land	3,170
7. Installation cost of fences around property	6,800
8. Cost of demolishing building to make land suitable for construction of new building	31,000
9. Real estate taxes paid for the current year on land	6,400
	$1,052,370

Credit	
10. Proceeds from salvage of demolished building	$ 12,000

Instructions

Analyze the transactions using the following table column headings. Enter the number of each transaction in the Item column, and enter the amounts in the appropriate columns. For amounts in the Other Accounts column, also indicate the account title.

Item	**Land**	**Buildings**	**Other Accounts**

Land $302,170

P9.2 (LO 2, 3, 5), AP At December 31, 2025, Arnold Corporation reported the following plant assets.

Journalize equipment transactions related to purchase, sale, retirement, and depreciation.

Excel

Land		$ 3,000,000
Buildings	$26,500,000	
Less: Accumulated depreciation—buildings	11,925,000	14,575,000
Equipment	40,000,000	
Less: Accumulated depreciation—equipment	5,000,000	35,000,000
Total plant assets		$52,575,000

During 2026, the following selected cash transactions occurred.

Apr. 1	Purchased land for $2,200,000.
May 1	Sold equipment that cost $600,000 when purchased on January 1, 2019. The equipment was sold for $170,000.

June 1	Sold land for $1,600,000. The land cost $1,000,000.
July 1	Purchased equipment for $1,100,000.
Dec. 31	Retired equipment that cost $700,000 when purchased on December 31, 2016. No salvage value was received.

Instructions

a. Journalize the transactions. (*Hint:* You may wish to set up T-accounts, post beginning balances, and then post 2026 transactions.) Arnold uses straight-line depreciation for buildings and equipment. The buildings are estimated to have a 40-year useful life and no salvage value; the equipment is estimated to have a 10-year useful life and no salvage value. Update depreciation on assets disposed of at the time of sale or retirement.

b. Record adjusting entries for depreciation for 2026.

c. Tot. plant assets $50,037,500

c. Prepare the plant assets section of Arnold's balance sheet at December 31, 2026.

Journalize entries for disposal of plant assets.

P9.3 **(LO 3), AP** Pine Company had the following assets on January 1, 2025.

Item	Cost	Purchase Date	Useful life (in years)	Salvage Value
Machinery	$71,000	Jan. 1, 2015	10	$ -0-
Forklift	30,000	Jan. 1, 2022	5	-0-
Truck	33,400	Jan. 1, 2020	8	3,000

During 2025, each of the assets was removed from service. The machinery was retired on January 1. The forklift was sold on June 30 for $12,000. The truck was discarded on December 31.

Instructions

Loss on truck disposal $10,600

Journalize all entries required on the above dates, including entries to update depreciation, where applicable, on disposed assets. The company uses straight-line depreciation. All depreciation was up to date as of December 31, 2024.

Record property, plant, and equipment transactions; prepare partial balance sheet.

P9.4 **(LO 1, 2, 3, 5), AP** At January 1, 2025, Youngstown Company reported the following property, plant, and equipment accounts:

Accumulated depreciation—buildings	$ 62,200,000
Accumulated depreciation—equipment	54,000,000
Buildings	97,400,000
Equipment	150,000,000
Land	20,000,000

The company uses straight-line depreciation for buildings and equipment, its year-end is December 31, and it makes adjusting entries annually. The buildings are estimated to have a 40-year useful life and no salvage value; the equipment is estimated to have a 10-year useful life and no salvage value.

During 2025, the following selected transactions occurred:

Apr. 1	Purchased land for $4.4 million. Paid $1.1 million cash and issued a 3-year, 6% note payable for the balance. Interest on the note is payable annually each April 1.
May 1	Sold equipment for $300,000 cash. The equipment cost $2.8 million when originally purchased on January 1, 2017.
June 1	Sold land for $3.6 million. Received $900,000 cash and accepted a 3-year, 5% note for the balance. The land cost $1.4 million when purchased on June 1, 2019. Interest on the note is due annually each June 1.
July 1	Purchased equipment for $2.2 million cash.
Dec. 31	Retired equipment that cost $1 million when purchased on December 31, 2015. No proceeds were received.

Instructions

a. Journalize the above transactions. (*Hint:* You may wish to set up T-accounts, post beginning balances, and then post 2025 transactions.)

b. Record any adjusting entries for depreciation required at December 31.

Total PP&E $138,575,000

c. Prepare the property, plant, and equipment section of the company's balance sheet at December 31.

Prepare entries to record transactions related to acquisition and amortization of intangibles; prepare the intangible assets section and note.

P9.5 **(LO 4, 5), AP** The intangible assets section of Amato Corporation's balance sheet at December 31, 2025, is presented here.

Patents ($60,000 cost less $6,000 amortization)	$54,000
Copyrights ($36,000 cost less $25,200 amortization)	10,800
Total	$64,800

The patent was acquired in January 2025 and has a useful life of 10 years. The copyright was acquired in January 2019 and also has a useful life of 10 years. The following cash transactions may have affected intangible assets during 2026.

Jan. 2	Paid $46,800 legal costs to successfully defend the patent against infringement by another company.
Jan.–June	Developed a new product, incurring $230,000 in research and development costs. A patent was granted for the product on July 1, and its useful life is equal to its legal life. Legal and other costs for the patent were $20,000.
Sept. 1	Paid $40,000 to a quarterback to appear in commercials advertising the company's products. The commercials will air in September and October.
Oct. 1	Acquired a copyright for $200,000. The copyright has a useful life and legal life of 50 years.

Instructions

a. Prepare journal entries to record the transactions.

b. Prepare journal entries to record the 2026 amortization expense for intangible assets.

c. Prepare the intangible assets section of the balance sheet at December 31, 2026. c. Tot. intangibles $315,300

d. Prepare the note to the financial statements on Amato Corporation's intangible assets as of December 31, 2026.

P9.6 (LO 4), AP Due to rapid employee turnover in the accounting department, the following transactions involving intangible assets were improperly recorded by Inland Corporation.

Prepare entries to correct errors in recording and amortizing intangible assets.

1. Inland developed a new manufacturing process, incurring research and development costs of $160,000. The company also purchased a patent for $40,000. In early January, Inland capitalized $200,000 as the cost of the patents. Patent amortization expense of $10,000 was recorded based on a 20-year useful life.
2. On July 1, 2025, Inland purchased a small company and as a result recorded goodwill of $80,000. Inland recorded a half-year's amortization in 2025, based on a 20-year life ($2,000 amortization). The goodwill has an indefinite life.

Instructions

Prepare all journal entries necessary to correct any errors made during 2025. Assume the books have not yet been closed for 2025.

P9.7 (LO 5), AN Blythe Corporation and Jacke Corporation, two companies of roughly the same size, are both involved in the manufacture of shoe-tracing devices. Each company depreciates its plant assets using the straight-line approach. An investigation of their financial statements reveals the information shown below.

Calculate and comment on return on assets, profit margin, and asset turnover.

	Blythe Corp.	Jacke Corp.
Net income	$ 240,000	$ 300,000
Sales revenue	1,150,000	1,200,000
Total assets (average)	3,200,000	3,000,000
Plant assets (average)	2,400,000	1,800,000
Intangible assets (goodwill)	300,000	0

Instructions

a. For each company, calculate these values:
   1. Return on assets.
   2. Profit margin.
   3. 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. What factors complicate your ability to compare the two companies?

***P9.8 (LO 2, 6), AP** In recent years, Jayme Company has purchased three machines. Because of frequent employee turnover in the accounting department, a different accountant was in charge of selecting the depreciation method for each machine, and various methods have been used. Information concerning the machines is summarized in the table below.

Compute depreciation under different methods.

Machine	Acquired	Cost	Salvage Value	Useful Life (in years)	Depreciation Method
1	Jan. 1, 2023	$96,000	$12,000	8	Straight-line
2	July 1, 2024	85,000	10,000	5	Declining-balance
3	Nov. 1, 2024	66,000	6,000	6	Units-of-activity

For the declining-balance method, Jayme Company uses the double-declining rate. For the units-of-activity method, total machine hours are expected to be 30,000. Actual hours of use in the first 3 years were 2024, 800; 2025, 4,500; and 2026, 6,000.

Instructions

a. Machine 2 $60,520

a. Compute the amount of accumulated depreciation on each machine at December 31, 2026.

b. If machine 2 was purchased on April 1 instead of July 1, what would be the depreciation expense for this machine in 2024? In 2025?

Compute depreciation under different methods.

*P9.9 **(LO 2, 6), AP** Megan Corporation purchased machinery on January 1, 2025, at a cost of $250,000. The estimated useful life of the machinery is 4 years, with an estimated salvage value at the end of that period of $30,000. The company is considering different depreciation methods that could be used for financial reporting purposes.

Instructions

a. Double-declining-balance expense 2027 $31,250

a. Prepare separate depreciation schedules for the machinery using the straight-line method, and the declining-balance method using double the straight-line rate. (Round to the nearest dollar.)

b. Which method would result in the higher reported 2025 income? In the highest total reported income over the 4-year period?

c. Which method would result in the lower reported 2025 income? In the lowest total reported income over the 4-year period?

Continuing Case

leungchopan/ Shutterstock.com

Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 through 8.)

CC9 Part 1 Now that she is selling mixers and her customers can use credit cards to pay for them, Natalie is thinking of upgrading her website so that she can sell mixers online, to broaden her range of customers. She will need to know how to account for the costs of upgrading the site.

Part 2 Natalie is also thinking of buying a van that will be used only for business. Natalie is concerned about the impact of the van's cost on her income statement and balance sheet. She has come to you for advice on calculating the van's depreciation.

Go to Wiley Course Resources for complete case details and instructions.

Comprehensive Accounting Cycle Review

ACR9.1 Milo Corporation's unadjusted trial balance at December 1, 2025, is presented below.

	Debit	Credit
Cash	$ 22,000	
Accounts Receivable	36,800	
Notes Receivable	10,000	
Interest Receivable	–0–	
Inventory	36,200	
Prepaid Insurance	3,600	
Land	20,000	
Buildings	150,000	
Equipment	60,000	
Patent	9,000	
Allowance for Doubtful Accounts		$ 500
Accumulated Depreciation—Buildings		50,000
Accumulated Depreciation—Equipment		24,000

	Debit	Credit
Accounts Payable		$ 27,300
Salaries and Wages Payable		–0–
Notes Payable (due April 30, 2026)		11,000
Income Taxes Payable		–0–
Interest Payable		–0–
Notes Payable (due in 2031)		35,000
Common Stock		50,000
Retained Earnings		63,600
Dividends	$ 12,000	
Sales Revenue		900,000
Interest 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	
	$1,161,400	$1,161,400

The following transactions occurred during December.

Dec.	2	Purchased equipment for $16,000, plus sales taxes of $800 (paid in cash).
	2	Milo sold for $3,500 equipment which originally cost $5,000. Accumulated depreciation on this equipment at January 1, 2025, was $1,800; 2025 depreciation prior to the sale of equipment was $825.
	15	Milo sold for $5,000 on account inventory that cost $3,500. (Milo records sales under a perpetual inventory system.)
	23	Salaries and wages of $6,600 were paid.

Adjustment data:

1. Milo estimates that uncollectible accounts receivable at year-end are $4,000.
2. The note receivable is a 1-year, 8% note dated April 1, 2025. No interest has been recorded.
3. The balance in prepaid insurance represents payment of a $3,600, 6-month premium on September 1, 2025.
4. The building is being depreciated using the straight-line method over 30 years. The salvage value is $30,000.
5. The equipment owned prior to this year is being depreciated using the straight-line method over 5 years. The salvage value is 10% of cost.
6. The equipment purchased on December 2, 2025, is being depreciated using the straight-line method over 5 years, with a salvage value of $1,800.
7. The patent was acquired on January 1, 2025, and has a useful life of 9 years from that date.
8. Unpaid salaries at December 31, 2025, total $2,200.
9. Both the short-term and long-term notes payable are dated January 1, 2025, and carry a 10% interest rate. All interest is payable in the next 12 months.
10. Income tax expense was $15,000. It was unpaid at December 31.

Instructions

a. Prepare journal entries for the transactions listed above and adjusting entries.

b. Prepare an adjusted trial balance at December 31, 2025.

c. Prepare a 2025 income statement and a 2025 retained earnings statement.

d. Prepare a December 31, 2025, balance sheet.

b. Totals $1,265,775
c. Net income $51,150
d. Total assets $247,850

ACR9.2 Aberkonkie Corporation prepares quarterly financial statements. The post-closing trial balance at December 31, 2024, is presented below.

Aberkonkie Corporation
Post-Closing Trial Balance
December 31, 2024

	Debit	Credit
Cash	$ 24,300	
Accounts Receivable	22,400	
Allowance for Doubtful Accounts		$ 1,200
Equipment	20,000	
Accumulated Depreciation—Equipment		15,000
Buildings	100,000	
Accumulated Depreciation—Buildings		15,000
Land	20,000	
Accounts Payable		12,370
Common Stock		90,000
Retained Earnings		53,130
	$186,700	$186,700

During the first quarter of 2025, the following transaction occurred:

1. On February 1, Aberkonkie collected fees of $12,000 in advance. The company will perform $1,000 of services each month from February 1, 2025, to January 31, 2026.
2. On February 1, Aberkonkie purchased computer equipment for $9,000 plus sales taxes of $600. $3,000 cash was paid with the rest on account. Check #455 was used.
3. On March 1, Aberkonkie acquired a patent with a 10-year life for $9,600 cash. Check #456 was used.
4. On March 28, Aberkonkie recorded the quarter's sales in a single entry. During this period, Aberkonkie had total sales of $140,000 (not including the sales referred to in item 1 above). All of the sales were on account.
5. On March 29, Aberkonkie collected $133,000 from customers on account.
6. On March 29, Aberkonkie paid $16,370 on accounts payable. Check #457 was used.
7. On March 29, Aberkonkie paid other operating expenses of $97,525. Check #458 was used.
8. On March 31, Aberkonkie wrote off a receivable of $200 for a customer who declared bankruptcy.
9. On March 31, Aberkonkie sold for $1,620 equipment that originally cost $11,000. It had an estimated life of 5 years and salvage of $1,000. Accumulated depreciation as of December 31, 2024, was $8,000 using the straight line method. (*Hint:* Record depreciation on the equipment sold, then record the sale.)

Bank reconciliation data and adjustment data:

1. The company reconciles its bank statement every quarter. Information from the December 31, 2024, bank reconciliation is:

Deposit in transit:	12/30/2024	$5,000
Outstanding checks	#440	3,444
	#452	333
	#453	865
	#454	5,845

   The bank statement received for the quarter ended March 31, 2025, is as follows.

Beginning balance per bank	$ 29,787
Deposits: 1/2/2025, $5,000; 2/2/2025, $12,000; 3/30/2025, $133,000	150,000
Checks: #452, $333; #453, $865; #457, $16,370; #458, $97,525	(115,093)
Debit memo: Bank service charge (record as operating expense)	(100)
Ending bank balance	$ 64,594

2. Record revenue earned from item 1 above.
3. $26,000 of accounts receivable at March 31, 2025, are not past due yet. The bad debt percentage for these is 4%. The remaining balance of accounts receivable is past due. The bad debt percentage for these is 23.75%. Record bad debt expense. (*Hint:* You will need to compute the balance in accounts receivable before calculating this.)
4. Depreciation is recorded on the equipment still owned at March 31, 2025. The new equipment purchased in February is being depreciated on a straight-line basis over 5 years and salvage value was estimated at $1,200. The old equipment still owned is being depreciated over a 10-year life using straight-line with no salvage value.
5. Depreciation is recorded on the building on a straight-line basis based on a 30-year life and a salvage value of $10,000.

6. Amortization is recorded on the patent.
7. The income tax rate is 30%. This amount will be paid when the tax return is due in April. (*Hint:* Prepare the income statement up to income before taxes and multiply by 30% to compute the amount.)

Instructions

a. Record journal entries for transactions 1–9.
b. Enter the December 31, 2024, balances in ledger accounts using T-accounts.
c. Post the journal entries to the ledger accounts for items 1–9.
d. Prepare an unadjusted trial balance at March 31.
e. Prepare a bank reconciliation in good form.
f. Journalize and post entries related to bank reconciliation and all adjusting entries.
g. Prepare an adjusted trial balance.
h. Prepare an income statement and a retained earnings statement for the quarter ended March 31, 2025, and a classified balance sheet at March 31, 2025.

d. Trial balance total $320,730
e. Adjusted balance per bank $44,325
f. Total assets $196,590

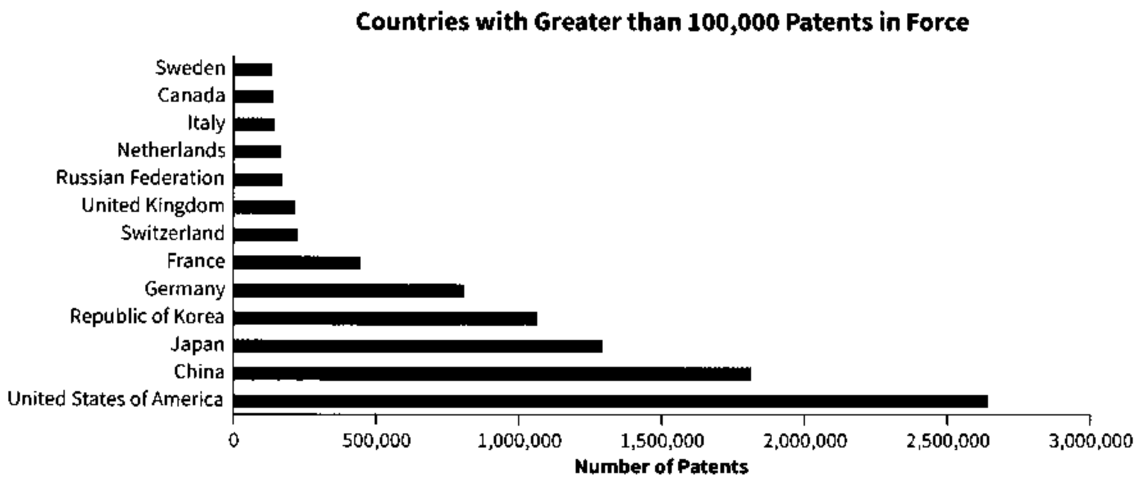
Data Analytics in Action

Using Data Visualization to Analyze Types of Assets

DA9 Data visualization can be used to identify changes in the composition of assets.

Example: Patents are often reported on companies' balance sheets as intangible assets. For example, consider the following chart, which shows the countries that recently had at least 100,000 patents in force.

Excel



Source: Based on WIPO Statistics Database.

For companies that have many patents, GAAP requires the amounts to be valued at historical cost on the companies' balance sheets. The market value of many of the patents owned by companies such as Dropbox, Google, and Facebook is therefore much greater than the amount reported on a company's balance sheet.

For this case, you will use data that shows the dollar value of intangible assets compared to tangible assets held by S&P 500 companies over the last 45 years. (The S&P 500 companies are a group of the largest 500 companies that trade stock on multiple U.S. stock exchanges, including the New York Stock Exchange and NASDAQ.) You will create and analyze a stacked column chart to identify trends in the types of assets held by these large companies over time.

Go to Wiley Course Resources for complete case details and instructions.

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT9.1 The financial statements of **Apple Inc.** are presented in Appendix A. The complete annual report, including the notes to the financial statements, is available at the company's website.

Instructions

Answer the following questions.

a. What were the total cost and book value of property, plant, and equipment at September 26, 2020?

b. Using the notes to the financial statements, 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 2018–2020? (*Hint:* Use the statement of cash flows.)

d. Using the statement of cash flows, what are the amounts of property, plant, and equipment purchased in 2020 and 2019?

Comparative Analysis Problem: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT9.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements of **Under Armour, Inc.** are presented in Appendix C. The complete annual reports, including the notes to the financial statements, are available at each company's respective website.

Instructions

a. Based on the information in these financial statements and the accompanying notes and schedules, compute the following values for each company in 2020.

1. Return on assets.
2. Profit margin (use "Total Revenue").
3. Asset turnover.

b. What conclusions concerning the management of plant assets can be drawn from these data?

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT9.3 The financial statements of **Amazon.com, Inc.** are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E. The complete annual reports, including the notes to the financial statements, are available at each company's respective website.

Instructions

a. Based on the information in these financial statements and the accompanying notes and schedules, compute the following values for each company for the most recent fiscal year provided.

1. Return on assets.
2. Profit margin (use "Total Revenue").
3. Asset turnover.

b. What conclusions concerning the management of plant assets can be drawn from these data?

Interpreting Financial Statements

CT9.4 As customers shifted to shopping online, Best Buy's 1,100 giant stores, which enabled the company to obtain its position as the largest retailer of electronics, began to reduce its profitability and even threatening its survival. Many customers go to Best Buy stores to see items but then buy them for less from online retailers. As a result, Best Buy began to close stores and switch to smaller stores.

Suppose the following data were extracted from the annual reports of Best Buy. (All amounts are in millions.)

	2025	2024	2020	2019
Total assets at year-end	$17,849	$18,302	$11,864	$10,294
Net sales	50,272		30,848	
Net income	1,277		1,140	

Instructions

Using the data above, answer the following questions.

a. How might the return on assets and asset turnover of Best Buy differ from an online retailer?
b. Compute the profit margin, asset turnover, and return on assets for 2025 and 2020.
c. Present the ratios calculated in part (b) in the equation format shown in Illustration 9.23.
d. Discuss the implications of the ratios calculated in parts (b) and (c).

Real-world focus

CT9.5 A company's annual report identifies the amount of its plant assets and the depreciation method used.

Instructions

Select a particular company, search the Internet for the company's website address, and then 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?

CT9.6 The *Forbes* article by Karsten Strauss, entitled "Subway's Lack of Transparency Is Out of Step with Franchise Industry," presents an informative view of owning a **Subway** franchise.

Instructions

Read the article and then answer the following questions.

a. According to the author, if you were interested in purchasing a Subway franchise, would you be able to find information about how much you might make from owning a Subway franchise?
b. According to the author, how does Subway compare in terms of providing financial information to prospective franchisees? What are the potential implications of this?
c. What did the Franchise Grade study find in terms of the relationship of number of franchises and the providing financial details?
d. What was the reported relationship between publishing financial data and the ability of a franchise to borrow money from lenders?

Decision-Making Across the Organization

CT9.7 Brady Furniture Corp. is nationally recognized for making high-quality products. Management is concerned that it is not fully exploiting its brand power. Brady's production managers are also concerned because their plants are not operating at anywhere near full capacity. Management is currently considering a proposal to offer a new line of affordable furniture.

Those in favor of the proposal (including the vice president of production) believe that, by offering these new products, the company could attract a clientele that it is not currently servicing. Also, it could operate its plants at full capacity, thus taking better advantage of its assets.

The vice president of marketing, however, believes that the lower-priced (and lower-margin) product would have a negative impact on the sales of existing products. The vice president believes that $10,000,000 of the sales of the new product will be from customers that would have purchased the more expensive product but switched to the lower-margin product because it was available. (This is often referred to as cannibalization of existing sales.) Top management feels, however, that even with cannibalization, the company's sales will increase and the company will be better off.

The following data are available.

(in thousands)	Current Results	Proposed Results without Cannibalization	Proposed Results with Cannibalization
Sales revenue	$ 40,000	$ 60,000	$ 50,000
Net income	$ 12,000	$ 13,500	$ 10,500
Average total assets	$100,000	$100,000	$100,000

Instructions

a. Compute Brady's return on assets, profit margin, and asset turnover, both with and without the new product line.

b. Discuss the implications that your findings in part (a) have for Brady's decision.

c. Are there any other options that Brady should consider? What impact would each of these have on the above ratios?

Communication Activity

CT9.8 The chapter presented some concerns regarding the current accounting standards for research and development expenditures.

Instructions

Assume that you are either (a) the president of a company that is very dependent on ongoing research and development, writing a memo to the FASB complaining about the current accounting standards regarding research and development, or (b) the FASB member defending the current standards regarding research and development. Your memo should address the following questions.

1. By requiring expensing of R&D, do you think companies will spend less on R&D? Why or why not? What are the possible implications for the competitiveness of U.S. companies?
2. If a company makes a commitment to spend money for R&D, it must believe it has future benefits. Shouldn't these costs therefore be capitalized just like the purchase of any long-lived asset that you believe will have future benefits?

Ethics Case

CT9.9 Clean Aire Anti-Pollution Company is suffering declining sales of its principal product, non-biodegradable plastic cartons. The president, Wade Truman, instructs his controller, Kate Rollins, to lengthen asset lives to reduce depreciation expense. A processing line of automated plastic extruding equipment, purchased for $3.5 million in January 2025, was originally estimated to have a useful life of 8 years and a salvage value of $400,000. Depreciation has been recorded for 2 years on that basis. Wade wants the estimated life changed to 12 years total and the straight-line method continued with no change in the salvage value. Kate is hesitant to make the change, believing it is unethical to increase net income in this manner. Wade 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 proposed change in asset life unethical, or is it simply a good business practice by an astute president?

c. What is the effect of Wade's proposed change on income before taxes in the year of change?

All About You

CT9.10 A company's tradename is a very important asset to the company, as it creates immediate product identification. Companies invest substantial sums to ensure that their product is well-known to the consumer. Test your knowledge of who owns some famous brands and their impact on the financial statements.

Instructions

a. Provide an answer to the four multiple-choice questions below.

1. Which company owns both Taco Bell and Pizza Hut?

   a. McDonald's. b. CKE. c. Yum Brands. d. Wendy's.

2. Dairy Queen belongs to:

   a. Breyer. b. Berkshire Hathaway. c. GE. d. The Coca-Cola Company.

3. Philip Morris USA, the cigarette maker, is owned by:

   a. Altria. b. GE. c. Boeing. d. ExxonMobil.

4. LinkedIn, an online platform for professionals to network, is owned by:

   a. Microsoft. b. Cisco. c. NBC. d. Time Warner.

b. How do you think the value of these brands is reported on the appropriate company's balance sheet?

FASB Codification Activity

CT9.11 If your school has a subscription to the FASB Codification, log in and prepare responses to the following.

a. What does it mean to capitalize an item?

b. What is the definition provided for an intangible asset?

c. Your great-uncle, who is a CPA, is impressed that you are taking an accounting class. Based on his experience, he believes that depreciation is something that companies do based on past practice, not on the basis of authoritative guidance. Provide the authoritative literature to support the practice of fixed-asset depreciation.

Considering People, Planet, and Profit

CT9.12 The March 6, 2012, edition of the *Wall Street Journal Online* contains an article by David Kesmodel entitled "Air War: 'Winglet' Versus 'Sharklet'." This article demonstrates how a company focused on green technology has also been profitable.

Instructions

Read the article and then answer the following questions.

a. Why did **Airbus** file a lawsuit against **Aviation Partners**?

b. What are the percentage fuel savings provided by Aviation Partners' Winglets on Boeing jetliners? How much total jet fuel did Aviation Partners say that its Winglets have provided at the time the article was written?

c. Describe the history of the relationship between Aviation Partners and Airbus, and the development of the Airbus Sharklet.

d. What would be the likely accounting implications if Aviation Partners were to lose the lawsuit?

Answers to Insight and Accounting Across the Organization Questions

Many U.S. 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 balance sheet.

We Want to Own Glass **Q:** If Google had been successful in registering the term Glass, where would this trademark have been reported on its financial statements? **A:** The trademark would have been reported on the balance sheet under the classification Intangible Assets.

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.

Marketing ROI as Profit Indicator **Q:** How does measuring marketing ROI support the overall efforts of the organization? **A:** Top management is ultimately concerned about maximizing the company's return on assets. Holding marketing managers accountable for the marketing ROI will contribute to the company's overall goal of maximizing return on assets.

CHAPTER **10**

Reporting and Analyzing Liabilities

Chapter Preview

The following Feature Story suggests that **General Motors (GM)** and **Ford** accumulated tremendous amounts of debt in their pursuit of auto industry dominance. It is unlikely that they could have grown so large without this debt, but at times the debt threatened their very existence. Given this risk, why do companies borrow money? Why do they sometimes borrow short-term and other times long-term? Besides bank borrowings, what other kinds of debts do companies incur? In this chapter, we address these issues.

Feature Story

And Then There Were Two

Debt can help a company acquire the things it needs to grow. But, it is often the very thing that can also kill a company. A brief history of **Maxwell Car Company** illustrates the role of debt in the U.S. auto industry. In 1920, Maxwell Car Company was on the brink of financial ruin. Because it was unable to pay its bills, its creditors stepped in and took over. They hired a former **General Motors (GM)** executive named Walter Chrysler to reorganize the company. By 1925, he had taken over the company and renamed it Chrysler. By 1933, **Chrysler** was booming, with sales surpassing even those of **Ford**.

But the next few decades saw Chrysler make a series of blunders. By 1980, with its creditors pounding at the gates, Chrysler was again on the brink of financial ruin.

At that point, Chrysler brought in a former Ford executive named Lee Iacocca to save the company. Iacocca convinced the federal government to grant loan guarantees—promises that if Chrysler failed to pay its creditors, the government would pay them. Chrysler repaid all of its government-guaranteed loans by 1983, seven years ahead of the scheduled final payment.

To compete in today's global vehicle market, you must be big—really big. GM and Ford typically rank among the top five U.S. firms in total assets. But GM and Ford accumulated truckloads of debt on their way to getting big. Although debt made it possible to get so big, the Chrysler story, and GM's recent bankruptcy, make it clear that debt can also threaten a company's survival. The rise of Tesla and the growth of the electric car market have only added to the uncertainty.

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Explain how to account for current liabilities.	• What is a current liability? • Notes payable • Sales taxes payable • Unearned revenues • Current maturities of long-term debt • Payroll and payroll taxes payable	**DO IT! 1a** Current Liabilities **1b** Wages and Payroll Taxes
LO 2 Describe the major characteristics of bonds.	• Types of bonds • Issuing procedures • Bond trading • Determining the market price of a bond	**DO IT! 2** Bond Terminology
LO 3 Explain how to account for bond transactions.	• Issuing bonds at face value • Discount or premium on bonds • Issuing bonds at a discount • Issuing bonds at a premium • Redeeming bonds at maturity • Redeeming bonds before maturity	**DO IT! 3a** Bond Issuance **3b** Bond Redemption
LO 4 Discuss how liabilities are reported and analyzed.	• Presentation • Analysis	**DO IT! 4** Analyzing Liabilities

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.
Visit Wiley Course Resources for additional tutorials and practice opportunities.

10.1 Accounting for Current Liabilities

LEARNING OBJECTIVE 1

Explain how to account for current liabilities.

What Is a Current Liability?

Liabilities are creditors' claims on total assets. 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 (1) from existing current assets or through the creation of other current liabilities, and (2) within one year or the operating cycle, whichever is longer. Debts that do not meet this criterion are **long-term liabilities**.

- Financial statement users want to know whether a company's obligations are current or long-term. 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 (see **Helpful Hint**).

HELPFUL HINT

In previous chapters, we explained the entries for accounts payable and the adjusting entries for some current liabilities.

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 balance sheet date are usually classified as current liabilities.**

To illustrate the accounting for notes payable, assume that First National Bank agrees to lend \$100,000 on September 1, 2025, if Cole Williams Co. signs a \$100,000, 6%, 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. Cole Williams therefore will receive \$100,000 cash and will make the following journal entry.

Sept. 1	Cash	100,000	
	Notes Payable		100,000
	(To record issuance of 6%, 4-month note to First National Bank)		

A	=	L	+	SE
+100,000				
		+100,000		

Cash Flows
+100,000

Interest accrues over the life of the note, and the company must periodically record that accrual. If Cole Williams prepares financial statements annually, it makes an adjusting entry at December 31 to recognize interest expense and interest payable of \$2,000 (\$100,000 × 6% × 4/12). **Illustration 10.1** shows the formula for computing interest and its application to Cole Williams' note.

ILLUSTRATION 10.1
Formula for computing interest

Face Value of Note	×	Annual Interest Rate	×	Time in Terms of One Year	=	Interest
$100,000	×	6%	×	4/12	=	$2,000

Cole Williams makes an adjusting entry as follows.

A	=	L	+	SE
				−2,000 Exp
		+2,000		

Cash Flows
no effect

Dec. 31	Interest Expense	2,000	
	Interest Payable		2,000
	(To accrue interest for 4 months on First National Bank note)		

In the December 31 financial statements, the current liabilities section of the balance sheet will show notes payable $100,000 and interest payable $2,000. In addition, the company will report interest expense of $2,000 under "Other expenses and losses" in the income statement. If Cole Williams prepared financial statements monthly, the adjusting entry at the end of each month would be $500 ($100,000 × 6% × 1/12).

At maturity (January 1, 2026), Cole Williams must pay the face value of the note ($100,000) plus $2,000 interest ($100,000 × 6% × 4/12). It records payment of the note and accrued interest as follows.

A	=	L	+	SE
		−100,000		
		−2,000		
−102,000				

Cash Flows
−102,000

Jan. 1	Notes Payable	100,000	
	Interest Payable	2,000	
	Cash		102,000
	(To record payment of First National Bank interest-bearing note and accrued interest at maturity)		

Sales Taxes Payable

Many of the products we purchase at retail stores are subject to sales taxes. Many states also collect sales taxes on online purchases 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 state's department of revenue.

Collecting sales taxes is important. For example, the State of New York recently sued **Sprint Corporation** for $300 million for its alleged failure to collect sales taxes on phone calls.

Under most state sales tax laws, the selling company must enter separately in the cash register the amount of the sale and the amount of the sales tax collected (see **Helpful Hint**). (Gasoline sales are a major exception.) 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 $10,000 and sales taxes of $600 (sales tax rate of 6%), the journal entry is as follows.

> HELPFUL HINT
> **For point-of-sale systems, the company receives sales information through the computer network.**

A	=	L	+	SE
+10,600				
				+10,000 Rev
		+600		

Cash Flows
+10,600

Mar. 25	Cash	10,600	
	Sales Revenue		10,000
	Sales Taxes Payable		600
	(To record daily sales and sales taxes)		

- 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 $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 revenue amount as shown in **Illustration 10.2**.

Total Receipts	÷	(1 + Tax Rate)	=	Sales Revenue
$10,600	÷	1.06	=	$10,000

ILLUSTRATION 10.2
Computing the sales revenue amount

Thus, we can find the sales tax amount of $600 by either (1) subtracting sales from total receipts ($10,600 − $10,000) or (2) multiplying sales by the sales tax rate ($10,000 × .06).

Unearned Revenues

A magazine publisher, such as **Outside**, receives customers' checks when they order magazines. An airline company, such as **Southwest Airlines**, often receives cash when it sells tickets for future flights. 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, a performance obligation is created. The company debits Cash and credits a current liability account identifying the source of the unearned revenue.
2. When the company satisfies the performance obligation, it recognizes revenue. It debits an unearned revenue account and credits a revenue account.

To illustrate, assume that Superior University sells 10,000 season football tickets at $50 each for its five-game home schedule. The university makes the following entry for the sale of season tickets.

Aug. 6	Cash (10,000 × $50)	500,000	
	Unearned Ticket Revenue		500,000
	(To record sale of 10,000 season tickets)		

A	=	L	+	SE
+500,000		+500,000		

Cash Flows
+500,000

As each game is completed, Superior records the recognition of revenue with the following entry.

Sept. 7	Unearned Ticket Revenue ($500,000 ÷ 5)	100,000	
	Ticket Revenue		100,000
	(To record football ticket revenue)		

A	=	L	+	SE
		−100,000		
				+100,000 Rev

Cash Flows
no effect

The account Unearned Ticket Revenue represents unearned revenue, and Superior reports it as a current liability. As the school 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 Air Lines**, unearned ticket revenue is its largest current liability, recently amounting to over $1 billion.

Illustration 10.3 shows specific unearned revenue and revenue accounts used in selected types of businesses.

	Account Title	
Type of Business	**Unearned Revenue (Liability)**	**Revenue**
Airline	Unearned Ticket Revenue	Ticket Revenue
Magazine publisher	Unearned Subscription Revenue	Subscription Revenue
Hotel	Unearned Rent Revenue	Rent Revenue

ILLUSTRATION 10.3
Unearned revenue and revenue accounts

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, 2025. This note specifies that each January 1, starting January 1, 2026, Wendy should pay $5,000 of the note. When the company prepares financial statements on December 31, 2025, it should report $5,000 as a current liability and $20,000 as a long-term 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 balance sheet as **long-term debt due within one year**. In a recent year, **Tesla** had $1.8 billion of such debt.

- It is not necessary to prepare an adjusting entry to recognize the current maturity of long-term debt.
- At the balance sheet date, all obligations due within one year are classified as current, and all other obligations as long-term.

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.**

DO IT! 1a Current Liabilities

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, 6% 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 should be recognized by December 31?

Solution

1. $50,000 × 6% × 4/12 = $1,000
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: BE10.1, BE10.2, BE10.3, BE10.4, BE10.5, DO IT! 10.1a, E10.1, E10.2, E10.3, E10.4, and E10.5.

Payroll and Payroll Taxes Payable

Assume that Susan Alena works 40 hours this week for Pepitone Inc., earning a wage of $15 per hour. Will Susan receive a $600 check at the end of the week? Not likely.

- Companies are required to withhold amounts from employee wages to pay various governmental authorities.
- For example, Pepitone will withhold amounts for FICA taxes (Social Security and Medicare)[1] and for federal and state income taxes.
- If these withholdings total $100, Susan will receive a check for only $500.

Illustration 10.4 summarizes the types of payroll deductions that normally occur for most companies.

[1]Social Security and Medicare taxes are commonly called FICA taxes. In 1937, Congress enacted the Federal Insurance Contributions Act (FICA) whereby both the employee and employer must make equal contributions. The recent combined Social Security and Medicare rate was 7.65%. *Our examples and homework use 7.65% as the FICA rate.*

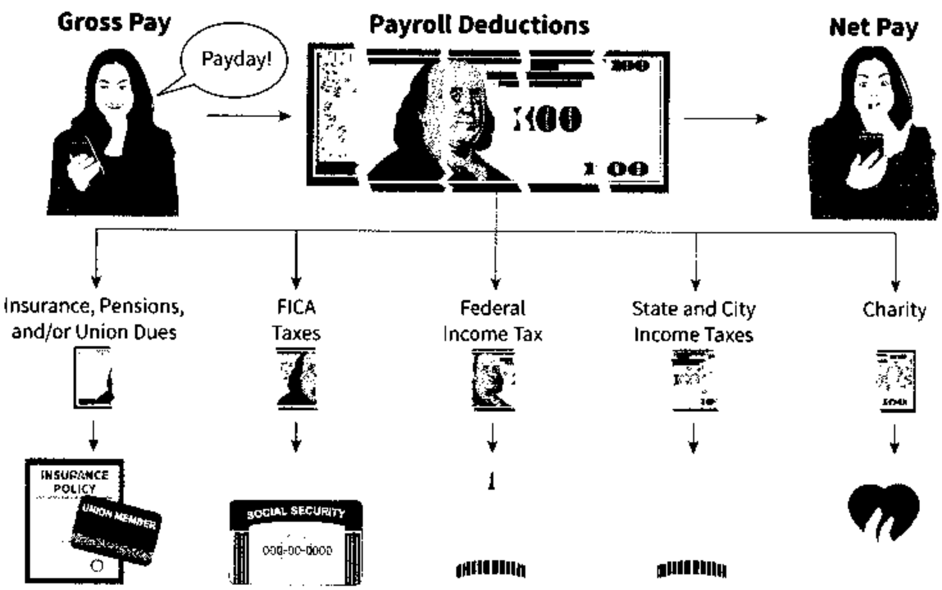


ILLUSTRATION 10.4
Payroll deductions

As a result of these deductions, companies withhold from employee paychecks amounts that must be paid to other parties. Pepitone therefore has incurred liabilities to pay these third parties and must report these liabilities on its balance sheet.

As a second example, assume that Cargo Corporation records its payroll for the week of March 7 with the following journal entry.

Mar. 7	Salaries and Wages Expense	100,000	
	FICA Taxes Payable		7,650
	Federal Income Taxes Payable		21,864
	State Income Taxes Payable		2,922
	Salaries and Wages Payable		67,564
	(To record payroll and withholding taxes for the week ending March 7)		

A	=	L	+	SE
				−100,000 Exp
		+7,650		
		+21,864		
		+2,922		
		+67,564		

Cash Flows
no effect

Cargo then records payment of this payroll on March 7 as follows.

Mar. 7	Salaries and Wages Payable	67,564	
	Cash		67,564
	(To record payment of the March 7 payroll)		

A	=	L	+	SE
		−67,564		
−67,564				

Cash Flows
−67,564

In this case, Cargo reports $100,000 in salaries and wages expense. In addition, it reports liabilities for the salaries and wages payable as well as liabilities to governmental agencies. Rather than pay the employees $100,000, Cargo instead must withhold the taxes and make the tax payments directly to the government entities. In summary, Cargo is essentially serving as a tax collector.

In addition to the liabilities incurred as a result of withholdings, employers also incur a second type of payroll-related liability.

- With every payroll, the employer incurs liabilities to pay various **payroll taxes** levied upon the employer.
- These payroll taxes include the **employer's share** of FICA (Social Security and Medicare) taxes and state and federal unemployment taxes.

Based on Cargo's $100,000 payroll, the company would record the employer's expense and liability for these payroll taxes as follows.

Mar. 7	Payroll Tax Expense	13,850	
	FICA Taxes Payable		7,650
	Federal Unemployment Taxes Payable		800
	State Unemployment Taxes Payable		5,400
	(To record employer's payroll taxes on March 7 payroll)		

A	=	L	+	SE
				−13,850 Exp
		+7,650		
		+800		
		+5,400		

Cash Flows
no effect

Companies classify the payroll and payroll tax liability accounts as current liabilities because they must be paid to employees or remitted to taxing authorities periodically and 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.

Anatomy of a Fraud

Art was a custodial supervisor for a large school district. The district was supposed to employ between 35 and 40 regular custodians, as well as 3 or 4 substitute custodians to fill in when regular custodians were absent. Instead, in addition to the regular custodians, Art "hired" 77 substitutes. In fact, almost none of these people worked for the district. Instead, Art submitted time cards for these people, collected their checks at the district office, and personally distributed the checks to the "employees." If a substitute's check was for $1,200, that person would cash the check, keep $200, and pay Art $1,000.

Total take: $150,000

The Missing Controls

Human resource controls. Thorough background checks should be performed. No employees should begin work until they have been approved by the Board of Education and entered into the payroll system. No employees should be entered into the payroll system until they have been approved by a supervisor. All paychecks should be distributed directly to employees at the official school locations by designated employees or direct-deposited into approved employee bank accounts.

Independent internal verification. Budgets should be reviewed monthly to identify situations where actual costs significantly exceed budgeted amounts.

Source: Adapted from Wells, *Fraud Casebook* (2007), pp. 164–171.

ACTION PLAN

- **Remember that wages earned are an expense to the company, but withholdings reduce the amount due to be paid to the employee.**
- **Payroll taxes are taxes the company incurs related to its employees.**

DO IT! 1b Wages and Payroll Taxes

During the month of September, Lake Corporation's employees earned wages of $60,000. Withholdings related to these wages were $4,590 for FICA, $6,500 for federal income tax, and $2,000 for state income tax. Costs incurred for unemployment taxes were $90 for federal and $150 for state.

Prepare the September 30 journal entries for (a) salaries and wages expense and salaries and wages payable, assuming that all September wages will be paid in October, and (b) the company's payroll tax expense.

Solution

a. To determine wages payable, reduce wages expense by the withholdings for FICA, federal income tax, and state income tax.

Sept. 30	Salaries and Wages Expense	60,000	
	FICA Taxes Payable		4,590
	Federal Income Taxes Payable		6,500
	State Income Taxes Payable		2,000
	Salaries and Wages Payable		46,910

b. Payroll taxes would be for the company's share of FICA, as well as for federal and state unemployment tax.

Sept. 30	Payroll Tax Expense	4,830	
	FICA Taxes Payable		4,590
	Federal Unemployment Taxes Payable		90
	State Unemployment Taxes Payable		150

Related exercise material: BE10.5, BE10.6, BE10.7, DO IT! 10.1b, E10.6, E10.7, and E10.8.

10.2 Characteristics of Bonds

LEARNING OBJECTIVE 2

Describe the major characteristics of bonds.

Long-term 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 long-term liabilities section of the balance sheet. These obligations often are in the form of bonds or long-term notes.

Bonds are a form of interest-bearing note payable issued by corporations, universities, and governmental agencies. Typically, interest payments are made to the bondholders throughout the term of the bond, and the face value is repaid upon maturity. Bonds, like common stock, are sold in small denominations (usually $1,000 or multiples of $1,000). As a result, bonds attract many investors. **When a corporation issues bonds, it is borrowing money. The person who buys the bonds (the bondholder) is lending money.**

Types of Bonds

Bonds may have many different features. In the following sections, we describe the types of bonds commonly issued.

Secured Bonds

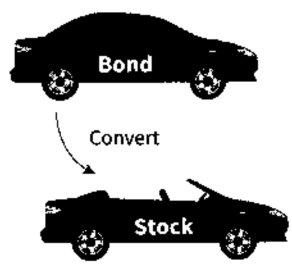
Unsecured Bonds

Secured and Unsecured Bonds

Secured bonds have specific assets of the issuer pledged as collateral for the bonds. For example, **American Airlines** and other airlines have used their frequent flyer programs as collateral.

- 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. At one time, **DuPont** reported over $2 billion of debenture bonds outstanding.

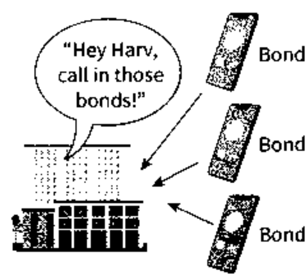


Convertible Bonds

Convertible and Callable Bonds

Bonds that can be converted into common stock at the bondholder's option are **convertible bonds**.

- Convertible bonds have features that are attractive both to bondholders and to the issuer.
- The conversion feature often gives bondholders an opportunity to benefit if the market price of the common stock increases substantially. Furthermore, until conversion, the bondholder receives interest on the bond.
- For the issuer, the bonds sell at a higher price and pay a lower rate of interest than comparable debt securities that do not have a conversion option.



Callable Bonds

Many corporations, such as **Twitter, Etsy, Slack,** and **Southwest Airlines**, have issued convertible bonds.

Bonds that the issuing company can redeem (buy back) at a stated dollar amount prior to maturity are **callable bonds**. Typically, bonds are repaid at the maturity date. The call feature allows companies to repay their debt early.

Investor Insight


Panther Media GmbH/ Alamy Images

"Covenant-Lite" Debt

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 subsequent years, however, when there was lots of cash available, lenders began reducing or completely eliminating covenants from loan agreements in order to be more competitive with other lenders. Then, when the economy declined, these lenders lost big money when companies defaulted.

Recently, problems with "covenant-lite" debt have arisen in the so-called private debt market. This is where specialist funds loan money to small companies, without any participation by traditional banks.

Sources: Cynthia Koons, "Risky Business: Growth of 'Covenant-Lite' Debt," *Wall Street Journal* (June 18, 2007), p. C2; and Katy Burne, "More Loans Come with Few Strings Attached," *Wall Street Journal* (June 12, 2014); and Paul J. Davis, "Payment Problems Rise in Fast-Growing Private-Debt Market," *Wall Street Journal* (June 5, 2020).

How do debt covenants provide protection for creditors? (Answer is available at the end of the chapter.)

Issuing Procedures

State laws grant corporations the power to issue bonds. Both the board of directors and stockholders usually must approve bond issues. **In authorizing the bond issue, the board of directors must stipulate the number of bonds 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 due 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 (see **Alternative Terminology**). Usually, the contractual rate is stated as an annual rate.

ALTERNATIVE TERMINOLOGY
In addition to stated rate, the contractual interest rate is also referred to as the coupon 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.

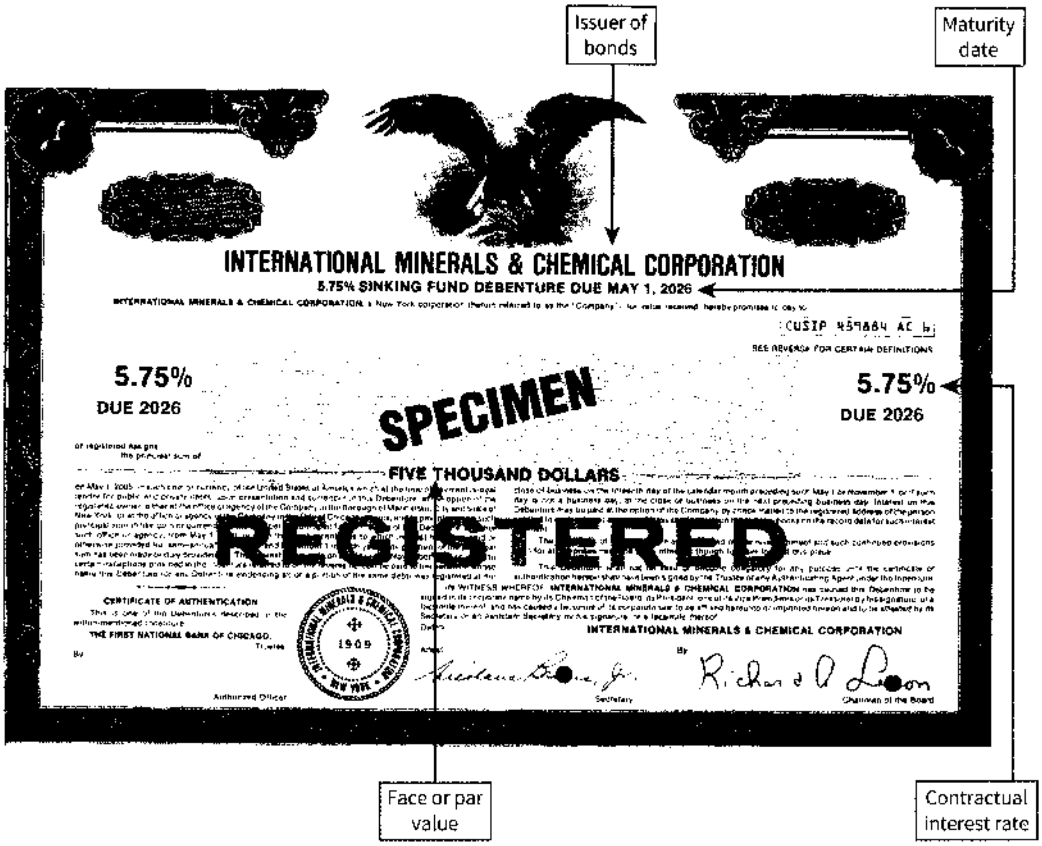
In addition, the issuing company arranges for the printing of **bond certificates**. The indenture and the certificate are separate documents. As shown in **Illustration 10.5**, a bond certificate provides the following information: name of the issuer, face value (par value), contractual interest rate, 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 bond investments into cash at any time by selling the bonds at the current market price on national securities exchanges.

- **Bond prices are quoted as a percentage of the face value of the bond, which is usually $1,000.**
- A $1,000 face value bond with a quoted price of 97 means that the selling price of the bond is 97% of face value, or $970.

ILLUSTRATION 10.5 **Bond certificate**



Newspapers and the financial press publish bond prices and trading activity daily, as shown in Illustration 10.6.

Issuer	Contractual Interest Rate	Maturity	Close	Yield
Twitter, Inc.	3.875	Dec. 15, 2027	97.71	4.06

ILLUSTRATION 10.6
Market information for bonds

This bond listing indicates that **Twitter, Inc.** has outstanding 3.875% (contractual interest rate), $1,000 (face value) bonds that mature in 2027 (see **Helpful Hint**). The bonds currently yield a 4.06% return. At the close of trading, the price was 97.71% of face value, or $977.10.

A corporation makes journal entries **only when it issues or buys back bonds,** when interest is accrued or paid, and when bondholders convert bonds into common stock. For example, **DuPont does not journalize** transactions between its bondholders and other investors. If Tom Smith sells his DuPont bonds to Faith Jones, DuPont does not journalize the transaction.

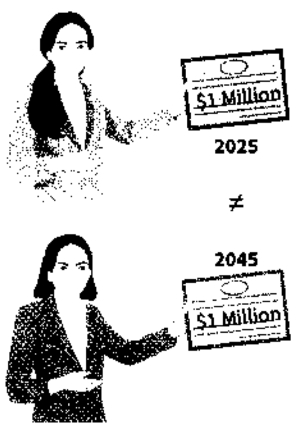
HELPFUL HINT

The price of a $1,000 bond trading at $95\frac{1}{4}$ is $952.50.

Determining the Market Price of a Bond

If your company needed financing and wanted to attract investors to purchase your bonds, how would the market set the price for these bonds? To be more specific, assume that Coronet, Inc. 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 Coronet pays to bond investors is one million dollars at the end of 20 years. Would investors pay one million dollars for this bond? We hope not because one million dollars received 20 years from now is not the same as one million dollars received today.

The term **time value of money** is used to indicate the relationship between time and money—that a dollar received today is worth more than a dollar to be received at some time in the future.



Same dollars at different times are not equal.

- 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:

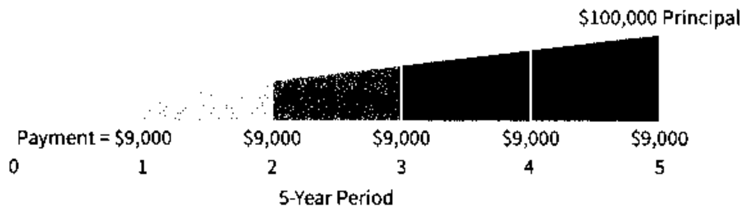
1. The dollar amounts to be received.
2. The length of time until the amounts are received.
3. The market rate of interest. The **market interest rate** is the rate investors demand for loaning funds. In most cases, the market interest rate will differ from its contractual interest rate.

To illustrate, assume that Acropolis Company on January 1, 2025, 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.
2. Five $9,000 **interest payments** ($100,000 × 9%) over the term of the bonds.

Illustration 10.7 shows a time diagram depicting both cash flows.

ILLUSTRATION 10.7
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 10.8** lists and totals the present values of these amounts, assuming the market rate of interest is 9%.

ILLUSTRATION 10.8
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**

Present value calculations involve the use of present value factors. 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 F 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 10.8 are $100,000 × .64993 = $64,993, and $9,000 × 3.88965 = $35,007 (rounded).

Investor Insight Ford Motor Company

Phonlamai Photo/Shutterstock .com

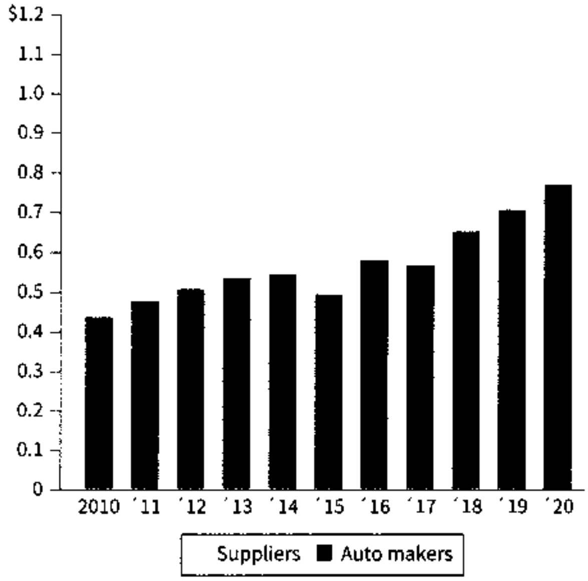
Driving Up Debt

As described in the Feature Story, U.S.-based auto manufacturers accumulated debt along their way to becoming giants. And during the Covid-19 pandemic, these companies faced pressure to meet the obligations when their factories shut down. Some companies reported their largest ever quarterly losses.

Even prior to the pandemic, auto manufacturers required more cash due to the rising costs of new technologies for electric vehicles. Fortunately, the manufacturers and their suppliers were able to raise $21.7 billion in extra long-term debt, which increased the total auto industry debt to over $1.1 trillion (see the chart). For example, Ford Motor Company issued three series of high-yield, unsecured bonds, raising a total of $8 billion. Analysts suggest that this inflow of cash offered Ford breathing room until the plants reopened.

However, more cash now means more debt later. Highly leveraged companies, that is, those with high debt levels, need to rely on best-case scenarios for sales. In the auto industry, there is a simple rule of thumb: new products drive profits, and Ford has several new product launches planned. Investors will need to monitor both sales and any future idle factories as they consider their investments in the auto industry.

Total Auto Industry Debt



Source: Alix Partners.

Sources: John Rosevear, "Why Ford Sold Junk Bonds to Raise $8 Billion," *fool.com* (April 18, 2020); John Rosevear, "Why Ford Stock Is Up Big Today," *fool.com* (June 5, 2020); Molly Smith, "Ford Raises $8 Billion of Junk Bonds After Virus Spurs Loss," *bloomberg.com* (April 17, 2020); and Stephen Wilmot, "The Car Industry's $1.1 Trillion Debt Problem," *Wall Street Journal* (June 17, 2020).

Ford recently issued unsecured bonds. What is the difference between a secured and unsecured bond? (Answer is available at the end of the chapter.)

DO IT! 2 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 contractual interest 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 market price of a bond is equal to its face value.

ACTION PLAN

- **Review the types of bonds and the basic terms associated with bonds.**

Solution

1. True. **2.** True. **3.** False. The contractual interest rate is used to determine the amount of cash interest the borrower pays. **4.** True. **5.** False. The market price of a bond is the value at which it should sell in the marketplace. As a result, the market price of the bond and its face value are often different.

Related exercise material: DO IT! 10.1 and E10.1.

10.3 Accounting for Bond Transactions

LEARNING OBJECTIVE 3

Explain how to account for bond transactions.

As indicated earlier, a corporation records bond transactions when it issues (sells) or redeems (buys back) bonds and when bondholders convert bonds into common stock. If bondholders sell their bond investments to other investors, the issuing company receives no further cash on this 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, and that face value 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.

Issuing Bonds at Face Value

To illustrate the accounting for bonds issued at face value, assume that on January 1, 2025, Candlestick Inc. issues $100,000, five-year, 10% bonds at 100 (100% of face value). The entry to record the sale is as follows.

A	=	L	+	SE
+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 long-term liabilities section of the balance sheet because the maturity date is January 1, 2030 (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. 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	+	SE
				−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 on January 1. When Candlestick pays the interest on January 1, 2026, it debits (decreases) Interest Payable and credits (decreases) Cash for $10,000.

Candlestick records the payment on January 1 as follows.

A	=	L	+	SE
		−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 previous 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 its face value and 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.

- When a bond is sold for more than its face value, the difference between its face value and selling price is called a **premium**.
- For example, 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.

Illustration 10.9 shows these relationships.

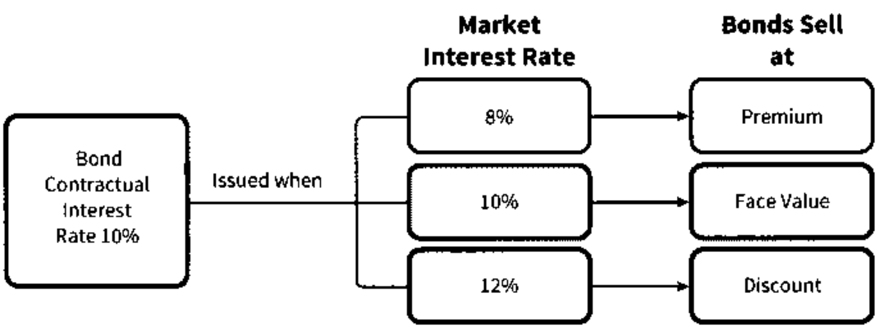


ILLUSTRATION 10.9
Interest rates and bond prices

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.

- The issuance of bonds **at a discount** does not mean that the issuer's financial strength is suspect.
- 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, 2025, Candlestick Inc. 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 (see Helpful Hint).

HELPFUL HINT

Discount on Bonds Payable

Increase Debit ↓ Normal Balance	Decrease Credit

A	=	L	+	SE
+98,000				
		−2,000		
		+100,000		

Cash Flows
+98,000

Jan. 1	Cash	98,000	
	Discount on Bonds Payable	2,000	
	Bonds Payable		100,000
	(To record sale of bonds at a discount)		

Although Discount on Bonds Payable has a debit balance, **it is not an asset**. Rather, it is a **contra account**. This account is **deducted from bonds payable** on the balance sheet, as shown in **Illustration 10.10**.

ILLUSTRATION 10.10
Statement presentation of discount on bonds payable

Candlestick Inc.
Balance Sheet (partial)

Long-term liabilities		
Bonds payable	$100,000	
Less: Discount on bonds payable	2,000	$98,000

HELPFUL HINT
Carrying value (book value) of bonds issued at a discount is determined by subtracting the balance of the discount account from the balance of the Bonds Payable account.

The $98,000 represents the **carrying (or book) value** of the bonds (see **Helpful Hint**). 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 corporation 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.

- 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 shown in **Illustration 10.11**.

ILLUSTRATION 10.11
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 shown in **Illustration 10.12**.

ILLUSTRATION 10.12
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 10.11, 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 value. This is shown in **Illustration 10.13**. Appendices 10A and 10B discuss procedures for amortizing bond discount.

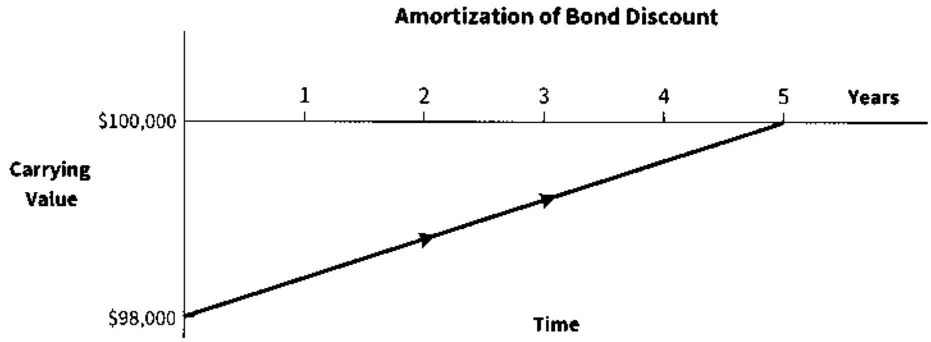


ILLUSTRATION 10.13
Amortization of bond discount

Issuing Bonds at a Premium

To illustrate the issuance of bonds at a premium, we now assume the Candlestick Inc. bonds described above sell for $102,000 (102% of face value) rather than for $98,000. The entry to record the issuance is as follows.

Jan. 1	Cash	102,000	
	Bonds Payable		100,000
	Premium on Bonds Payable		2,000
	(To record sale of bonds at a premium)		

A	=	L	+	SE
+102,000				
		+100,000		
		+2,000		

Cash Flows
+102,000

Candlestick adds the premium on bonds payable **to the bonds payable amount** on the balance sheet, as shown in **Illustration 10.14**.

Candlestick Inc.
Balance Sheet (partial)

Long-term liabilities		
Bonds payable	$100,000	
Add: Premium on bonds payable	2,000	$102,000

ILLUSTRATION 10.14
Statement presentation of bond premium

The sale of bonds above face value causes the total cost of borrowing to be **less than the bond interest paid**.

- The borrower is not required to pay back 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** that reduces bond interest over the life of the bonds.

The total cost of borrowing $102,000 for Candlestick is shown in **Illustration 10.15** (see **Helpful Hint**).

HELPFUL HINT

Premium on Bonds Payable

Decrease Debit	Increase Credit ↓ Normal Balance

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**

ILLUSTRATION 10.15
Total cost of borrowing—bonds issued at a premium

Alternatively, we can compute the cost of borrowing as shown in **Illustration 10.16**.

ILLUSTRATION 10.16

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

HELPFUL HINT

Both a discount and a premium account are valuation accounts. A *valuation account* is one that is needed to value properly the item to which it relates.

Similar to bond discount, companies allocate bond premium to expense in each period in which the bonds are outstanding (see **Helpful Hint**). 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.

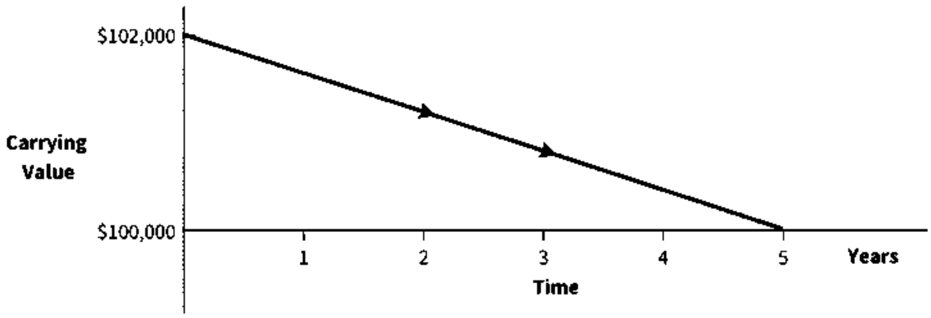
As shown in Illustration 10.15, for the bonds issued by Candlestick, contractual interest will exceed the interest expense by $2,000 over the life of the bonds.

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 value. This is shown in **Illustration 10.17**. Appendices 10A and 10B discuss procedures for amortizing bond premium.

ILLUSTRATION 10.17

Amortization of bond premium

Amortization of Bond Premium



ACTION PLAN

- **Record cash received, bonds payable at face value, and the difference as a discount or premium.**
- **Report discount as a deduction from bonds payable and premium as an addition to bonds payable.**

DO IT! 3a Bond Issuance

Giant Corporation issues $200,000 of bonds for $189,000. (a) Prepare the journal entry to record the issuance of the bonds, and (b) show how the bonds would be reported on the balance sheet at the date of issuance.

Solution

a.

Cash	189,000	
Discount on Bonds Payable	11,000	
Bonds Payable		200,000
(To record sale of bonds at a discount)		

b.

Long-term liabilities		
Bonds payable	$200,000	
Less: Discount on bonds payable	11,000	$189,000

Related exercise material: BE10.8, BE10.9, BE10.10, BE10.12, DO IT! 10.3a, E10.12, E10.13, E10.14, E10.15, and E10.16.

Redeeming Bonds at Maturity

Regardless of the issue price of bonds, the carrying value (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 Inc. records the redemption of its bonds at maturity as follows.

Jan. 1	Bonds Payable	100,000	
	Cash		100,000
	(To record redemption of bonds at maturity)		

= L +
−100,000
−100,000

Cash Flows
−100,000

Redeeming Bonds Before Maturity

Bonds may be redeemed before maturity. A company may decide to redeem bonds before maturity to reduce interest cost and to remove debt from its balance sheet. 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.
3. Recognize the gain or loss on redemption.

The **carrying value** of the bonds is the face value of the bonds less any remaining bond discount or plus any remaining bond premium at the redemption date (see Helpful Hint).

To illustrate, assume that Candlestick Inc. 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 $100,400 (principal $100,000 and premium $400), as shown in Illustration 10.18.

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.

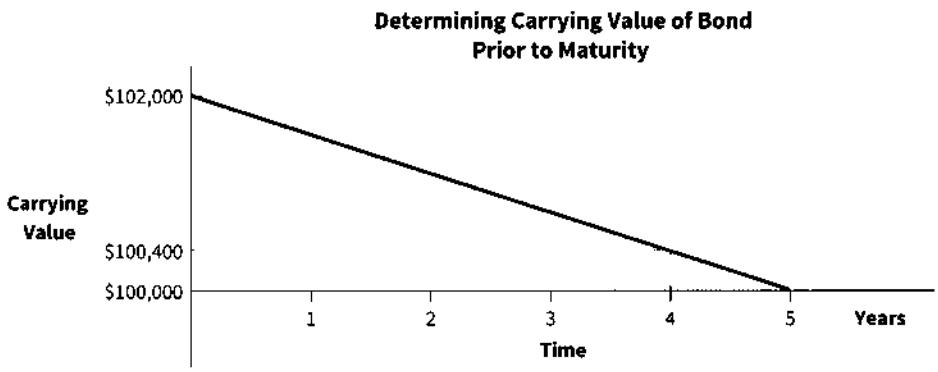


ILLUSTRATION 10.18

Carrying value of bond prior to maturity

Candlestick records the redemption at the end of the fourth interest period (January 1, 2029) as follows.

Jan. 1	Bonds Payable	100,000	
	Premium on Bonds Payable	400	
	Loss on Bond Redemption	2,600	
	Cash		103,000
	(To record redemption of bonds at 103)		

= L +
−100,000
−400
−2,600 Exp
−103,000

Cash Flows
−103,000

Note that the loss of $2,600 is the difference between the cash paid of $103,000 and the carrying value of the bonds of $100,400. Gains and losses from bond redemptions are reported in the income statement as "Other revenues and gains" or "Other expenses and losses."

People, Planet, and Profit Insight

Liviu Peicu/123 RF

How About Some Green Bonds?

Green bonds are debt used to fund activities such as renewable-energy projects. For example, a company may use the proceeds from the sale of green bonds to clean up its 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.

Sources: Ben Edwards, "Green Bonds Catch On." *Wall Street Journal* (April 3, 2014), p. C5; and Matt Wirz, "Why Going Green Saves Bond Borrowers Money," *Wall Street Journal* (December 17, 2020).

Why might standardized disclosure help investors to better understand how proceeds from the sale or issuance of bonds are used? (Answer is available at the end of the chapter.)

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).**

DO IT! 3b | 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.

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	500,000	
Discount on Bonds Payable		4,000
Gain on Bond Redemption		6,000
Cash		490,000
(To record redemption of bonds at 98)		

Related exercise material: BE10.11, DO IT! 10.3b, E10.17, and E10.18.

10.4 Presentation and Analysis

LEARNING OBJECTIVE 4

Discuss how liabilities are reported and analyzed.

Presentation

Current liabilities are the first category under "Liabilities" on the balance sheet. Companies list each of the principal types of current liabilities separately within the category. Within the current liabilities section, companies often list notes payable first, followed by accounts payable.

Companies report long-term liabilities in a separate section of the balance sheet immediately following "Current liabilities." **Illustration 10.19** shows an example.

ILLUSTRATION 10.19
Balance sheet presentation of liabilities

Marais Company
Balance Sheet (partial)

Liabilities		
Current liabilities		
Notes payable	$ 250,000	
Accounts payable	125,000	
Current maturities of long-term debt	300,000	
Accrued liabilities	75,000	
Total current liabilities		$ 750,000
Long-term liabilities		
Bonds payable	1,000,000	
Less: Discount on bonds payable	80,000	920,000
Notes payable, secured by plant assets		540,000
Lease liability		500,000
Total long-term liabilities		1,960,000
Total liabilities		$2,710,000

Disclosure of debt is very important. The historically large failures at **Enron**, **WorldCom**, and **Global Crossing** made investors very concerned about companies' debt obligations (see Ethics Note). Summary data regarding debts may be presented in the balance sheet with detailed data (such as interest rates, maturity dates, conversion privileges, and assets pledged as collateral) shown in a supporting schedule in the notes. Companies should report current maturities of long-term debt as a current liability.

ETHICS NOTE

Some companies try to minimize the amount of debt reported on their balance sheets by not reporting certain types of commitments as liabilities. This subject is of intense interest in the financial community.

Keeping an Eye on Cash

The balance sheet presents the balances of a company's debts at a point in time. The statement of cash flows also presents information about a company's debts. Information regarding cash inflows and outflows during the year that resulted from the principal portion of debt transactions appears in the "Financing activities" section of the statement of cash flows. Interest expense is reported in the "Operating activities" section even though it resulted from debt transactions.

The following statement of cash flows presents the cash flows from financing activities for **General Motors Company** from a recent year. From this we learn that the company issued new debt of $31,373 million and repaid debt of $19,524 million.

General Motors Company
Statement of Cash Flows (partial)
(in millions)

Cash flows from financing activities	
Payments to repurchase stock	$ (3,277)
Proceeds from issuance of debt	31,373
Payments of debt	(19,524)
Increase in short-term debt	391
Dividends paid	(3,165)
Other	(123)
Net cash provided by (used in) financing activities	$ 5,675

Analysis

Careful examination of debt obligations helps you assess a company's ability to pay its current and long-term obligations. It also helps you determine whether a company can obtain debt financing in order to grow. We will use the information from the financial statements of **General Motors** (see **Illustration 10.20**) to illustrate the analysis of a company's liquidity and solvency.

ILLUSTRATION 10.20

Simplified balance sheets for General Motors

Real World

General Motors Company
Balance Sheet
(in millions)

Assets	
Total current assets	$ 74,992
Noncurrent assets	153,045
Total assets	$228,037
Liabilities and Stockholders' Equity	
Total current liabilities	$ 84,905
Noncurrent liabilities	97,175
Total liabilities	182,080
Total stockholders' equity	45,957
Total liabilities and stockholders' equity	$228,037

Liquidity

Liquidity ratios measure the short-term ability of a company to pay its maturing obligations and to meet unexpected needs for cash. A commonly used measure of liquidity is the current ratio (presented in Chapter 2). The current ratio is calculated as current assets divided by current liabilities. **Illustration 10.21** presents the current ratio for General Motors and **Tesla**.

ILLUSTRATION 10.21

Current ratio

Ratio	General Motors ($ in millions)	Tesla
Current Ratio	$\frac{\$74{,}992}{\$84{,}905} = .88:1$	1.13:1

General Motors' current ratio is .88:1. This ratio is quite low. Tesla's ratio, while also quite low, is higher than General Motors', suggesting it is more liquid. Many companies today minimize their liquid assets (such as accounts receivable and inventory) in order to improve profitability measures, such as return on assets. This is particularly true of large companies such as **Ford**, General Motors, and **Toyota**.

Companies that keep fewer liquid assets on hand must rely on other sources of liquidity.

- One such source is a **bank line of credit**.
- A line of credit is a prearranged agreement between a company and a lender that permits the company, should it be necessary, to borrow up to an agreed-upon amount.

For example, a recent disclosure regarding debt in General Motors' annual report stated that it had $12 billion of unused lines of credit (see **Decision Tools**).

Decision Tools

Comparing available lines of credit to current liabilities as well as evaluating liquidity ratios helps users determine if a company can obtain short-term financing when necessary.

Solvency

Solvency ratios measure the ability of a company to survive over a long period of time. The Feature Story in this chapter mentioned that, although there once were many U.S. automobile manufacturers, only three of the original U.S.-based companies remain today. Many of the others went bankrupt. This highlights the fact that when making a long-term loan or purchasing a company's stock, you must give consideration to a company's solvency.

In Chapter 2, you learned that one measure of a company's solvency is the debt to assets ratio. This is calculated as total liabilities (debt) divided by total assets. This ratio indicates the extent to which a company's assets are financed with debt.

Another useful solvency measure is the **times interest earned** (see **Decision Tools**). It provides an indication of a company's ability to meet interest payments as they come due.

- Times interest earned is computed by dividing the sum of net income, interest expense, and income tax expense by interest expense.
- It uses income before interest expense and taxes because this number best represents the amount available to pay interest.

Decision Tools

Times interest earned helps users determine if a company can meet its interest obligations on long-term and other debt.

We can use the balance sheet information presented in Illustration 10.20 and the additional information below to calculate solvency ratios for General Motors.

($ in millions)	
Net income	$6,667
Interest expense	782
Income tax expense	769

The debt to assets ratios and times interest earned for General Motors and Tesla are shown in **Illustration 10.22**.

ILLUSTRATION 10.22

Solvency ratios

$$\text{Debt to Assets Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

$$\text{Times Interest Earned} = \frac{\text{Net Income + Interest Expense + Income Tax Expense}}{\text{Interest Expense}}$$

Ratio	General Motors ($ in millions)	Tesla
Debt to Assets Ratio	$\frac{\$182,080}{\$228,037} = 80\%$	76%
Times Interest Earned	$\frac{\$6,667 + \$782 + \$769}{\$782} = 10.5$ times	0.0 times

General Motors' debt to assets ratio is 80%, while Tesla's is 76%. Thus, both companies are quite reliant on debt financing. In part, General Motors' heavy reliance on debt is due to its substantial finance division.

General Motors' times interest earned is 10.5 times. This means that General Motors has earnings before interest and taxes that are more than 10.5 times the amount needed to pay interest. The higher the multiple, the lower the likelihood that the company will default on interest payments. This suggests that General Motors' ability to meet interest payments was high.

In contrast, Tesla's times interest earning is approximately zero. For most of its history, the company has operated at a loss. This suggests that Tesla cannot generate sufficient income to pay its interest payments, not unusual for a rapidly growing company during its early years. However, this is also not sustainable, so Tesla's creditors will closely monitor this.

Investor Insight

Yenwen Lu/
iStock.com

Debt Masking

In the wake of the financial crisis, many financial institutions were wary of reporting too much debt on their financial statements, for fear that investors will consider them too risky. The Securities and Exchange Commission (SEC) is concerned that some companies engage in "debt masking" to make it appear that they use less debt than they actually do. These companies enter into transactions at the end of the accounting period that essentially remove debt from their books. Shortly after the end of the period, they reverse the transaction and the debt goes back on their books. The *Wall Street Journal* reported that 18 large banks "had consistently lowered one type of debt at the end of each of the past five quarters, reducing it on average by 42% from quarterly peaks."

Source: Based on Tom McGinty, Kate Kelly, and Kara Scannell, "Debt 'Masking' Under Fire," *Wall Street Journal Online* (April 21, 2010).

What implications does debt masking have for an investor that is using the debt to assets ratio to evaluate a company's solvency? (Answer is available at the end of the chapter.)

Contingencies

Sometimes, a company's balance sheet does not fully reflect its potential obligations due to contingencies. **Contingencies** are events with uncertain outcomes that may represent potential liabilities (see **Decision Tools**). A common type of contingency is lawsuits. Suppose, for example, that you were analyzing the financial statements of a cigarette manufacturer and did not consider the possible negative implications of existing unsettled lawsuits. Your analysis of the company's financial position would certainly be misleading. Other common types of contingencies are product warranties and environmental cleanup obligations. For example, in a recent year, **Novartis AG** began offering a money-back guarantee on its blood-pressure medications. This guarantee would necessitate an accrual for the estimated claims that will result from returns.

> **Decision Tools**
> Understanding a company's contingencies and significant off-balance-sheet financing helps users determine the potential impact on a company's financial position.

- Accounting rules require that companies disclose contingencies in the notes.
- In some cases, they must accrue them as liabilities.

For example, suppose that Waterbury Inc. is sued by a customer for $1 million due to an injury sustained by a defective product. If at the company's year-end the lawsuit had not yet been resolved, how should Waterbury account for this event?

- If the company can determine **a reasonable estimate** of the expected loss and if it is **probable** it will lose the suit, then the company should accrue for the loss.
- It records the loss by increasing (debiting) a loss account and increasing (crediting) a liability such as Lawsuit Liability.
- If **both** of these conditions are not met, then the company does not make a journal entry and instead discloses the basic facts regarding this suit in the notes to its financial statements.

Off-Balance-Sheet Financing

A concern for analysts when they evaluate a company's liquidity and solvency is whether that company has properly recorded all of its obligations. The bankruptcy of **Enron**, one of the largest bankruptcies in U.S. history, demonstrated how much damage can result when a company does not properly record or disclose all of its debts. Many would say Enron was practicing off-balance-sheet financing. **Off-balance-sheet financing** is an intentional effort by a company to structure its financing arrangements so as to avoid showing liabilities on its balance sheet.

DO IT! 4 | Analyzing Liabilities

Trout Company provides you with the following balance sheet information as of December 31, 2025.

Current assets	$10,500	Current liabilities	$ 8,000
Long-term assets	24,200	Long-term liabilities	16,000
Total assets	$34,700	Stockholders' equity	10,700
		Total liabilities and stockholders' equity	$34,700

In addition, Trout reported net income for 2025 of $14,000, income tax expense of $2,800, and interest expense of $900.

Instructions

a. Compute the current ratio and working capital for Trout for 2025.

b. Assume that at the end of 2025, Trout used $2,000 cash to pay off $2,000 of accounts payable. How would the current ratio and working capital have changed?

c. Compute the debt to assets ratio and the times interest earned for Trout for 2025.

ACTION PLAN

- **Use the formula for the current ratio: Current assets ÷ Current liabilities.**
- **Use the formula for working capital: Current assets – Current liabilities.**
- **Use the formula for the debt to assets ratio: Total liabilities ÷ Total assets.**
- **Use the formula for times interest earned: (Net income + Income tax expense + Interest expense) ÷ Interest expense.**

Solution

a. Current ratio is 1.31:1 ($10,500/$8,000). Working capital is $2,500 ($10,500 – $8,000).

b. Current ratio is 1.42:1 ($8,500/$6,000). Working capital is $2,500 ($8,500 – $6,000).

c. Debt to assets ratio is 69.2% ($24,000/$34,700). Times interest earned is 19.67 times [($14,000 + $2,800 + $900)/$900].

Related exercise material: BE10.14, DO IT! 10.4, E10.20, E10.21, and E10.22.

USING THE DECISION TOOLS Ford Motor Company

Ford Motor Company has enjoyed some tremendous successes, including its popular F-10 pickup truck. Development of a new vehicle costs billions. A flop is financially devastating, and the financial effect is magnified if the company has large amounts of outstanding debt.

The following balance sheet provides financial information for Ford Motor Company as of a recent year.

Ford Motor Company
Balance Sheet
(in millions)

Assets	
Current assets	$115,902
Noncurrent assets	141,906
Total assets	$257,808
Liabilities and Shareholders' Equity	
Current liabilities	$ 94,600
Noncurrent liabilities	128,192
Total liabilities	222,792
Total shareholders' equity (deficit)	35,016
Total liabilities and shareholders' equity	$257,808

Other Information

Net income	$ 7,628
Income tax expense	520
Interest expense	1,133
Available lines of credit (Automotive Division)	12,100

Instructions

1. Evaluate Ford's liquidity using appropriate ratios and compare to those of **General Motors** presented in Illustration 10.21.
2. Evaluate Ford's solvency using appropriate ratios and compare to those of General Motors presented in Illustration 10.22.
3. Comment on Ford's available lines of credit.

Solution

1. Ford's liquidity can be measured using the current ratio:

$$\text{Current ratio} \quad \frac{\$115,902}{\$94,600} = 1.23:1$$

Ford's current ratio exceeds General Motors' ratio by a fairly large amount, suggesting Ford is more liquid.

2. Ford's solvency can be measured with the debt to assets ratio and the times interest earned:

$$\text{Debt to assets ratio} \quad \frac{\$222,792}{\$257,808} = 86\%$$

$$\text{Times interest earned} \quad \frac{\$7,628 + \$1,133 + \$520}{\$1,133} = 8.2 \text{ times}$$

The debt to assets ratio suggests that Ford relies very heavily on debt financing. Ford's reliance on debt, as measured by the debt to assets ratio, exceeds that of General Motors.

The times interest earned is 8.2. While not as high as that of General Motors, it is very strong.

3. Ford has available lines of credit of $12.1 billion. These financing sources significantly improve its liquidity and help reduce the concerns of its short-term creditors.

Appendix 10A Straight-Line Amortization

LEARNING OBJECTIVE *5

Apply the straight-line method of amortizing bond discount and bond premium.

Amortizing Bond Discount

To follow the expense recognition principle, companies allocate bond discount to expense in each period in which the bonds are outstanding. The **straight-line method of amortization** allocates the same amount to interest expense in each interest period. The calculation is presented in **Illustration 10A.1**.

ILLUSTRATION 10A.1
Formula for straight-line method of bond discount amortization

Bond Discount	÷	Number of Interest Periods	=	Bond Discount Amortization

In the Candlestick Inc. example, the company sold $100,000, five-year, 10% bonds on January 1, 2025, 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.

Dec. 31	Interest Expense	10,400	
	Discount on Bonds Payable		400
	Interest Payable		10,000
	(To record accrued bond interest and amortization of bond discount)		

A	=	L	+	SE
				−10,400 Exp
		+400		
		+10,000		

Cash Flows
no effect

- Over the term of the bonds, the balance in Discount on Bonds Payable will decrease annually by the same amount until it has a zero balance at the maturity date of the bonds (see Alternative Terminology).
- Thus, the carrying value of the bonds at maturity will be equal to the face value of the bonds.

ALTERNATIVE TERMINOLOGY
The amount in the Discount on Bonds Payable account is often referred to as *Unamortized Discount on Bonds Payable*.

Preparing a bond discount amortization schedule, as shown in **Illustration 10A.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 10A.2
Bond discount amortization schedule

	A	B	C	D	E	F
1	**Candlestick Inc.** **Bond Discount Amortization Schedule** **Straight-Line Method—Annual Interest Payments** **$100,000 of 10%, 5-Year Bonds**					
2	**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)**
3	Issue date				$2,000	$98,000
4	1	$10,000	$10,400	$ 400	1,600	98,400
5	2	10,000	10,400	400	1,200	98,800
6	3	10,000	10,400	400	800	99,200
7	4	10,000	10,400	400	400	99,600
8	5	10,000	10,400	400	0	100,000
9		$50,000	$52,000	$2,000		
10						
11	Column (A) remains constant because the face value of the bonds ($100,000) is multiplied by the annual contractual interest rate (10%) each period.					
12	Column (B) is computed as the interest paid (Column A) plus the discount amortization (Column C).					
13	Column (C) indicates the discount amortization each period.					
14	Column (D) decreases each period by the same amount until it reaches zero at maturity.					
15	Column (E) increases each period by the amount of discount amortization until it equals the face value at maturity.					

Sheet1

Amortizing Bond Premium

The amortization of bond premium parallels that of bond discount. Illustration 10A.3 presents the formula for determining bond premium amortization under the straight-line method.

ILLUSTRATION 10A.3
Formula for straight-line method of bond premium amortization

Bond Premium	÷	Number of Interest Periods	=	Bond Premium Amortization

Continuing our example, assume Candlestick Inc., sells the bonds described above for \$102,000, rather than \$98,000. 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.

A	=	L	+	SE
				−9,600 Exp
		−400		
		+10,000		

Cash Flows
no effect

Date	Account	Debit	Credit
Dec. 31	Interest Expense	9,600	
	Premium on Bonds Payable	400	
	Interest Payable		10,000
	(To record accrued bond interest and amortization of bond premium)		

Over the term of the bonds, the balance in Premium on 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 10A.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 10A.4
Bond premium amortization schedule

Candlestick Inc.
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.

Appendix 10B Effective-Interest Amortization

LEARNING OBJECTIVE *6

Apply the effective-interest method of amortizing bond discount and bond premium.

To follow the expense recognition principle, companies allocate bond discount to expense in each period in which the bonds are outstanding. However, to completely comply with the expense recognition principle, interest expense as a percentage of carrying value should not change over the life of the bonds.

- This percentage, referred to as the **effective-interest rate**, is established when the bonds are issued and remains constant in each interest period. Unlike the straight-line method, the effective-interest method of amortization accomplishes this result.
- 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.** In contrast, the straight-line method results in constant amounts of amortization and interest expense per period but a varying percentage rate.

Companies follow three steps 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 10B.1 depicts these steps.

ILLUSTRATION 10B.1
Computation of amortization using effective-interest method

(1) Bond Interest Expense				(2) Bond Interest Paid				(3)
[Carrying Value of Bond at Beginning of Period	×	Effective-Interest Rate]	−	[Face Value of Bond	×	Contractual Interest Rate]	=	Amortization Amount

Both the straight-line and effective-interest methods of amortization result in the same total amount of interest expense over the term of the bonds. Furthermore, interest expense each interest period is generally comparable in amount. However, **when the amounts are materially different, generally accepted accounting principles (GAAP) require use of the effective-interest method.**

HELPFUL HINT
Note that the amount of periodic interest expense increases over the life of the bonds when the effective-interest method is used for bonds issued at a discount. The reason is that a constant percentage is applied to an increasing bond carrying value to compute interest expense. The carrying value is increasing because of the amortization of the discount.

Amortizing Bond Discount

In the Candlestick Inc. example, the company sold $100,000, five-year, 10% bonds on January 1, 2025, 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 F.)

Preparing a bond discount amortization schedule as shown in Illustration 10B.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% (see Helpful Hint).

ILLUSTRATION 10B.2 **Bond discount amortization schedule**

Candlestick Inc.
Bond Discount Amortization Schedule
Effective-Interest Method—Annual Interest Payments
10% Bonds Issued at 10.5348% Effective-Interest Rate

	A	B	C		D	E	F
2	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)
3	Issue date					$2,000	$98,000
4	1	$10,000	$10,324	(10.5348% × $98,000)	$ 324	1,676	98,324
5	2	10,000	10,358	(10.5348% × $98,324)	358	1,318	98,682
6	3	10,000	10,396	(10.5348% × $98,682)	396	922	99,078
7	4	10,000	10,438	(10.5348% × $99,078)	438	484	99,516
8	5	10,000	10,484	(10.5348% × $99,516)	484	-0-	100,000
9		$50,000	$52,000		$2,000		

11 Column (A) remains constant because the face value of the bonds ($100,000) is multiplied by the annual contractual interest rate (10%) each period.

12 Column (B) is computed as the preceding bond carrying value times the annual effective-interest rate (10.5348%).

13 Column (C) indicates the discount amortization each period.

14 Column (D) decreases each period until it reaches zero at maturity.

15 Column (E) increases each period until it equals face value at maturity.

Sheet1

For the first interest period, Illustration 10B.3 shows the computations of bond interest expense and the bond discount amortization.

ILLUSTRATION 10B.3
Computation of bond discount amortization

Bond interest expense ($98,000 × 10.5348%)	$10,324
Less: Bond interest paid ($100,000 × 10%)	10,000
Bond discount amortization	**$ 324**

A	=	L	+	SE
				−10,324 Exp
+324				
+10,000				

Cash Flows
no effect

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	
	Discount on Bonds Payable		324
	Interest Payable		10,000
	(To record accrued interest and amortization of bond discount)		

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.

A	=	L	+	SE
				−10,358 Exp
+358				
+10,000				

Cash Flows
no effect

Dec. 31	Interest Expense	10,358	
	Discount on Bonds Payable		358
	Interest Payable		10,000
	(To record accrued interest and amortization of bond discount)		

Amortizing Bond Premium

Continuing our example, assume Candlestick Inc. sells the bonds described above for $102,000 rather than $98,000. 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 F.) **Illustration 10B.4** shows the bond premium amortization schedule.

ILLUSTRATION 10B.4 **Bond premium amortization schedule**

Candlestick Inc.
Bond Premium Amortization Schedule
Effective-Interest Method—Annual Interest Payments
10% Bonds Issued at 9.4794% Effective-Interest Rate

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 premium resulting from rounding the effective-interest rate.

For the first interest period, **Illustration 10B.5** shows the computations of bond interest expense and the 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**

ILLUSTRATION 10B.5 **Computation of bond premium amortization**

The entry Candlestick makes on December 31 is as follows.

Dec. 31	Interest Expense	9,669	
	Premium on Bonds Payable	331	
	Interest Payable		10,000
	(To record accrued interest and amortization of bond premium)		

A	=	L	+	SE
				−9,669 Exp
		−331		
		+10,000		

Cash Flows
no effect

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.

Appendix 10C Accounting for Long-Term Notes Payable

LEARNING OBJECTIVE *7

Explain how to account 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. In periods of unstable interest rates, lenders may tie the interest rate on long-term notes to changes in the market rate for comparable loans.

- 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 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 the following.

1. Interest on the unpaid balance of the loan.
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 Porter Technology Inc. issues a $500,000, 8%, 20-year mortgage note on December 31, 2025, to obtain needed financing for a new research laboratory. The terms provide for annual installment payments of $50,926 (not including real estate taxes and insurance). Illustration 10C.1 shows the installment payment schedule for the first four years.

ILLUSTRATION 10C.1
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				$500,000
1	$50,926	$40,000	$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

Porter records the mortgage loan on December 31, 2025, as follows.

A	=	L	+	SE
+500,000		+500,000		

Cash Flows
+500,000

Dec. 31	Cash	500,000	
	Mortgage Payable		500,000
	(To record mortgage loan)		

On December 31, 2026, Porter records the first installment payment as follows.

Dec. 31	Interest Expense	40,000	
	Mortgage Payable	10,926	
	Cash		50,926
	(To record annual payment on mortgage)		

A	=	L	+	SE
				−40,000 Exp
		−10,926		
−50,926				

Cash Flows
−50,926

In the balance sheet, 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 long-term liability. At December 31, 2026, the total liability is $489,074. Of that amount, $11,800 is current and $477,274 ($489,074 − $11,800) is long-term.

Review and Practice

Learning Objectives Review

1 Explain how to account for current liabilities.

A current liability is a debt that a company can reasonably expect to pay (a) from existing current assets or through the creation of other current liabilities and (b) 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.

When a note payable is interest-bearing, the amount of assets received upon the issuance of the note is generally equal to the face value of the note, and interest expense is accrued over the life of the note. At maturity, the amount paid is equal to the face value of the note plus accrued interest.

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 hold employee withholding taxes and credit them to appropriate liability accounts, until they remit these taxes to the governmental taxing authorities. Unearned revenues are initially recorded 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 balance sheet.

2 Describe the major characteristics of bonds.

The following different types of bonds may be issued: secured and unsecured bonds, and convertible and callable bonds.

3 Explain how to account for bond transactions.

When companies issue bonds, they debit Cash for the cash proceeds and credit Bonds Payable for the face value of the bonds. In addition, they use the accounts Premium on Bonds Payable and Discount on Bonds Payable to show the bond premium and bond discount, respectively. Bond discount and bond premium are amortized over the life of the bond, which increases or decreases interest expense, respectively.

When companies redeem bonds at maturity, they debit Bonds Payable and credit Cash for the face value of the bonds. When companies redeem bonds before maturity, they (a) eliminate the carrying value of the bonds at the redemption date, (b) record the cash paid, and (c) recognize the gain or loss on redemption.

4 Discuss how liabilities are reported and analyzed.

Current liabilities appear first on the balance sheet, followed by long-term liabilities. Companies should report the nature and amount of each liability in the balance sheet or in schedules in the notes accompanying the statements. They report inflows and outflows of cash related to the principal portion of long-term debt in the financing section of the statement of cash flows.

The liquidity of a company may be analyzed by computing the current ratio. The long-run solvency of a company may be analyzed by computing the debt to assets ratio and the times interest earned. Other factors to consider are contingencies and off-balance-sheet financing.

*5 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.

*6 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. When the difference between the straight-line and effective-interest methods is material, GAAP requires use of the effective-interest method.

*7 Explain how to account for long-term notes payable.

Each payment consists of (1) interest on the unpaid balance of the loan, and (2) a reduction of loan principal. The interest paid decreases each period, while the portion applied to the loan principal increases each period.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Can the company obtain short-term financing when necessary?	Available lines of credit, from notes to the financial statements.	Compare available lines of credit to current liabilities. Also, evaluate liquidity ratios.	If liquidity ratios are low, then lines of credit should be high to compensate.
Can the company meet its obligations in the long term?	Interest expense and net income before interest and taxes	$\text{Times interest earned} = \dfrac{\text{Net income} + \text{Interest expense} + \text{Income tax expense}}{\text{Interest expense}}$	High ratio indicates ability to meet interest payments as scheduled.
Does the company have any contingencies?	Knowledge of events with uncertain negative outcomes	Notes to financial statements and financial statements	If negative outcomes are possible, determine the probability, the amount of loss, and the potential impact on financial statements.

Glossary Review

Bond certificate A legal document that indicates the name of the issuer, the face value of the bonds, and other data such as the contractual interest rate and the maturity date of the bonds. (p. 10-10).

Bond indenture A legal document that sets forth the terms of the bond issue. (p. 10-10).

Bonds A form of interest-bearing notes payable issued by corporations, universities, and governmental agencies. (p. 10-9).

Callable bonds Bonds that the issuing company can redeem (buy back) at a stated dollar amount prior to maturity. (p. 10-9).

Contingencies Events with uncertain outcomes that may represent potential liabilities. (p. 10-24).

Contractual (stated) interest rate Rate used to determine the amount of interest the issuer pays and the investor receives. (p. 10-10).

Convertible bonds Bonds that can be converted into common stock at the bondholder's option. (p. 10-9).

Current liability A debt that a company reasonably expects to pay (1) from existing current assets or through the creation of other current liabilities, and (2) within one year or the operating cycle, whichever is longer. (p. 10-3).

Debenture bonds Bonds issued against the general credit of the borrower. Also called unsecured bonds. (p. 10-9).

Discount (on a bond) The difference between the face value of a bond and its selling price when a bond is sold for less than its face value. (p. 10-15).

***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. 10-29).

***Effective-interest rate** Rate established when bonds are issued that maintains a constant value for interest expense as a percentage of bond carrying value in each interest period. (p. 10-29).

Face value Amount of principal due at the maturity date of the bond. (p. 10-10).

Long-term liabilities Obligations that a company expects to pay more than one year in the future. (p. 10-9).

Market interest rate The rate investors demand for loaning funds to the corporation. (p. 10-12).

Maturity date The date on which the final payment on a bond is due from the bond issuer to the investor. (p. 10-10).

Mortgage bond A bond secured by real estate. (p. 10-9).

***Mortgage note payable** A long-term note secured by a mortgage that pledges title to specific assets as security for the loan. (p. 10-32).

Notes payable An obligation in the form of a written note. (p. 10-3).

Off-balance-sheet financing The intentional effort by a company to structure its financing arrangements so as to avoid showing liabilities on its balance sheet. (p. 10-24).

Premium (on a bond) The difference between the selling price and the face value of a bond when a bond is sold for more than its face value. (p. 10-15).

Present value The value today of an amount to be received at some date in the future after taking into account current interest rates. (p. 10-12).

Secured bonds Bonds that have specific assets of the issuer pledged as collateral. (p. 10-9).

Sinking fund bonds Bonds secured by specific assets set aside to redeem them. (p. 10-9).

***Straight-line method of amortization** A method of amortizing bond discount or bond premium that allocates the same amount to interest expense in each interest period. (p. 10-26).

Times interest earned A measure of a company's solvency, calculated by dividing the sum of net income, interest expense, and income tax expense by interest expense. (p. 10-23).

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. 10-11).

Unsecured bonds Bonds issued against the general credit of the borrower. (p. 10-9).

Practice Multiple-Choice Questions

1. (LO 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.

2. (LO 1) To be classified as a current liability, a debt must be expected to be paid within:

 a. 1 year.
 b. the operating cycle.
 c. 2 years.
 d. 1 year or the operating cycle, whichever is longer.

3. (LO 1) Ottman Company borrows $88,500 on September 1, 2025, from Farley State Bank by signing an $88,500, 12%, 1-year note. What is the accrued interest at December 31, 2025?

 a. $2,655.
 b. $3,540.
 c. $4,425.
 d. $10,620.

4. (LO 1) JD Company borrowed $70,000 on December 1 on a 6-month, 12% note. At December 31:

 a. neither the note payable nor the interest payable is a current liability.
 b. the note payable is a current liability but the interest payable is not.
 c. the interest payable is a current liability but the note payable is not.
 d. both the note payable and the interest payable are current liabilities.

5. (LO 1) Alexis Company has total proceeds from sales of $4,515. If the proceeds include sales taxes of 5%, what is the amount to be credited to Sales Revenue?

 a. $4,000.
 b. $4,300.
 c. $4,289.25.
 d. None of the answer choices is correct.

6. (LO 1) When recording payroll:

 a. gross earnings are recorded as salaries and wages payable.
 b. net pay is recorded as salaries and wages expense.
 c. payroll deductions are recorded as liabilities.
 d. More than one of the answer choices is correct.

7. (LO 1) No Fault Insurance Company collected a premium of $18,000 for a 1-year insurance policy on April 1. What amount should No Fault report as a current liability for Unearned Insurance Premiums at December 31?

 a. $0.
 b. $4,500.
 c. $13,500.
 d. $18,000.

8. (LO 1) Employer payroll taxes do **not** include:

 a. federal unemployment taxes.
 b. state unemployment taxes.
 c. federal income taxes.
 d. FICA taxes.

9. (LO 2) What term is used for bonds that have specific assets pledged as collateral?

 a. Callable bonds.
 b. Convertible bonds.
 c. Secured bonds.
 d. Discount bonds.

10. (LO 2) The market interest rate:

 a. is the contractual interest rate used to determine the amount of cash interest paid by the borrower.
 b. is listed in the bond indenture.
 c. is the rate investors demand for loaning funds.
 d. More than one of the answer choices is correct.

11. (LO 3) Laurel Inc. issues 10-year bonds with a maturity value of $200,000. If the bonds are issued at a premium, this indicates that:

 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.

12. (LO 3) On January 1, 2025, Kelly Corp. issues $200,000, 5-year, 7% bonds at face value. The entry to record the issuance of the bonds would include a:

 a. debit to Cash for $14,000.
 b. debit to Bonds Payable for $200,000.
 c. credit to Bonds Payable for $200,000.
 d. credit to Interest Expense of $14,000.

13. (LO 3) Prescher Corporation issued bonds that pay interest every January 1. The entry to accrue bond interest at December 31 includes a:

 a. debit to Interest Payable.
 b. credit to Cash.
 c. credit to Interest Expense.
 d. credit to Interest Payable.

14. (LO 3) Goethe Corporation redeems its $100,000 face value bonds at 105 on January 1, following the payment of interest. The carrying value of the bonds at the redemption date is $103,745. The entry to record the redemption will include a:

 a. credit of $3,745 to Loss on Bond Redemption.
 b. debit of $3,745 to Premium on Bonds Payable.
 c. credit of $1,255 to Gain on Bond Redemption.
 d. debit of $5,000 to Premium on Bonds Payable.

15. (LO 4) In a recent year, Derek Corporation had net income of $150,000, interest expense of $30,000, and income tax expense of $20,000. What was Derek Corporation's times interest earned for the year?

 a. 5.00.
 b. 4.00.
 c. 6.67.
 d. 7.50.

16. **(LO 4)** Which of the following is a measure of liquidity?
   - **a.** Debt to assets ratio.
   - **b.** Working capital.
   - **c.** Current ratio.
   - **d.** Both working capital and current ratio.

*17. **(LO 5)** On January 1, Xiang Corporation issues $500,000, 5-year, 12% bonds at 96 with interest payable on January 1. The entry on December 31 to record accrued bond interest and the amortization of bond discount using the straight-line method will include a:
   - **a.** debit to Interest Expense $57,600.
   - **b.** debit to Interest Expense $60,000.
   - **c.** credit to Discount on Bonds Payable $4,000.
   - **d.** credit to Discount on Bonds Payable $2,000.

*18. **(LO 5)** For the bonds issued in Question 17, what is the carrying value of the bonds at the end of the third interest period?
   - **a.** $492,000.
   - **b.** $488,000.
   - **c.** $472,000.
   - **d.** $464,000.

*19. **(LO 6)** On January 1, Holly Ester Inc. issued $1,000,000, 10-year, 9% bonds for $938,554. The market rate of interest for these bonds is 10%. Interest is payable annually on December 31. Holly Ester uses the effective-interest method of amortizing bond discount. At the end of the first year, Holly Ester should report unamortized bond discount of:
   - **a.** $54,900.
   - **b.** $57,591.
   - **c.** $51,610.
   - **d.** $51,000.

*20. **(LO 6)** On January 1, Nicholas Corporation issued $1,000,000, 14%, 5-year bonds with interest payable on December 31. The bonds sold for $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.** $120,000.
   - **b.** $125,581.
   - **c.** $128,652.
   - **d.** $140,000.

*21. **(LO 7)** Sampson Corp. purchased a piece of equipment by issuing a $20,000, 6% installment note payable. Quarterly payments on the note are $1,165. What will be the reduction in the principal portion of the note payable that results from the first payment?
   - **a.** $1,165.
   - **b.** $300.
   - **c.** $865.
   - **d.** $1,200.

*22. **(LO 7)** Andrews Inc. 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 Inc. in the second year?
   - **a.** $16,567.
   - **b.** $49,700.
   - **c.** $34,670.
   - **d.** $346,700.

*23. **(LO 7)** Howard Corporation issued a 20-year mortgage note payable on January 1, 2025. At December 31, 2025, the unpaid principal balance will be reported as:
   - **a.** a current liability.
   - **b.** a long-term liability.
   - **c.** part current and part long-term liability.
   - **d.** interest payable.

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 1 year or the operating cycle, whichever is longer. Choices (a) and (b) are both correct, but (d) is the better answer. Choice (c) is incorrect.

3. **b.** Accrued interest at 12/31/25 is computed as the face value ($88,500) times the interest rate (12%) times the portion of the year the debt was outstanding (4 months out of 12), or $3,540 ($88,500 × 12% × $\frac{4}{12}$), not (a) $2,655, (c) $4,425, or (d) $10,620.

4. **d.** A current liability is a debt the company reasonably expects to pay (1) from existing current assets or through the creation of other current liabilities, and (2) within the next year or the operating cycle, whichever is longer. Since both the interest payable and the note payable are expected to be paid within one year, they both will be considered current liabilities. The other choices are therefore incorrect.

5. **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.

6. **c.** Payroll deductions are recorded as liabilities. The other choices are incorrect because (a) gross earnings are recorded as salaries and wages expense, and (b) net pay is recorded as salaries and wages payable. Choice (d) is wrong as there is only one correct answer.

7. **b.** The monthly premium is $1,500 or $18,000 divided by 12. Because No Fault has recognized 9 months of insurance revenue (April 1–December 31), 3 months' insurance premium is still unearned. The amount that No Fault should report as Unearned Service Revenue is therefore $4,500 (3 months × $1,500), not (a) $0, (c) $13,500, or (d) $18,000.

8. **c.** Federal income taxes are a payroll deduction, not an employer payroll tax. The employer is merely a collection agent. The other choices are all included in employer payroll taxes.

9. **c.** Secured bonds are those that have specific assets of the issuer pledged as collateral. The other choices are incorrect because (a) callable bonds can be redeemed (bought back) by the issuer at a stated dollar amount prior to the maturity date, (b) convertible bonds can be converted into common stock at the option of the bondholder, and (d) discount bonds is not a term that is generally used when describing bonds.

10. **c.** The market interest rate is the rate investors demand for loaning funds to the corporation. The other choices are incorrect because (a) the rate on the bond certificate is used to determine the interest payments, (b) the contractual interest rate is listed in the bond indenture, and (d) there is only one correct answer.

11. **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.

12. **c.** The issuance entry for the bonds includes a debit to Cash for \$200,000 and a credit to Bonds Payable for \$200,000. The other choices are therefore incorrect.

13. **d.** Since the interest has been accrued but not yet paid, it has to be recognized as an increase in expenses and liabilities. The entry would be a debit to Interest Expense and a credit to Interest Payable. The other choices are incorrect because (a) an interest accrual will increase, not decrease, Interest Payable; (b) interest accruals do not affect Cash; and (c) an interest accrual will increase, not decrease, Interest Expense.

14. **b.** The entry to record the redemption of bonds will include a debit to Bonds Payable of \$100,000, a debit to Premium on Bonds Payable of \$3,745 (\$103,745 − \$100,000), a credit to Cash of \$105,000 (\$100,000 × 1.05) and a debit to Loss on Bond Redemption of \$1,255 (\$105,000 − \$103,745). The other choices are therefore incorrect.

15. **c.** Times interest earned = (Net income + Interest expense + Income tax expense) ÷ Interest expense = (\$150,000 + \$30,000 + \$20,000) ÷ \$30,000 = 6.67, not (a) 5.00, (b) 4.00, or (d) 7.50.

16. **d.** Working capital and current ratio are measures of liquidity. Choice (a) is incorrect because the debt to assets ratio measures solvency, which is the ability of a company to survive over a long period of time.

*17. **c.** [\$500,000 − (96% × \$500,000)] = \$20,000; \$20,000 ÷ 5 = \$4,000 of discount to amortize annually. As a result, the entry would involve a credit to Discount on Bonds Payable \$4,000. The other choices are therefore incorrect.

*18. **a.** The carrying value of bonds increases by the amount of the periodic discount amortization. Discount amortization using the straight-line method is \$4,000 each period. Total discount amortization for three periods is \$12,000 (\$4,000 × 3 periods) which is added to the initial carrying value (\$480,000) to arrive at \$492,000, the carrying value at the end of the third interest period, not (b) \$488,000, (c) \$472,000, or (d) \$464,000.

*19. **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.

*20. **c.** The debit to Interest Expense = \$1,072,096 (initial carrying value of bond) × 12% (market rate) = \$128,652, not (a) \$120,000, (b) \$125,581, or (d) \$140,000.

*21. **c.** The reduction in the principal portion of the note payable that results from the first payment = \$1,165 − (\$20,000 × 0.06 × 1/4) = \$865, not (a) \$1,165, (b) \$300, or (d) \$1,200.

*22. **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.

*23. **c.** Howard Corporation reports the reduction in principal for the next year as a current liability, and it classifies the remaining unpaid principal balance as a long-term liability. The other choices are therefore incorrect.

Practice Brief Exercises

1. **(LO 1)** Amy Pond Discounts does not segregate sales and sales taxes at the time of sale. The register total for March 17 is \$19,928. 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.

Compute and record sales taxes payable.

Solution

1. Sales tax payable:

Sales = \$18,800 (\$19,928 ÷ 1.06)

Sales taxes payable = \$1,128 (\$18,800 × 6%)

Mar. 17	Cash	19,928	
	Sales Revenue		18,800
	Sales Taxes Payable		1,128

2. **(LO 2)** Ben Borke's regular hourly wage rate is \$20, and he receives an hourly rate of \$30 for work in excess of 40 hours. During a January pay period, Ben works 46 hours. Ben's federal income tax withholding is \$123, he has no voluntary deductions, and the FICA tax rate is 7.65%. There are no state income taxes. Compute Ben's gross earnings and net pay for the pay period.

Compute gross earnings and net pay.

Solution

2. Gross earnings:

Regular pay (40 × \$20)		\$800.00
Overtime pay (6 × \$30)		180.00
Gross earnings		\$980.00
Less: FICA taxes payable (\$980 × 7.65%)	\$ 74.97	
Federal income taxes payable	123.00	197.97
Net pay		\$782.03

Prepare entries for bonds issued at face value.

3. (LO 3) Kahnle Corporation issued 3,000, 7%, 5-year, $1,000 bonds dated January 1, 2025, at 100. Interest is paid each January 1. (a) Prepare the journal entry to record the sale of these bonds on January 1, 2025. (b) Prepare the adjusting journal entry on December 31, 2025, to record interest expense. (c) Prepare the journal entry on January 1, 2026, to record interest paid.

Solution

3. a. Jan. 1	Cash	3,000,000	
	Bonds Payable (3,000 × $1,000)		3,000,000
b. Dec. 31	Interest Expense	210,000	
	Interest Payable ($3,000,000 × 7%)		210,000
c. Jan. 1	Interest Payable	210,000	
	Cash ($3,000,000 × 7%)		210,000

Prepare statement presentation of long-term liabilities.

4. (LO 4) Presented below are liability items for Rymer Company at December 31, 2025. Prepare the long-term liabilities section of the balance sheet for Rymer Company.

Bonds payable, due 2027	$700,000
Accounts payable	100,000
Lease liability (long-term)	120,000
Notes payable, due 2030	110,000
Premium on bonds payable	40,000

Solution

4. Long-term liabilities*

Bonds payable, due 2027	$700,000	
Plus: Premium on bonds payable	40,000	$740,000
Notes payable, due 2030		110,000
Lease liability		120,000
Total long-term liabilities		$970,000

*Accounts payable is a current liability.

Prepare entries for long-term notes payable.

*5. (LO 7) Tyler-Danish Inc. issues a $600,000, 10%, 10-year mortgage note on December 31, 2025, to obtain financing for a new building. The terms provide for annual installment payments of $97,647. Prepare the entry to record the mortgage loan on December 31, 2025, and the first installment payment on December 31, 2026.

Solution

*5.

Annual Interest Period	(A) Cash Payment	(B) Interest Expense (D) × 10%	(C) Reduction of Principal (A) − (B)	(D) Principal Balance (D) − (C)
Issue Date				$600,000
1	$97,647	$60,000	$37,647	562,353

2025 Dec. 31	Cash	600,000	
	Mortgage Payable		600,000
2026 Dec. 31	Interest Expense	60,000	
	Mortgage Payable	37,647	
	Cash		97,647

Practice Exercises

Prepare entries for interest-bearing notes.

1. (LO 1) On June 1, JetSet Company borrows $150,000 from First Bank on a 6-month, $150,000, 8% 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)?

Solution

1. a. June 1	Cash	150,000	
	Notes Payable		150,000
b. June 30	Interest Expense	1,000	
	Interest Payable		1,000
	($150,000 × 8% × 1/12)		
c. Dec. 1	Notes Payable	150,000	
	Interest Payable	6,000	
	($150,000 × 8% × 6/12)		
	Cash		156,000

d. $6,000

2. **(LO 3)** Global Airlines Company issued $900,000 of 8%, 10-year bonds on January 1, 2025, at face value. Interest is payable annually on January 1.

Prepare entries for bonds issued at face value.

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, 2026.

d. The redemption of bonds at maturity, assuming interest for the last interest period has been paid and recorded.

Solution

2.

January 1, 2025		
a. Cash	900,000	
Bonds Payable		900,000
December 31, 2025		
b. Interest Expense	72,000	
Interest Payable ($900,000 × 8%)		72,000
January 1, 2026		
c. Interest Payable	72,000	
Cash		72,000
January 1, 2035		
d. Bonds Payable	900,000	
Cash		900,000

*3. **(LO 7)** Trawler Company borrowed $500,000 on December 31, 2025, by issuing a $500,000, 7% mortgage note payable. The terms call for annual installment payments of $80,000 on December 31.

Prepare entries to record mortgage note and installment payments.

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 long-term liability at December 31, 2026.

Solution

*3.

December 31, 2025		
a. Cash	500,000	
Mortgage Payable		500,000
December 31, 2026		
Interest Expense ($500,000 × 7%)	35,000	
Mortgage Payable	45,000	
Cash		80,000

December 31, 2027		
Interest Expense [($500,000 − $45,000) × 7%]	31,850	
Mortgage Payable	48,150	
Cash		80,000

b. Current: $48,150
Long-term: $406,850 ($500,000 − $45,000 − $48,150)

Practice Problem

Prepare entries to record issuance of bonds, interest accrual, and bond redemption.

(LO 3, 5) Snyder Software Inc. successfully developed a new spreadsheet program. However, to produce and market the program, the company needed additional financing. On January 1, 2024, Snyder borrowed money as follows.

1. Snyder issued $500,000, 11%, 10-year bonds. The bonds sold at face value and pay interest on January 1.
2. Snyder issued $1.0 million, 10%, 10-year bonds for $886,996. Interest is payable on January 1. Snyder uses the straight-line method of amortization.

Instructions

a. For the 11% bonds, prepare journal entries for the following items.

1. The issuance of the bonds on January 1, 2024.
2. Accrue interest expense on December 31, 2024.
3. The payment of interest on January 1, 2025.

***b.** For the 10-year, 10% bonds:

1. Journalize the issuance of the bonds on January 1, 2024.
2. Prepare the entry for the redemption of the bonds at 101 on January 1, 2027, after paying the interest due on this date. The carrying value of the bonds at the redemption date was $920,897.

Solution

a. 1. 2024			
Jan. 1	Cash	500,000	
	Bonds Payable		500,000
	(To record issue of 11%, 10-year bonds at face value)		
2. 2024			
Dec. 31	Interest Expense	55,000	
	Interest Payable		55,000
	(To record accrual of bond interest)		
3. 2025			
Jan. 1	Interest Payable	55,000	
	Cash		55,000
	(To record payment of accrued interest)		
***b. 1.** 2024			
Jan. 1	Cash	886,996	
	Discount on Bonds Payable	113,004	
	Bonds Payable		1,000,000
	(To record issuance of bonds at a discount)		
2. 2027			
Jan. 1	Bonds Payable	1,000,000	
	Loss on Bond Redemption	89,103*	
	Discount on Bonds Payable		79,103
	Cash		1,010,000
	(To record redemption of bonds at 101)		
	*($1,010,000 − $920,897)		

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Note: All asterisked Questions, Exercises, and Problems relate to material in the appendices to the chapter.

Questions

1. Jenny Perez believes a current liability is a debt that can be expected to be paid in one year. Is Jenny correct? Explain.

2. Rayborn Company obtains $20,000 in cash by signing a 9%, 6-month, $20,000 note payable to First Bank on July 1. Rayborn'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. Leiana's Cafe has cash proceeds from sales of $8,550. This amount includes $550 of sales taxes. Give the entry to record the proceeds.

4. Carolina University sold 9,000 season football tickets at $100 each for its five-game home schedule. What entries should be made (a) when the tickets are sold and (b) after each game?

5. Identify three taxes commonly withheld by the employer from an employee's gross pay.

6. **a.** Identify three taxes commonly paid by employers on employees' salaries and wages.
   b. Where in the financial statements does the employer report taxes withheld from employees' pay?

7. Identify the liabilities classified by **Apple** as current.

8. **a.** What are long-term liabilities? Give two examples.
   b. What is a bond?

9. Contrast these types of bonds:
   a. Secured and unsecured.
   b. Convertible and callable.

10. Explain each of these important terms in issuing bonds:
    a. Face value.
    b. Contractual interest rate.
    c. Bond certificate.

11. **a.** What is a convertible bond?
    b. Discuss the advantages of a convertible bond from the standpoint of the bondholders and of the issuing corporation.

12. Describe the two major obligations incurred by a company when bonds are issued.

13. Assume that Acorn Inc. 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.

14. Lee and Jay are discussing how the market price of a bond is determined. Lee believes that the market price of a bond is solely a function of the amount of the principal payment at the end of the term of a bond. Is he right? Discuss.

15. If a 6%, 10-year, $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?

16. If the Bonds Payable account has a balance of $700,000 and the Discount on Bonds Payable account has a balance of $36,000, what is the carrying value of the bonds?

17. 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?

18. Penny Lennon, the chief financial officer of Johnson Inc., is considering the options available to her for financing the company's new plant. Short-term interest rates right now are 6%, and long-term rates are 8%. The company's current ratio is 2.2:1. If she finances the new plant with short-term debt, the current ratio will fall to 1.5:1. Briefly discuss the issues that Penny should consider.

19. **a.** In general, what are the requirements for the financial statement presentation of long-term liabilities?
    b. What ratios may be computed to evaluate a company's liquidity and solvency?

20. Ernie Sams says that liquidity and solvency are the same thing. Is he correct? If not, how do they differ?

21. Anglo Corporation has a current ratio of 1.1:1. Jon has always been told that a corporation's current ratio should exceed 2.0:1. The company maintains that its ratio is low because it has a minimal amount of inventory on hand so as to reduce operating costs. Anglo also has significant available lines of credit. Is Jon still correct? What do some companies do to compensate for having fewer liquid assets?

22. What criteria must be met before a contingency must be recorded as a liability? How should the contingency be disclosed if the criteria are not met?

*23. Explain the straight-line method of amortizing discount and premium on bonds payable.

*24. Robbins Corporation issues $200,000 of 6%, 5-year bonds on January 1, 2025, at 103. Assuming that the straight-line method is used to amortize the premium, what is the total amount of interest expense for 2025?

*25. Honore Draper is discussing the advantages of the effective-interest method of bond amortization with her accounting staff. What do you think Honore is saying?

*26. Dotsin Corporation issues $400,000 of 9%, 5-year bonds on January 1, 2025, at 104. If Dotsin uses the effective-interest method in amortizing the premium, will the annual interest expense increase or decrease over the life of the bonds? Explain.

*27. Your friend just received a car loan. It is a 7-year installment note. He does not understand the mechanics of how the loan works. Explain the important aspects of the installment note.

*28. Tim Rian, 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, Tim 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.

Brief Exercises

Identify whether obligations are current liabilities.

BE10.1 **(LO 1), C** Busch Company has these obligations at December 31: (a) a note payable for $100,000 due in 2 years, (b) a 10-year mortgage payable of $200,000 payable in ten $20,000 annual payments and (c) interest payable of $15,000 on the mortgage, and (d) accounts payable of $60,000. For each obligation, indicate whether it should be classified as a current liability, long-term liability, or both.

Prepare entries for an interest-bearing note payable.

BE10.2 **(LO 1), AP** Hive Company borrows $90,000 on July 1 from the bank by signing a $90,000, 7%, 1-year note payable. Prepare the journal entries to record (a) the proceeds of the note and (b) accrued interest at December 31, assuming adjusting entries are made only at the end of the year.

Compute and record sales taxes payable.

BE10.3 **(LO 1), AP** Greenspan Supply does not segregate sales and sales taxes at the time of sale. The register total for March 16 is $10,388. All sales are subject to a 6% sales tax. Compute sales taxes payable and make the entry to record sales taxes payable and sales.

Prepare entries for unearned revenues.

BE10.4 **(LO 1), AP** Bramble University sells 3,500 season basketball tickets at $80 each for its 10-game home schedule. Give the entry to record (a) the sale of the season tickets and (b) the revenue recognized after playing the first home game.

Compute gross earnings and net pay.

BE10.5 **(LO 1), AP** Betsy Strand's regular hourly wage rate is $16, and she receives an hourly rate of $24 for work in excess of 40 hours. During a January pay period, Betsy works 47 hours. Betsy's federal income tax withholding is $95, and she has no voluntary deductions. Compute Betsy Strand's gross earnings and net pay for the pay period. Assume that the FICA tax rate is 7.65%.

Record a payroll and the payment of wages.

BE10.6 **(LO 1), AP** Data for Betsy Strand are presented in BE10.5. Prepare the employer's journal entries to record (a) Betsy's pay for the period and (b) the payment of Betsy's wages. Use January 15 for the end of the pay period and the payment date.

Prepare entries for payroll taxes.

BE10.7 **(LO 1), AP** Data for Betsy Strand are presented in BE10.5. Prepare the employer's journal entry to record payroll taxes for the period. Ignore unemployment taxes.

Prepare entries for issuance of bonds.

BE10.8 **(LO 3), AP** Bridle Inc. issues $300,000, 10-year, 8% bonds at 98. Prepare the journal entry to record the sale of these bonds on March 1, 2025.

Prepare entries for issuance of bonds.

BE10.9 **(LO 3), AP** Ravine Company issues $400,000, 20-year, 7% bonds at 101. Prepare the journal entry to record the sale of these bonds on June 1, 2025.

Prepare journal entries for bonds issued at face value.

BE10.10 **(LO 3), AP** Clooney Corporation issued 3,000 7%, 5-year, $1,000 bonds dated January 1, 2025, at face value. Interest is paid each January 1.

a. Prepare the journal entry to record the sale of these bonds on January 1, 2025.

b. Prepare the adjusting journal entry on December 31, 2025, to record interest expense.

c. Prepare the journal entry on January 1, 2026, to record interest paid.

Prepare journal entry for redemption of bonds.

BE10.11 **(LO 3), AP** The balance sheet for Gelher Company reports the following information on July 1, 2025.

Gelher Company
Balance Sheet (partial)

Long-term liabilities		
Bonds payable	$2,000,000	
Less: Discount on bonds payable	45,000	$1,955,000

Gelher decides to redeem these bonds at 102 after paying annual interest. Prepare the journal entry to record the redemption on July 1, 2025.

BE10.12 (LO 4), AP Presented here are long-term liability items for Stevens Inc. at December 31, 2025. Prepare the long-term liabilities section of the balance sheet for Stevens Inc.

Prepare statement presentation of long-term liabilities.

Bonds payable (due 2029)	$700,000
Notes payable (due 2027)	80,000
Discount on bonds payable	28,000

BE10.13 (LO 4), AP Presented here are liability items for O'Brian Inc. at December 31, 2025. Prepare the liabilities section of O'Brian's balance sheet.

Prepare liabilities section of balance sheet.

Accounts payable	$157,000	FICA taxes payable	$ 7,800
Notes payable (due May 1, 2026)	20,000	Interest payable	40,000
		Notes payable (due 2027)	80,000
Bonds payable (due 2029)	900,000	Income taxes payable	3,500
Unearned rent revenue	240,000	Sales taxes payable	1,700
Discount on bonds payable	41,000		

BE10.14 (LO 4), AP Suppose the 2025 adidas financial statements contain the following selected data (in millions).

Analyze solvency.

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.
b. Current ratio.
c. Debt to assets ratio.
d. Times interest earned.

***BE10.15 (LO 5), AP** Alpine Company issues $2 million, 10-year, 7% bonds at 99, with interest payable on December 31. The straight-line method is used to amortize bond discount.

Prepare journal entries for bonds issued at a discount.

a. Prepare the journal entry to record the sale of these bonds on January 1, 2025.

b. Prepare the journal entry to record interest expense and bond discount amortization on December 31, 2025, assuming no previous accrual of interest.

***BE10.16 (LO 5), AP** Harvard Inc. issues $4 million, 5-year, 8% bonds at 102, with interest payable on January 1. The straight-line method is used to amortize bond premium.

Prepare journal entries for bonds issued at a premium.

a. Prepare the journal entry to record the sale of these bonds on January 1, 2025.

b. Prepare the journal entry to record interest expense and bond premium amortization on December 31, 2025, assuming no previous accrual of interest.

***BE10.17 (LO 6), AP Writing** Presented below is the partial bond discount amortization schedule for Rohr Corp., which uses the effective-interest method of amortization.

Use effective-interest method of bond amortization.

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

Instructions

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.

***BE10.18 (LO 7), AP** Jenseng Inc. issues an $800,000, 10%, 10-year mortgage note on December 31, 2025, 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, 2025, and the first installment payment on December 31, 2026.

Prepare entries for long-term notes payable.

DO IT! Exercises

Answer questions about current liabilities.

DO IT! 10.1a (LO 1), AP 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 $60,000, 9-month, 10% note on August 1, how much interest expense would be incurred by December 31?
2. The cash register total including sales taxes is $42,000, and the sales tax rate is 5%. What is the sales taxes payable?
3. If $42,000 is collected in advance on November 1 for 6-month magazine subscriptions, what amount of subscription revenue should be recognized on December 31?

Prepare entries for payroll and payroll taxes.

DO IT! 10.1b (LO 1), AP During the month of February, Hennesey Corporation's employees earned wages of $74,000. Withholdings related to these wages were $5,661 for FICA, $7,100 for federal income tax, and $1,900 for state income tax. Costs incurred for unemployment taxes were $110 for federal and $160 for state.

Prepare the February 28 journal entries for (a) salaries and wages expense and salaries and wages payable assuming that all February wages will be paid in March and (b) the company's payroll tax expense.

Evaluate statements about bonds.

DO IT! 10.2 (LO 2), C State whether each of the following statements is true or false. If false, indicate how to correct the statement.

1. Convertible bonds are also known as callable bonds.
2. The market rate is the rate investors demand for loaning funds.
3. Annual interest payments on bonds are equal to the face value times the stated rate.
4. 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 balance sheet presentation.

DO IT! 10.3a (LO 3), AP Smiley Corporation issues $300,000 of bonds for $315,000. (a) Prepare the journal entry to record the issuance of the bonds, and (b) show how the bonds would be reported on the balance sheet at the date of issuance.

Prepare entry for bond redemption.

DO IT! 10.3b (LO 3), AP Farmland Corporation issued $400,000 of 10-year bonds at a discount. Prior to maturity, when the carrying value of the bonds was $388,000, the company redeemed the bonds at 99. Prepare the entry to record the redemption of the bonds.

Analyze liabilities.

DO IT! 10.4 (LO 4), AN Grouper Company provides you with the following balance sheet information as of December 31, 2025.

Current assets	$11,500	Current liabilities	$12,000
Long-term assets	26,500	Long-term liabilities	14,000
Total assets	$38,000	Stockholders' equity	12,000
		Total liabilities and stockholders' equity	$38,000

In addition, Grouper reported net income for 2025 of $16,000, income tax expense of $3,200, and interest expense of $1,300.

a. Compute the current ratio and working capital for Grouper for 2025.
b. Assume that at the end of 2025, Grouper used $3,000 cash to pay off $3,000 of accounts payable. How would the current ratio and working capital have changed?
c. Compute the debt to assets ratio and the times interest earned for Grouper for 2025.

Exercises

Prepare entries for interest-bearing notes.

E10.1 (LO 1), AP Kelly Jones and Tami Crawford borrowed $15,000 on a 7-month, 8% note from Gem State Bank to open their business, JC's Coffee House. The money was borrowed on June 1, 2025, and the note matures January 1, 2026.

Instructions

a. Prepare the entry to record the receipt of the funds from the loan.
b. Prepare the entry to accrue the interest on June 30.

c. Assuming adjusting entries are made at the end of each month, determine the balance in the Interest Payable account at December 31, 2025.

d. Prepare the entry required on January 1, 2026, when the loan is paid back.

Prepare entries for interest-bearing notes.

E10.2 **(LO 1), AP** On May 15, Wild Quest Clothiers borrowed some money on a 4-month note to provide cash during the slow season of the year. The interest rate on the note was 8%. At the time the note was due, the amount of interest owed was $480.

Instructions

a. Determine the amount borrowed by Wild Quest.

b. Independent of your answer in part (a), assume the amount borrowed was $18,500. What was the interest rate if the amount of interest owed was $555?

c. Prepare the entry for the initial borrowing and the repayment for the facts in part (a).

Prepare entries for interest-bearing notes.

E10.3 **(LO 1), AP** On June 1, Marchon Company Ltd. borrows $60,000 from Acme Bank on a 6-month, $60,000, 8% note. The note matures on December 1.

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)?

Prepare entries for interest-bearing notes.

E10.4 **(LO 1), AP** C.S. Lewis Company had the following transactions involving notes payable.

July 1, 2025	Borrows $50,000 from First National Bank by signing a 9-month, 8% note.
Nov. 1, 2025	Borrows $60,000 from Lyon County State Bank by signing a 3-month, 6% note.
Dec. 31, 2025	Prepares adjusting entries.
Feb. 1, 2026	Pays principal and interest to Lyon County State Bank.
Apr. 1, 2026	Pays principal and interest to First National Bank.

Instructions

Prepare journal entries for each of the transactions.

Journalize sales and related taxes.

E10.5 **(LO 1), AP** In performing accounting services for small businesses, you encounter the following situations pertaining to cash sales.

1. Cerviq Company enters sales and sales taxes separately on its cash register. On April 10, the register totals are sales $22,000 and sales taxes $1,100.
2. Quartz Company does not segregate sales and sales taxes. Its register total for April 15 is $13,780, which includes a 6% sales tax.

Instructions

Prepare the entries to record the sales transactions and related taxes for (a) Cerviq Company and (b) Quartz Company.

Journalize payroll entries.

E10.6 **(LO 1), AP** During the month of March, Munster Company's employees earned wages of $64,000. Withholdings related to these wages were $4,896 for FICA, $7,500 for federal income tax, $3,100 for state income tax, and $400 for union dues. The company incurred no cost related to these earnings for federal unemployment tax but incurred $700 for state unemployment tax.

Instructions

a. Prepare the necessary March 31 journal entry to record salaries and wages expense and salaries and wages payable. Assume that wages earned during March will be paid during April.

b. Prepare the entry to record the company's payroll tax expense.

Calculate and record net pay.

E10.7 **(LO 1), AP** Dan Noll's gross earnings for the week were $1,780, his federal income tax withholding was $303, and his FICA total was $136. There were no state income taxes.

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.

Record accrual of payroll taxes.

E10.8 **(LO 1), AP** According to the accountant of Ulster Inc., its payroll taxes for the week were as follows: $137.68 for FICA taxes, $13.77 for federal unemployment taxes, and $92.93 for state unemployment taxes.

Instructions

Journalize the entry to record the accrual of the payroll taxes.

Journalize unearned revenue transactions.

E10.9 **(LO 1), AP** Season tickets for the Dingos are priced at $320 and include 16 home games. An equal amount of revenue is recognized after each game is played. When the season began, the amount credited to Unearned Ticket Revenue was $1,728,000. By the end of October, $1,188,000 of the Unearned Ticket Revenue had been recognized as revenue.

Instructions

a. How many season tickets did the Dingos sell?

b. How many home games had the Dingos played by the end of October?

c. Prepare the entry for the initial recording of the Unearned Ticket Revenue.

d. Prepare the entry to recognize the revenue after the first home game had been played.

Journalize unearned subscription revenue.

E10.10 **(LO 1), AP** Cassini Company Ltd. publishes a monthly sports magazine, *Fishing Preview*. Subscriptions to the magazine cost $28 per year. During November 2025, Cassini sells 6,300 subscriptions for cash, beginning with the December issue. Cassini 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. The company has a December 31 year-end.

Instructions

a. Prepare the entry in November for the receipt of the subscriptions.

b. Prepare the adjusting entry at December 31, 2025, to record subscription revenue in December 2025.

c. Prepare the adjusting entry at March 31, 2026, to record subscription revenue in the first quarter of 2026.

Evaluate statements about bonds.

E10.11 **(LO 2), AN** Nick Bosch has prepared the following list of statements about bonds.

1. Bonds are a form of interest-bearing notes payable.
2. Secured bonds have specific assets of the issuer pledged as collateral for the bonds.
3. Secured bonds are also known as debenture bonds.
4. A conversion feature may be added to bonds to make them more attractive to bond buyers.
5. The rate used to determine the amount of cash interest the borrower pays is called the stated rate.
6. Bond prices are usually quoted as a percentage of the face value of the bond.
7. 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.

Prepare journal entries for issuance of bonds and payment and accrual of interest.

E10.12 **(LO 3), AP** On August 1, 2025, Gonzaga Corporation issued $600,000, 7%, 10-year bonds at face value. Interest is payable annually on August 1. Gonzaga's year-end is December 31.

Instructions

Prepare journal entries to record the following events.

a. The issuance of the bonds.

b. The accrual of interest on December 31, 2025.

c. The payment of interest on August 1, 2026.

Prepare journal entries for issuance of bonds and payment and accrual of interest.

E10.13 **(LO 3), AP** On January 1, Kirkland Company issued $300,000, 8%, 10-year bonds at face value. Interest is payable annually on January 1.

Instructions

Prepare 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.

E10.14 (LO 3), AP Arroyo Company issued $600,000, 10-year, 6% bonds at 103.

Prepare entries for issuance of bonds, balance sheet presentation, and cause of deviations from face value.

Instructions

a. Prepare the journal entry to record the sale of these bonds on January 1, 2025.

b. Suppose the remaining Premium on Bonds Payable was $10,800 on December 31, 2028. Show the balance sheet presentation on this date.

c. Explain why the bonds sold at a price above the face value.

E10.15 (LO 3), AP Mobbe Company issued $500,000, 15-year, 7% bonds at 96.

Prepare entries for issuance of bonds, balance sheet presentation, and cause of deviations from face value.

Instructions

a. Prepare the journal entry to record the sale of these bonds on January 1, 2025.

b. Suppose the remaining Discount on Bonds Payable was $12,000 on December 31, 2030. Show the balance sheet presentation on this date.

c. Explain why the bonds sold at a price below the face value.

E10.16 (LO 3), AN Assume that the following are independent situations recently reported in the *Wall Street Journal*.

Prepare entries for issue of bonds.

1. **General Electric (GE)** 7% bonds, maturing January 28, 2026, were issued at 111.12.
2. **Boeing** 7% bonds, maturing September 24, 2040, were issued at 99.08.

Instructions

a. Were GE and Boeing bonds issued at a premium or a discount?

b. Explain how bonds, both paying the same contractual interest rate, could be issued at different prices.

c. Prepare the journal entry to record the issue of each of these two bonds, assuming each company issued $800,000 of bonds in total.

E10.17 (LO 3), AP Kale Company issued $350,000 of 8%, 20-year bonds on January 1, 2025, at face value. Interest is payable annually on January 1.

Prepare journal entries to record issuance of bonds, payment of interest, and redemption at maturity.

Instructions

Prepare the journal entries to record the following events.

a. The issuance of the bonds.

b. The accrual of interest on December 31, 2025.

c. The payment of interest on January 1, 2026.

d. The redemption of the bonds at maturity, assuming interest for the last interest period has been paid and recorded.

E10.18 (LO 3), AP The following situations are independent of each other.

Prepare journal entries for redemption of bonds.

Instructions

For each situation, prepare the appropriate journal entry for the redemption of the bonds.

a. Mikhail Corporation redeemed $140,000 face value, 9% bonds on April 30, 2025, at 101. The carrying value of the bonds at the redemption date was $126,500. The bonds pay annual interest, and the interest payment due on April 30, 2025, has been made and recorded.

b. Oldman, Inc., redeemed $170,000 face value, 12.5% bonds on June 30, 2025, at 98. The carrying value of the bonds at the redemption date was $184,000. The bonds pay annual interest, and the interest payment due on June 30, 2025, has been made and recorded.

E10.19 (LO 4), AP Sanchez, Inc. reports the following liabilities (in thousands) on its December 31, 2025, balance sheet and notes to the financial statements.

Prepare liabilities section of balance sheet.

Accounts payable	$4,263.9	Mortgage payable	$6,746.7
Unearned rent revenue	1,058.1	Notes payable (due in 2028)	335.6
Bonds payable	1,961.2	Salaries and wages payable	858.1
Current portion of mortgage payable	1,992.2	Notes payable (due in 2026)	2,563.6
Income taxes payable	265.2	Warranty liability—current	1,417.3

Instructions

a. Identify which of the above liabilities are likely current and which are likely long-term. List any items that do not fit in either category. Explain the reasoning for your selection.

b. Prepare the liabilities section of Sanchez's balance sheet as at December 31, 2025.

Calculate liquidity and solvency measures.

E10.20 **(LO 4), AP** Suppose McDonald's 2025 financial statements contain the following selected data (in millions).

Current assets	$ 3,416.3	Interest expense	$ 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

Compute the following values and provide a brief interpretation of each.

a. Working capital.

b. Current ratio.

c. Debt to assets ratio.

d. Times interest earned.

Calculate current ratio before and after paying accounts payable.

E10.21 **(LO 4), AN** Suppose 3M Company reported the following financial data for 2025 and 2024 (in millions).

3M Company
Balance Sheet (partial)

	2025	2024
Current assets		
Cash and cash equivalents	$ 3,040	$1,849
Accounts receivable, net	3,250	3,195
Inventories	2,639	3,013
Other current assets	1,866	1,541
Total current assets	$10,795	$9,598
Current liabilities	$ 4,897	$5,839

Instructions

a. Calculate the current ratio for 3M for 2025 and 2024.

b. Suppose that at the end of 2025, 3M management used $300 million cash to pay off $300 million of accounts payable. How would its current ratio change?

Calculate current ratio before and after paying accounts payable.

E10.22 **(LO 4), AN** Underwood Boutique reported the following financial data for 2025 and 2024.

Underwood Boutique
Balance Sheet (partial)
September 30 (in thousands)

	2025	2024
Current assets		
Cash	$2,574	$1,021
Accounts receivable	2,147	1,575
Inventories	1,201	1,010
Other current assets	322	192
Total current assets	$6,244	$3,798
Current liabilities	$4,503	$2,619

Instructions

a. Calculate the current ratio for Underwood Boutique for 2025 and 2024.

b. Suppose that at the end of 2025, Underwood Boutique used $1.5 million cash to pay off $1.5 million of accounts payable. How would its current ratio change?

c. At September 30, Underwood Boutique has an undrawn operating line of credit of $12.5 million. Would this affect any assessment that you might make of Underwood Boutique's short-term liquidity? Explain.

E10.23 (LO 4), C A large retailer was sued nearly 5,000 times in a recent year—about once every 2 hours every day of the year. It has been sued for everything imaginable—ranging from falls on icy parking lots to injuries sustained in shoppers' stampedes to a murder with a rifle purchased at one of its stores. The company reported the following in the notes to its financial statements.

Discuss contingencies.

> The Company and its subsidiaries are involved from time to time in claims, proceedings, and litigation arising from the operation of its business. The Company does not believe that any such claim, proceeding, or litigation, either alone or in the aggregate, will have a material adverse effect on the Company's financial position or results of its operations.

Instructions

a. Explain why the company does not have to record these contingencies.

b. Comment on any implications for analysis of the financial statements.

E10.24 (LO 1, 2, 3, 4), K The following are terms or phrases that were introduced in the chapter.

Identify key terms.

1. Bond certificate.
2. Premium (on a bond).
3. Discount (on a bond).
4. Times interest earned.
5. Present value.
6. Maturity date.
7. Callable bonds.
8. Market interest rate.
9. Contingencies.
10. Secured bonds.
11. Contractual (stated) interest rate.
12. Unsecured bonds.
13. Off-balance-sheet financing.
14. Face value.
15. Convertible bonds.

Instructions

Match the term or phrase with the appropriate description below.

a. ________ The value today of an amount to be received at some date in the future after taking into account current interest rates.

b. ________ Bonds that have specific assets of the issuer pledged as collateral.

c. ________ Events with uncertain outcomes that may represent potential liabilities.

d. ________ Bonds that can be converted into common stock at the bondholder's option.

e. ________ A legal document that indicates the name of the issuer, the face value of the bonds, and other data such as the contractual interest rate and the maturity date of the bonds.

f. ________ Bonds that the issuing company can redeem (buy back) at a stated dollar amount prior to maturity.

g. ________ The date on which the final payment on a bond is due from the bond issuer to the investor.

h. ________ Rate used to determine the amount of interest the issuer pays and the investor receives.

i. ________ The difference between the face value of a bond and its selling price when a bond is issued for less than its face value.

j. ________ A measure of a company's solvency, calculated by dividing the sum of net income, interest expense, and income tax expense by interest expense.

k. ________ The rate investors demand for loaning funds to the corporation.

l. ________ Amount of principal due at the maturity date of the bond.

m. ________ Bonds issued against the general credit of the borrower.

n. ________ The intentional effort by a company to structure its financing arrangements so as to avoid showing liabilities on its balance sheet

o. ________ The difference between the selling price and the face value of a bond when a bond is sold for more than its face value.

***E10.25 (LO 3, 5), AP** Sehr Company issued $500,000, 6%, 30-year bonds on January 1, 2025, at 103. Interest is payable annually on January 1. Sehr uses straight-line amortization for bond premium or discount.

Prepare journal entries to record issuance of bonds, payment of interest, amortization of premium using straight-line, and redemption at maturity.

Instructions

Prepare the journal entries to record the following events.

a. The issuance of the bonds.

b. The accrual of interest and the premium amortization on December 31, 2025.

c. The payment of interest on January 1, 2026.

d. The redemption of the bonds at maturity, assuming interest for the last interest period has been paid and recorded.

Prepare journal entries to record issuance of bonds, payment of interest, amortization of discount using straight-line, and redemption at maturity.

*E10.26 **(LO 3, 5), AP** Motley Company issued $300,000, 8%, 15-year bonds on December 31, 2024, for $288,000. Interest is payable annually on December 31. Motley uses the straight-line method to amortize bond premium or discount.

Instructions

Prepare the journal entries to record the following events.

a. The issuance of the bonds.

b. The payment of interest and the discount amortization on December 31, 2025.

c. The redemption of the bonds at maturity, assuming interest for the last interest period has been paid and recorded.

Prepare journal entries for issuance of bonds, payment of interest, and amortization of discount using effective-interest method.

*E10.27 **(LO 3, 6), AP** Woode Corporation issued $400,000, 7%, 20-year bonds on January 1, 2025, for $360,727. This price resulted in an effective-interest rate of 8% on the bonds. Interest is payable annually on January 1. Woode uses the effective-interest method to amortize bond premium or discount.

Instructions

Prepare the journal entries to record (round to the nearest dollar):

a. The issuance of the bonds.

b. The accrual of interest and the discount amortization on December 31, 2025.

c. The payment of interest on January 1, 2026.

Prepare journal entries for issuance of bonds, payment of interest, and amortization of premium using effective-interest method.

*E10.28 **(LO 3, 6), AP** Hernandez Company issued $380,000, 7%, 10-year bonds on January 1, 2025, for $407,968. This price resulted in an effective-interest rate of 6% on the bonds. Interest is payable annually on January 1. Hernandez uses the effective-interest method to amortize bond premium or discount.

Instructions

Prepare the journal entries (rounded to the nearest dollar) to record:

a. The issuance of the bonds.

b. The accrual of interest and the premium amortization on December 31, 2025.

c. The payment of interest on January 1, 2026.

Prepare journal entries to record mortgage note and installment payments.

*E10.29 **(LO 7), AP** Yancey Co. receives $300,000 when it issues a $300,000, 10%, mortgage note payable to finance the construction of a building at December 31, 2025. The terms provide for annual installment payments of $50,000 on December 31.

Instructions

Prepare the journal entries to record the mortgage loan and the first two installment payments.

Determine balance sheet presentation of installment note payable.

*E10.30 **(LO 7), AP** Waite Corporation issued a $50,000, 10%, 10-year installment note payable on January 1, 2025. Payments of $8,137 are made each January 1, beginning January 1, 2026.

Instructions

a. What amounts should be reported under current liabilities related to the note on December 31, 2025?

b. What should be reported under long-term liabilities?

Problems

P10.1 (LO 1, 4), AP On January 1, 2025, the ledger of Romada Company contained these liability accounts.

Prepare current liability entries, adjusting entries, and current liabilities section.

Accounts Payable	$42,500
Sales Taxes Payable	6,600
Unearned Service Revenue	19,000

During January, the following selected transactions occurred.

Jan.	1	Borrowed $18,000 in cash from Apex Bank on a 4-month, 5%, $18,000 note.
	5	Sold merchandise for cash totaling $6,254, which includes 6% sales taxes.
	12	Performed services for customers who had made advance payments of $10,000. (Credit Service Revenue.)
	14	Paid state treasurer's department for sales taxes collected in December 2024, $6,600.
	20	Sold 500 units of a new product on credit at $48 per unit, plus 6% sales tax.

During January, the company's employees earned wages of $70,000. Withholdings related to these wages were $5,355 for FICA, $5,000 for federal income tax, and $1,500 for state income tax. The company owed no money related to these earnings for federal or state unemployment tax. Assume that wages earned during January will be paid during February. No entry had been recorded for wages or payroll tax expense as of January 31.

Instructions

a. Journalize the January transactions.

b. Journalize the adjusting entries at January 31 for the outstanding note payable and for salaries and wages expense and payroll tax expense.

c. Prepare the current liabilities section of the balance sheet at January 31, 2025. Assume no change in Accounts Payable.

c. Tot. current liabilities $146,724

P10.2 (LO 1, 4), AP Ehler Corporation sells rock-climbing products and also operates an indoor climbing facility for climbing enthusiasts. During the last part of 2025, Ehler had the following transactions related to notes payable.

Journalize and post note transactions; show balance sheet presentation.

Sept.	1	Issued a $12,000 note to Pippen to purchase inventory. The 3-month note payable bears interest of 6% and is due December 1. (Ehler uses a perpetual inventory system.)
Sept.	30	Recorded accrued interest for the Pippen note.
Oct.	1	Issued a $16,500, 8%, 4-month note to Prime Bank to finance the purchase of a new climbing wall for advanced climbers. The note is due February 1.
Oct.	31	Recorded accrued interest for the Pippen note and the Prime Bank note.
Nov.	1	Issued a $26,000 note and paid $8,000 cash to purchase a vehicle to transport clients to nearby climbing sites as part of a new series of climbing classes. This note bears interest of 6% and matures in 12 months.
Nov.	30	Recorded accrued interest for the Pippen note, the Prime Bank note, and the vehicle note.
Dec.	1	Paid principal and interest on the Pippen note.
Dec.	31	Recorded accrued interest for the Prime Bank note and the vehicle note.

Instructions

a. Prepare journal entries for the transactions noted above.

b. Post the above entries to the Notes Payable, Interest Payable, and Interest Expense accounts. (Use T-accounts.)

b. Interest Payable $590

c. Show the balance sheet presentation of notes payable and interest payable at December 31.

d. How much interest expense relating to notes payable did Ehler incur during the year?

P10.3 (LO 3), AP The following section is taken from Hardesty's balance sheet at December 31, 2024.

Prepare journal entries to record interest payments and redemption of bonds.

Current liabilities	
Interest payable	$ 40,000
Long-term liabilities	
Bonds payable (8%, due January 1, 2028)	500,000

Interest is payable annually on January 1. The bonds are callable on any annual interest date.

Instructions

a. Journalize the payment of the bond interest on January 1, 2025.

b. Loss $6,000

b. Assume that on January 1, 2025, after paying interest, Hardesty calls bonds having a face value of $200,000. The call price is 103. Record the redemption of the bonds.

c. Prepare the adjusting entry on December 31, 2025, to accrue the interest on the remaining bonds.

Prepare journal entries to record issuance of bonds, interest, balance sheet presentation, and bond redemption.

P10.4 **(LO 3, 4), AP** On October 1, 2024, Kristal Corp. issued $700,000, 5%, 10-year bonds at face value. The bonds were dated October 1, 2024, and pay interest annually on October 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, 2024.

c. Show the balance sheet presentation of bonds payable and bond interest payable on December 31, 2024.

d. Prepare the journal entry to record the payment of interest on October 1, 2025.

e. Prepare the adjusting entry to record the accrual of interest on December 31, 2025.

f. Loss $28,000

f. Assume that on January 1, 2026, Kristal pays the accrued bond interest and calls the bonds. The call price is 104. Record the payment of interest and redemption of the bonds.

Prepare journal entries to record issuance of bonds, show balance sheet presentation, and record bond redemption.

P10.5 **(LO 3, 4), AP** Malcolm Company sold $6,000,000, 7%, 15-year bonds on January 1, 2025. The bonds were dated January 1, 2025, and pay interest on December 31. The bonds were sold at 98.

Instructions

a. Prepare the journal entry to record the issuance of the bonds on January 1, 2025.

b. At December 31, 2025, $8,000 of the bond discount had been amortized. Show the long-term liability balance sheet presentation of the bond liability at December 31, 2025.

c. Loss $224,000

c. At January 1, 2027, 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 year had already been paid.

Calculate and comment on ratios.

P10.6 **(LO 4), AN** Suppose you have been presented with selected information taken from the financial statements of Southwest Airlines Co.

Southwest Airlines Co.
Balance Sheet (partial)
December 31
(in millions)

	2025	2024
Total current assets	$ 2,893	$ 4,443
Noncurrent assets	11,415	12,329
Total assets	$14,308	$16,772
Current liabilities	$ 2,806	$ 4,836
Long-term liabilities	6,549	4,995
Total liabilities	9,355	9,831
Shareholders' equity	4,953	6,941
Total liabilities and shareholders' equity	$14,308	$16,772

Other information:

	2025	2024
Net income (loss)	$ 178	$ 645
Income tax expense	100	413
Interest expense	130	119
Cash provided by operations	(1,521)	2,845
Capital expenditures	923	1,331
Cash dividends	13	14

Instructions

a. Calculate each of the following ratios for 2025 and 2024.

1. Current ratio.
2. Debt to assets ratio.
3. Times interest earned.

b. Comment on the trend in ratios.

***P10.7 (LO 3, 5), AP** The following information is taken from Lassen Corp.'s balance sheet at December 31, 2024.

Prepare journal entries to record interest payments, straight-line discount amortization, and redemption of bonds.

Current liabilities		
Interest payable		$ 96,000
Long-term liabilities		
Bonds payable (4%, due January 1, 2035)	$2,400,000	
Less: Discount on bonds payable	24,000	2,376,000

Interest is payable annually on January 1. The bonds are callable on any annual interest date. Lassen uses straight-line amortization for any bond premium or discount. From December 31, 2024, the bonds will be outstanding for an additional 10 years (120 months).

Instructions

(Round all computations to the nearest dollar.)

a. Journalize the payment of bond interest on January 1, 2025.

b. Prepare the entry to amortize bond discount and to accrue the interest on December 31, 2025.

c. Assume on January 1, 2026, after paying interest, that Lassen Corp. calls bonds having a face value of $400,000. The call price is 102. Record the redemption of the bonds.

c. Loss $11,600

d. Prepare the adjusting entry at December 31, 2026, to amortize bond discount and to accrue interest on the remaining bonds.

***P10.8 (LO 3, 4, 5), AP** Fong Corporation sold $2,000,000, 7%, 5-year bonds on January 1, 2025. The bonds were dated January 1, 2025, and pay interest on January 1. Fong Corporation uses the straight-line method to amortize bond premium or discount.

Prepare journal entries to record issuance of bonds, interest, and straight-line amortization, and balance sheet presentation.

Instructions

a. Prepare all the necessary journal entries to record the issuance of the bonds and bond interest expense for 2025, assuming that the bonds sold at 102.

b. Prepare journal entries as in part (a) assuming that the bonds sold at 97.

c. Show the balance sheet presentation for the bond issue at December 31, 2025, using (1) the 102 selling price, and then (2) the 97 selling price.

c. Prem. on bonds pay. $32,000
Disc. on bonds pay. $48,000

***P10.9 (LO 3, 4, 5), AP** Saylor Co. sold $3,000,000, 8%, 10-year bonds on January 1, 2025. The bonds were dated January 1, 2025, and pay interest on January 1. The company uses straight-line amortization on bond premiums and discounts. Financial statements are prepared annually.

Prepare journal entries to record issuance of bonds, interest, and straight-line amortization, and balance sheet presentation.

Instructions

a. Prepare the journal entries to record the issuance of the bonds assuming they sold at:

1. 103.
2. 98.

b. Prepare amortization tables for both assumed sales for the first three interest payments.

c. Prepare the journal entries to record interest expense for 2025 under both of the bond issuances assumed in part (a).

c. (2) 12/31/25
Interest Expense $246,000

d. Show the long-term liabilities balance sheet presentation for both of the bond issuances assumed in part (a) at December 31, 2025.

***P10.10 (LO 3, 6), AP** On January 1, 2025, Lachte Corporation 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. Lachte uses the effective-interest method to amortize bond premium or discount. The bonds pay annual interest January 1.

Prepare journal entries to record issuance of bonds, payment of interest, and amortization of bond discount using effective-interest method.

Instructions

(Round all computations to the nearest dollar.)

a. Prepare the journal entry to record the issuance of the bonds on January 1, 2025.

b. Prepare an amortization table through December 31, 2027 (three interest periods), for this bond issue.

c. Interest Expense $100,051

c. Prepare the journal entry to record the accrual of interest and the amortization of the discount on December 31, 2025.

d. Prepare the journal entry to record the payment of interest on January 1, 2026.

e. Prepare the journal entry to record the accrual of interest and the amortization of the discount on December 31, 2026.

Prepare journal entries to record issuance of bonds, payment of interest, and effective-interest amortization, and balance sheet presentation.

*P10.11 **(LO 3, 4, 6), AP** On January 1, 2025, Opal Company 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. Opal 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, 2025.
2. Accrual of interest and amortization of the premium on December 31, 2025.
3. The payment of interest on January 1, 2026.
4. Accrual of interest and amortization of the premium on December 31, 2026.

a. (4) Interest Expense $128,162

b. Show the proper long-term liabilities balance sheet presentation for the liability for bonds payable at December 31, 2026.

c. Provide the answers to the following questions in narrative form.

1. What amount of interest expense is reported for 2026?
2. Would the bond interest expense reported in 2026 be the same as, greater than, or less than the amount that would be reported if the straight-line method of amortization were used?

Prepare installment payments schedule, journal entries, and balance sheet presentation for a mortgage note payable.

*P10.12 **(LO 4, 7), AP** Laverne purchased a new piece of equipment to be used in its new facility. The $370,000 piece of equipment was purchased with a $50,000 down payment and with cash received through the issuance of a $320,000, 8%, 5-year mortgage payable issued on January 1, 2025. The terms provide for annual installment payments of $80,146 on December 31.

Instructions

(Round all computations to the nearest dollar.)

a. Prepare an installment payments schedule for the first three payments of the notes payable.

b. Prepare the journal entry related to the notes payable for December 31, 2025.

c. Current portion of mortgage payable $53,910

c. Show the balance sheet presentation for this obligation for December 31, 2025. (*Hint:* Be sure to distinguish between the current and long-term portions of the note.)

Prepare journal entries to record payments for long-term note payable, and balance sheet presentation.

*P10.13 **(LO 4, 7), AP** Hetty Grey has just approached a venture capitalist for financing for her new business venture, the development of a local ski hill. On July 1, 2024, Hetty was loaned $150,000 at an annual interest rate of 7%. The loan is repayable over 5 years in annual installments of $36,584, principal and interest, due each June 30. The first payment is due June 30, 2025. Hetty uses the effective-interest method for amortizing debt. Her ski hill company's year-end will be June 30.

Instructions

a. Prepare an amortization schedule for the 5 years, 2024–2029. (Round all calculations to the nearest dollar.)

b. 6/30/25 interest Expense $10,500

b. Prepare all journal entries for Hetty Grey for the first 2 fiscal years ended June 30, 2025, and June 30, 2026. (Round all calculations to the nearest dollar.)

c. Show the balance sheet presentation of the note payable as of June 30, 2026. (*Hint:* Be sure to distinguish between the current and long-term portions of the note.)

Continuing Case

leungchopan/Shutterstock.com

Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 through 9.)

CC10 Recall that Cookie Creations borrowed $2,000 from Natalie's grandmother. Natalie now is thinking of repaying all amounts outstanding on that loan. She needs to know the amounts of interest payable and interest expense to make the correct journal entries for repayment of the loan.

Go to Wiley Course Resources for complete case details and instructions.

Comprehensive Accounting Cycle Review

ACR10 Aimes Corporation's balance sheet at December 31, 2024, is presented below.

Aimes Corporation
Balance Sheet
December 31, 2024

Cash	$ 30,000	Accounts payable	$ 13,750
Inventory	30,750	Interest payable	2,500
Prepaid insurance	5,600	Bonds payable	50,000
Equipment	38,000	Common stock	25,000
	$104,350	Retained earnings	13,100
			$104,350

During 2025, the following transactions occurred. Aimes uses a perpetual inventory system.

1. Aimes paid $2,500 interest on the bonds on January 1, 2025.
2. Aimes purchased $241,100 of inventory on account.
3. Aimes sold for $480,000 cash inventory which cost $265,000. Aimes also collected $28,800 sales taxes.
4. Aimes paid $230,000 on accounts payable.
5. Aimes paid $2,500 interest on the bonds on July 1, 2025.
6. The prepaid insurance ($5,600) expired on July 31.
7. On August 1, Aimes paid $10,200 for insurance coverage from August 1, 2025, through July 31, 2026.
8. Aimes paid $17,000 sales taxes to the state.
9. Paid other operating expenses, $91,000.
10. Redeemed the bonds on December 31, 2025, by paying $48,000 plus $2,500 interest.
11. Issued $90,000 of 8%, 10-year bonds on December 31, 2025, at 103. The bonds pay interest every June 30 and December 31.

Adjustment data:

1. Recorded the insurance expired from item 7.
2. The equipment was acquired on December 31, 2024, and will be depreciated on a straight-line basis over 5 years with a $3,000 salvage 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. Prepare an adjusted trial balance at December 31, 2025.
c. Prepare an income statement and a retained earnings statement for the year ending December 31, 2025, and a classified balance sheet as of December 31, 2025.

b. Totals $667,695
c. N.I. $72,905

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT10.1 Refer to the financial statements of Apple Inc. in Appendix A.

Instructions

Answer the following questions.

a. What were Apple's total current liabilities at September 26, 2020? What was the increase/decrease in Apple's total current liabilities from the prior year?
b. How much were the accounts payable at September 26, 2020?
c. What were the components of total current liabilities on September 26, 2020 (other than accounts

Comparative Analysis Problem: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT10.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements of **Under Armour, Inc.** are presented in Appendix C.

Instructions

a. Based on the information contained in these financial statements, compute the current ratio for 2020 for each company. What conclusions concerning the companies' liquidity can be drawn from these ratios?

b. Based on the information contained in these financial statements, compute the following 2020 ratios for each company.

1. Debt to assets ratio.
2. Times interest earned.

What conclusions about the companies' long-run solvency can be drawn from the ratios?

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT10.3 The financial statements of **Amazon.com, Inc.** are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

a. Based on the information contained in these financial statements, compute the current ratio for the most recent fiscal year provided for each company. What conclusions concerning the companies' liquidity can be drawn from these ratios?

b. Based on the information contained in these financial statements, compute the following ratios for each company's most recent fiscal year.

1. Debt to assets ratio.
2. Times interest earned.

What conclusions about the companies' long-run solvency can be drawn from the ratios?

Interpreting Financial Statements

CT10.4 **Hechinger Co.** and **Home Depot** are two home improvement retailers. Compared to Hechinger, founded in the early 1900s, Home Depot is a relative newcomer. But in recent years, while Home Depot was reporting large increases in net income, Hechinger was reporting increasingly large net losses. Finally, largely due to competition from Home Depot, Hechinger was forced to file for bankruptcy. Here are financial data for both companies (in millions).

	Hechinger	Home Depot
Cash	$ 21	$ 62
Receivables	0	469
Total current assets	1,153	4,933
Beginning total assets	1,668	11,229
Ending total assets	1,577	13,465
Beginning current liabilities	935	2,456
Ending current liabilities	938	2,857
Beginning total liabilities	1,392	4,015
Ending total liabilities	1,339	4,716
Interest expense	67	37
Income tax expense	3	1,040
Cash provided (used) by operations	(257)	1,917
Net income	(93)	1,614
Net sales	3,444	30,219

Instructions

Using the data provided, perform the following analysis.

a. Calculate working capital and the current ratio for each company. Discuss their relative liquidity.

b. Calculate the debt to assets ratio and times interest earned for each company. Discuss their relative solvency.

c. Calculate the return on assets and profit margin for each company. Comment on their relative profitability.

CT10.5 For many years, Borders Group and Barnes and Noble were the dominant booksellers in the United States. They experienced rapid growth, and in the process they forced many small, independent bookstores out of business. Recently, Borders filed for bankruptcy. It was the victim of its inability to change with the times. It did not develop a viable business plan for dealing with digital books and online sales. Below is financial information (in millions) for the two companies, taken from the annual reports of each company one year before Borders filed for bankruptcy.

	Borders	Barnes and Noble
Current assets	$ 978.7	$1,719.5
Total assets	1,415.6	3,705.7
Current liabilities	918.1	1,724.4
Total liabilities	1,257.3	2,802.3
Net income/(loss)	(109.4)	36.7
Interest expense	24.1	28.2
Tax expense/(income tax benefit)	(31.3)	8.4

Instructions

a. Compute the current ratio for each company.

b. Compute the debt to assets ratio and times interest earned for each company. (*Hint:* A tax benefit means that rather than pay taxes, the company was due a refund because of its losses. For ratio purposes, a tax benefit is treated the opposite of tax expense.)

c. Discuss the relative liquidity and solvency of each company. Did the bankruptcy of Borders seem likely?

Real-World Focus

CT10.6 Bond or debt securities pay a stated rate of interest. This rate of interest is dependent on the risk associated with the investment. Also, bond prices change when the risks associated with those bonds change. Standard & Poor's provides ratings for companies that issue debt securities.

Instructions

Go to the Standard & Poor's website and then answer the following questions.

a. Explain the meaning of an "A" rating. Explain the meaning of a "C" rating.

b. What types of things can cause a change in a company's credit rating?

c. Explain the relationship between a company's credit rating and the merit of an investment in that company's bonds.

CT10.7 *CFO.com* contains an article by Marie Leone and Tim Reason entitled "Dirty Secrets." You can access this article by doing an online search on "CFO.com Dirty Secrets."

Instructions

Read the article and then answer the following questions.

a. Summarize the accounting for contingent items that is provided in this text.

b. The authors of the article suggest that many companies are basically accounting for contingencies on a cash basis. Is this consistent with the approach you described in part (a)?

c. The article suggests that many companies report one set of liability estimates to insurers and a different (lower) set of numbers in their financial statements. How is this possible, and what are the implications for investors?

d. How do international accounting standards differ in terms of the amounts reported in these types of situations?

Decision-Making Across the Organization

CT10.8 On January 1, 2023, Picard Corporation issued $3,000,000, 5-year, 8% bonds at 97. The bonds pay interest annually on January 1. By January 1, 2025, the market rate of interest for bonds of risk similar to those of Picard Corporation had risen. As a result, the market price of these bonds was $2,500,000 on January 1, 2025—below their carrying value of $2,946,000.

Geoff Marquis, president of the company, suggests repurchasing all of these bonds in the open market at the $2,500,000 price. But to do so the company will have to issue $2,500,000 (face value) of new 10-year, 12% 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. Prepare the journal entry to redeem the 5-year bonds on January 1, 2025. Prepare the journal entry to issue the new 10-year bonds.

b. Prepare a short memo to the president in response to his request for advice. List the economic factors that you believe should be considered for his repurchase proposal.

Communication Activity

CT10.9 Jerry Hogan, president of Norwest, Inc., is considering the issuance of bonds to finance an expansion of his business. He has asked you to do the following: (1) discuss the advantages of bonds over common stock financing, (2) indicate the types of bonds he might issue, and (3) explain the issuing procedures used in bond transactions.

Instructions

Write a memorandum to the president, answering his request.

Ethics Cases

CT10.10 *Inc.* magazine published an article by Jeffrey L. Seglin entitled "Would You Lie to Save Your Company?" It recounts the following true situation:

"A Chief Executive Officer (CEO) of a $20-million company that repairs aircraft engines received notice from a number of its customers that engines that it had recently repaired had failed, and that the company's parts were to blame. The CEO had not yet determined whether his company's parts were, in fact, the cause of the problem. The Federal Aviation Administration (FAA) had been notified and was investigating the matter.

What complicated the situation was that the company was in the midst of its year-end audit. As part of the audit, the CEO was required to sign a letter saying that he was not aware of any significant outstanding circumstances that could negatively impact the company—in accounting terms, of any contingencies. The auditor was not aware of the customer complaints or the FAA investigation.

The company relied heavily on short-term loans from eight banks. The CEO feared that if these lenders learned of the situation, they would pull their loans. The loss of these loans would force the company into bankruptcy, leaving hundreds of people without jobs. Prior to this problem, the company had a stellar performance record."

Instructions

Answer the following questions.

a. Who are the stakeholders in this situation?

b. What are the CEO's possible courses of action? What are the potential results of each course of action? (Take into account the two alternative outcomes: the FAA determines the company (1) was not at fault, and (2) was at fault.)

c. What would you do, and why?

d. Suppose the CEO decides to conceal the situation, and that during the next year the company is found to be at fault and is forced into bankruptcy. What losses are incurred by the stakeholders in this situation? Do you think the CEO should suffer legal consequences if he decides to conceal the situation?

CT10.11 At one time, the financial press reported that **Citigroup** was being investigated for allegations that it had arranged transactions for **Enron** so as to intentionally misrepresent the nature of the transactions and consequently achieve favorable balance sheet treatment. Essentially, the deals were structured to make it appear that money was coming into Enron from trading activities, rather than from loans.

The New York Times article by Richard Oppel and Kurt Eichenwald entitled "Citigroup Said to Mold Deal to Help Enron Skirt Rules" suggested that Citigroup intentionally kept certain parts of a secret oral agreement out of the written record for fear that it would change the accounting treatment. Critics contend that this had the effect of significantly understating Enron's liabilities, thus misleading investors and creditors. Citigroup maintains that, as a lender, it has no obligation to ensure that its clients account for transactions properly. The proper accounting, Citigroup insists, is the responsibility of the client and its auditor.

Instructions

Answer the following questions.

a. Who are the stakeholders in this situation?

b. Do you think that a lender, in general, in arranging so-called "structured financing" has a responsibility to ensure that its clients account for the financing in an appropriate fashion, or is this the responsibility of the client and its auditor?

c. What effect did the fact that the written record did not disclose all characteristics of the transaction probably have on the auditor's ability to evaluate the accounting treatment of this transaction?

d. *The New York Times* article noted that in one presentation made to sell this kind of deal to Enron and other energy companies, Citigroup stated that using such an arrangement "eliminates the need for capital markets disclosure, keeping structure mechanics private." Why might a company wish to conceal the terms of a financing arrangement from the capital markets (investors and creditors)? Is this appropriate? Do you think it is ethical for a lender to market deals in this way?

e. Why was this deal more potentially harmful to shareholders than other off-balance-sheet transactions (for example, lease financing)?

All About You

CT10.12 For most U.S. families, medical costs are substantial and rising. But will medical costs be your most substantial expense over your lifetime? Not likely. Will it be housing or food? Again, not likely. The answer: Taxes are likely to be your biggest expense. On average, Americans work 74 days each year to afford their federal taxes. Companies, too, have large tax burdens. They look very hard at tax issues in deciding where to build their plants and where to locate their administrative headquarters.

Instructions

a. Determine what your state income taxes are if your taxable income is $60,000 and you file as a single taxpayer in the state in which you live.

b. Assume that you own a home worth $300,000 in your community and the tax rate is 2.1%. Compute the property taxes you would pay.

c. Assume that the total gasoline bill for your automobile is $1,200 a year (300 gallons at $4 per gallon). What are the amounts of state and federal taxes that you pay on the $1,200?

d. Assume that your purchases for the year total $9,000. Of this amount, $5,000 was for food and prescription drugs. What is the amount of sales tax you would pay on these purchases? (*Note:* Many states do not have a sales tax for food or prescription drug purchases. Does yours?)

e. Determine what your FICA taxes are if your income is $60,000.

f. Determine what your federal income taxes are if your taxable income is $60,000 and you file as a single taxpayer.

g. Determine your total taxes paid based on the above calculations, and determine the percentage of income that you would pay in taxes based on the following formula: Total taxes paid ÷ Total income.

FASB Codification Activity

CT10.13 If your school has a subscription to the FASB Codification, log in and prepare responses to the following.

a. What is the definition of current liabilities?

b. What is the definition of long-term obligations?

c. What guidance does the Codification provide for the disclosure of long-term obligations?

Considering People, Planet, and Profit

CT10.14 **Microfinance** is the process of lending small amounts of money to low-income or unemployed people who would otherwise not have access to banking services. It enables many of these people to operate small businesses. Recent challenges for microfinance are discussed in the *Economist* article, "For Microfinance Lenders, Covid-19 Is an Existential Threat."

Instructions

Read the article and then answer the following questions. (The article can be accessed by doing an online search that includes the title of the article and the magazine.)

a. Under normal circumstances, what is the default rate on small loans at Dvara Trust? What percent of borrowers were unable to pay their loans during the pandemic? Why were many borrowers unable to pay their loans even if they had money?

b. According to the World Bank, what percentage of the total number of global businesses do "MSMEs" represent? What percentage of employment does this represent? How many customers do microfinance institutions (MFIs) serve?

c. People who lack access to banking services are referred to as unbanked. What was the global change in the number of unbanked people between 2011 and 2017?

d. What is one step that could significantly reduce the default rate of loans (and thus sustain the businesses as well as lenders) during a pandemic?

Answers to Insight and Accounting Across the Organization Questions

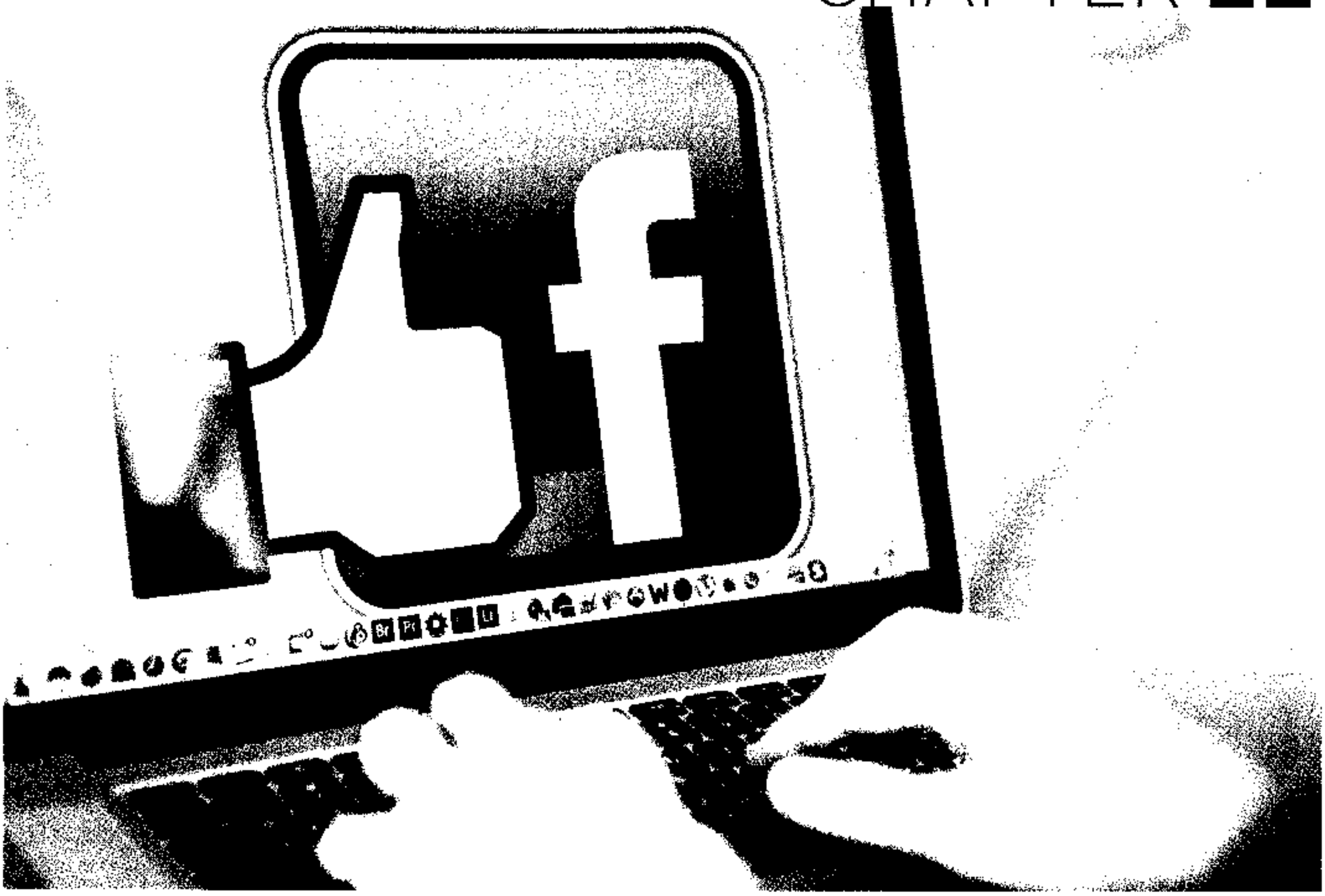
"Covenant-Lite" Debt Q: How do debt covenants provide protection for creditors? A: Debt covenants specify particular financial measures that a company must maintain during the life of the loan. If the company fails to meet the financial measures, the creditor can demand immediate repayment of its loan before the company's financial troubles are extreme.

Driving Up Debt Q: Ford recently issued unsecured bonds. What is the difference between a secured and unsecured bond? A: Secured bonds have specific assets of the issuer pledged as collateral. In contrast, unsecured bonds are issued against the general credit of the borrower.

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 it will affect a company's sustainable profitability, investors will make better financial decisions.

Debt Masking Q: What implications does debt masking have for an investor that is using the debt to assets ratio to evaluate a company's solvency? A: Since the debt to assets ratio is calculated using financial statement numbers from the end of the accounting period, debt masking could result in investors making incorrect assumptions about a company's solvency. By engaging in debt masking, a company is misleading investors because what it is disclosing at the end of the period does not reflect what its normal financial position was during most of the accounting period.

CHAPTER 11



S3studio/Getty Images

Reporting and Analyzing Stockholders' Equity

Chapter Preview

Corporations like Facebook and Google have substantial resources at their disposal. In fact, the corporation is the dominant form of business organization in the United States in terms of sales, earnings, and number of employees. All of the 500 largest U.S. companies are corporations. In this chapter, we look at the essential features of a corporation and explain the accounting for a corporation's capital stock transactions.

Feature Story

Oh Well, I Guess I'll Get Rich

Suppose you started one of the fastest-growing companies in the history of business. Now suppose that by "going public"—issuing stock of your company to outside investors who are foaming at the mouth for the chance to buy its shares—you would instantly become one of the richest people in the world. Would you hesitate?

That is exactly what Mark Zuckerberg, the founder of Facebook, did. Many people who start high-tech companies go public as soon as possible to cash in on their riches. But Zuckerberg was reluctant to do so. To understand why, you need to understand the advantages and disadvantages of being a public company.

The main motivation for issuing shares to the public is to raise money so you can grow your business. However, unlike a manufacturer or even an online retailer, Facebook doesn't need major physical resources, it doesn't have inventory, and it doesn't really need much money for marketing. But why not go public anyway, so the company would have some extra cash on hand—and so you personally get rich? As head of a closely held, nonpublic company, Zuckerberg was subject to far fewer regulations than a public company. Prior to going public, Zuckerberg could basically run the company however he wanted to.

For example, early in 2012, Facebook shocked the investment community by purchasing the photo-sharing service Instagram. The purchase was startling both for its speed (over a weekend) and price ($1 billion). Zuckerberg basically didn't seek anyone's approval. He thought it was a good idea, so he just did it. The structured decision-making process of a public company would make it very difficult for a public company to move that fast.

Speed is useful, but it is likely that Facebook will make even bigger acquisitions in the future. To survive among the likes of Microsoft, Google, and Apple, it needs lots of cash. To raise that amount of money, the company really needed to go public. So in 2012, Mark Zuckerberg reluctantly made Facebook a public company, thus becoming one of the richest people in the world.

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Discuss the major characteristics of a corporation.	• Characteristics of a corporation • Forming a corporation • Stockholder rights • Stock issue considerations • Corporate capital	**DO IT! 1a** Corporate Organization **1b** Corporate Capital
LO 2 Explain how to account for the issuance of common, preferred, and treasury stock.	• Accounting for common stock • Accounting for preferred stock • Accounting for treasury stock	**DO IT! 2a** Issuance of Stock **2b** Treasury Stock
LO 3 Explain how to account for cash dividends, stock dividends, and stock splits.	• Cash dividends • Dividend preferences • Stock dividends • Stock splits	**DO IT! 3a** Dividends on Preferred and Common Stock **3b** Stock Dividends and Stock Splits
LO 4 Discuss how stockholders' equity is reported and analyzed.	• Retained earnings • Retained earnings restrictions • Balance sheet presentation of stockholders' equity • Analysis of stockholders' equity • Debt versus equity decision	**DO IT! 4a** Stockholders' Equity Section **4b** Analyzing Stockholders' Equity

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.
Visit Wiley Course Resources for additional tutorials and practice opportunities.

11.1 Corporate Form of Organization

LEARNING OBJECTIVE 1

Discuss the major characteristics of a corporation.

In 1819, Chief Justice John Marshall 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 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 state in which it is incorporated (see **Decision Tools**).

- 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.

Decision Tools

Understanding the costs and benefits of different types of business organizations helps managers determine if incorporating is in the best interest of the company.

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 **McDonald's**, **Nike**, **PepsiCo**, and **Google**.
- Not-for-profit corporations are organized for charitable, medical, or educational purposes. Examples are the **Salvation Army** and the **American Cancer Society**.

Classification by ownership differentiates publicly held and privately held corporations. A **publicly held corporation** may have thousands of stockholders. Its stock is regularly traded on a national securities exchange such as the New York Stock Exchange or NASDAQ. Examples are **IBM**, **Caterpillar**, and **Apple**.

In contrast, a **privately held corporation** usually has only a few stockholders, and does not offer its stock for sale to the general public (see **Alternative Terminology**). Privately held companies are generally much smaller than publicly held companies, although some notable exceptions exist. **Cargill Inc.**, a private corporation that trades in grain and other commodities, is one of the largest companies in the United States.

ALTERNATIVE TERMINOLOGY

Privately held corporations are also referred to as *closely held corporations.*

Characteristics of a Corporation

In 1964, when **Nike**'s founders Phil Knight and Bill Bowerman were just getting started in the running shoe business, they formed their original organization as a partnership. In 1968, they reorganized the company as a corporation. A number of characteristics distinguish corporations from proprietorships and partnerships. We explain the most important of these characteristics below.

Legal existence separate from owners

Separate Legal Existence

As an entity separate and distinct from its owners, the corporation acts under its own name rather than in the name of its stockholders. A corporation like **Facebook** may:

- Buy, own, and sell property.
- Borrow money.
- Enter into legally binding contracts in its own name, as well as sue and be sued.

Corporations also pay their own taxes.

In a partnership, the acts of the owners (partners) bind the partnership. In contrast, the acts of its owners (stockholders) do not bind the corporation unless such owners are **agents** of the corporation. For example, if you owned shares of Nike stock, 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 stockholders

Limited Liability of Stockholders

Since a corporation is a separate legal entity, creditors have recourse only to corporate assets to satisfy their claims. The liability of stockholders is normally limited to their investment in the corporation. Creditors have no legal claim on the personal assets of the stockholders unless fraud has occurred. Even in the event of bankruptcy, stockholders' losses are generally limited to their capital investment in the corporation.

Transferable Ownership Rights

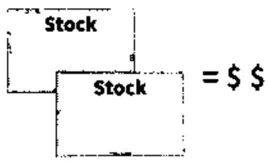
Transferable ownership rights

Shares of capital stock represent ownership in a corporation. These shares are transferable units. Stockholders may dispose of part or all of their interest in a corporation simply by selling their stock. The transfer of an ownership interest in a partnership requires the consent of each owner. In contrast, the transfer of stock is entirely at the discretion of the stockholder. It does not require the approval of either the corporation or other stockholders.

- The transfer of ownership rights between stockholders normally has no effect on the daily operating activities of the corporation. Nor does it affect the corporation's assets, liabilities, and total ownership 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 capital stock.

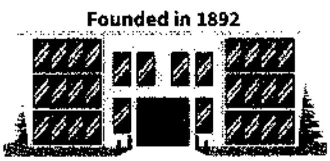
Ability to Acquire Capital



Ability to acquire capital

It is relatively easy for a corporation to obtain capital through the issuance of stock. Buying stock in a corporation is often attractive to an investor because a stockholder has limited liability and shares of stock are readily transferable. Also, numerous individuals can become stockholders by investing relatively small amounts of money.

Continuous Life



Continuous life

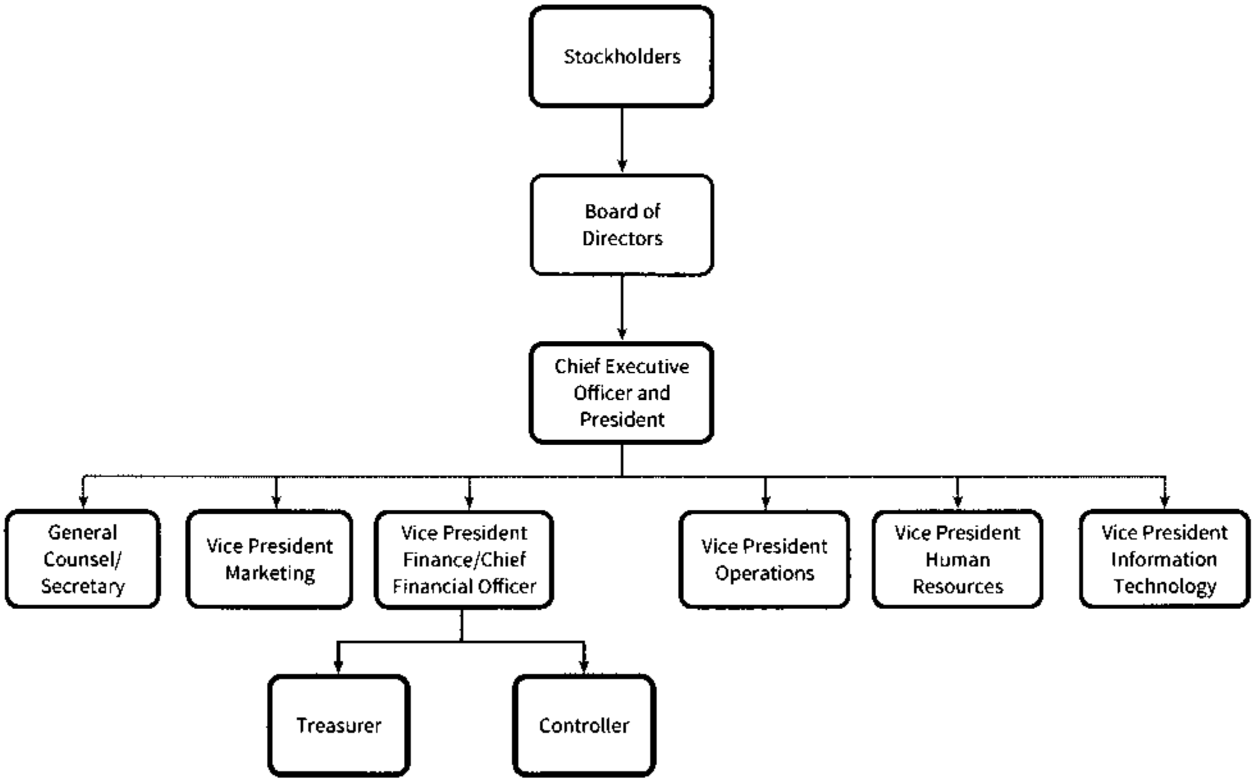
The life of a corporation is stated in its charter. The life may be perpetual, or it may be limited to a specific number of years. If it is limited, the company can extend the life through renewal of the charter. Since a corporation is a separate legal entity, its continuance as a going concern is not affected by the withdrawal, death, or incapacity of a stockholder, employee, or officer. As a result, a successful company can have a continuous and perpetual life.

Corporation Management

Stockholders legally own the corporation. However, they monitor the corporation indirectly through a board of directors they elect. Mark Zuckerberg is the chairman of **Facebook's** board of directors. 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. As a result of the Sarbanes-Oxley Act, the board is required to monitor management's actions more closely. Many feel that the failures of **Enron**, **WorldCom**, and **MF Global** could have been avoided by more diligent boards.

Illustration 11.1 presents a typical organization chart showing the delegation of responsibility. The chief executive officer (CEO) has overall responsibility for managing the business.

ILLUSTRATION 11.1 **A typical corporate organization chart**



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. Ensuring an adequate system of internal control.
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 (see **Ethics Note**). On the other hand, the separation of ownership and management often reduces an owner's ability to actively manage the company.

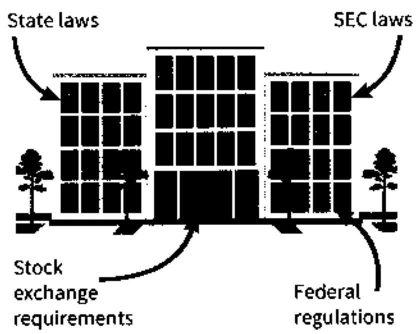
ETHICS NOTE

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 numerous state and federal regulations.

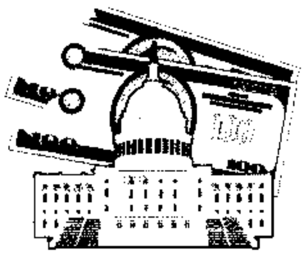
- State laws usually prescribe the requirements for issuing stock, the distributions of earnings permitted to stockholders, and the acceptable methods for buying back and retiring stock.
- Federal securities laws govern the sale of capital stock to the general public.
- Most publicly held corporations are required to make extensive disclosure of their financial affairs to the Securities and Exchange Commission (SEC) through quarterly and annual reports (Forms 10Q and 10K).



Government regulations

When a corporation lists its stock 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



Additional taxes

Owners of proprietorships and partnerships report their share of the company's earnings on their personal income tax returns. The individual owner then pays taxes on this amount.

- Corporations, must pay federal and state income taxes as a **separate legal entity**. These taxes can be substantial.
- Stockholders must pay taxes on cash dividends (pro rata distributions of net income).
- 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 stockholders	Government regulations
Transferable ownership rights	Additional taxes
Ability to acquire capital	
Continuous life	
Corporation management—professional managers	

Other Forms of Business Organization

A variety of "hybrid" organizational forms—forms that combine different attributes of partnerships and corporations—now exist. For example, one type of corporate form, called an **S corporation**, allows for legal treatment as a corporation but tax treatment as a partnership—that is, no double taxation. Because of changes to the S corporation's rules, more small- and medium-sized businesses now may choose S corporation treatment. One of the primary criteria is that the company cannot have more than 100 shareholders. Other forms of organization include limited partnerships, limited liability partnerships (LLPs), and limited liability companies (LLCs).

Forming a Corporation

A corporation is formed by grant of a state **charter** (see **Alternative Terminology**).

> **ALTERNATIVE TERMINOLOGY**
>
> **The charter is often referred to as the *articles of incorporation*.**

- The charter is a document that describes the name and purpose of the corporation, the types and number of shares of stock 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 states in which a corporation has operating divisions, it is incorporated in only one state.

It is to the company's advantage to incorporate in a state whose laws are favorable to the corporate form of business organization. For example, although **Facebook** has its headquarters in California, it is incorporated in Delaware. In fact, many corporations incorporate in states with rules that favor existing management. More than 50% of the 500 largest U.S. corporations are incorporated in Delaware.

Upon receipt of its charter from the state of incorporation, the corporation establishes **by-laws**. The by-laws establish the internal rules and procedures for conducting the affairs of the corporation. Corporations engaged in interstate commerce must also obtain a **license** from each state in which they do business. The license subjects the corporation's operating activities to the general corporation laws of the state.

Costs incurred in the formation of a corporation are called **organization costs**.

- These costs include legal and state 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.

Stockholder Rights

When chartered, the corporation may begin selling shares of stock. When a corporation has only one class of stock, it is **common stock**. Each share of common stock gives the stockholder the ownership rights pictured in **Illustration 11.3**. The articles of incorporation or the by-laws state the ownership rights of a share of stock.

Common stockholders have the right to:

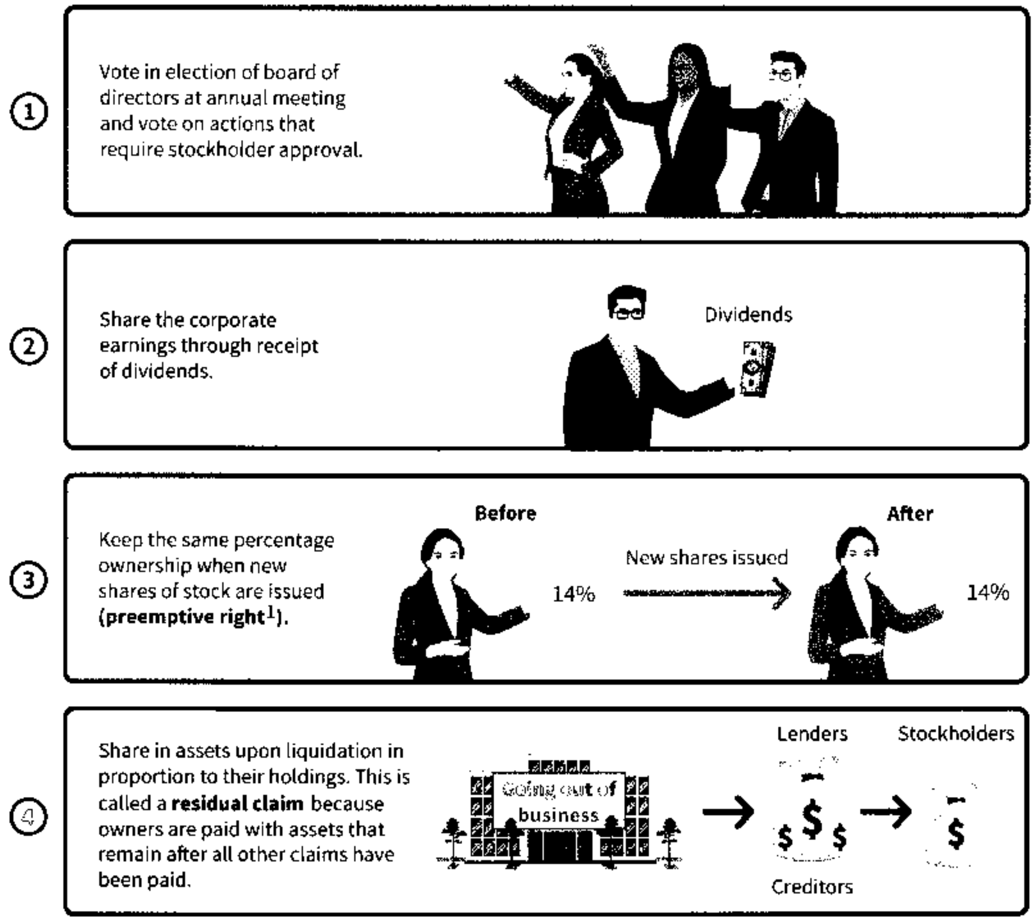


ILLUSTRATION 11.3
Ownership rights of common stockholders

Proof of stock ownership is evidenced by a **stock certificate**.

- The face of the certificate shows the name of the corporation, the stockholder's name, the class and special features of the stock, the number of shares owned, and the signatures of authorized corporate officials.
- Stock certificates may be issued for any quantity of shares.

Proof of share ownership is now commonly maintained through electronic records as opposed to paper certification.

[1]Most large, publicly traded companies have eliminated the preemptive right or only have it for certain shareholders. It is more common in smaller, privately held corporations.

People, Planet, and Profit Insight

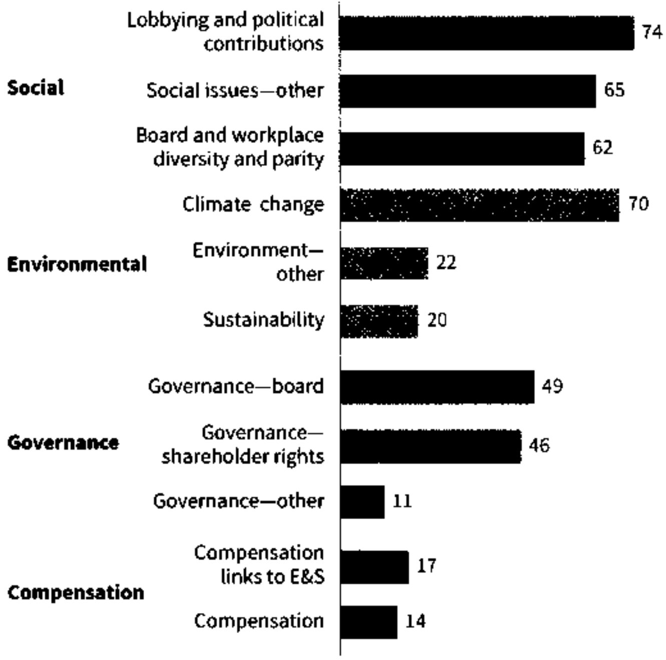
Rawpixel/Getty Images

The Impact of Corporate Social Responsibility

A survey conducted by **Institutional Shareholder Services**, a proxy advisory firm, found that 83% of investors now believe environmental and social factors can significantly impact 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 chart shows that the number of corporate social responsibility (CSR) related shareholder proposals now exceeds proposals related to governance and compensation.

Corporate Social Responsibility Proposals



Source: ISS Analytics.

Sources: Investor Responsibility Research Center, Ernst & Young, *Seven Questions CEOs and Boards Should Ask About: "Triple Bottom Line" Reporting*; and Subodh Mishra, "An Overview of U.S. Shareholder Proposal Filings," *Harvard Law School Forum on Corporate Governance* (February 28, 2018).

Why are CSR-related shareholder proposals increasing? (Answer is available at the end of the chapter.)

Stock Issue Considerations

Although **Facebook** incorporated in 2004, it did not sell stock to the public until 2012. At that time, Facebook evidently decided it would benefit from the infusion of cash that a public sale would bring. When a corporation decides to issue stock, it must resolve a number of basic questions: How many shares should it authorize for sale? How should it issue the stock? What value should the corporation assign to the stock? We address these questions in the following sections.

Authorized Stock

The charter indicates the maximum number of shares that a corporation is **authorized** to sell.

- The total amount of authorized stock at the time of incorporation normally anticipates both initial and subsequent capital needs.
- The number of shares authorized generally exceeds the number initially sold.

If it sells all authorized stock, a corporation must obtain consent of the state to amend its charter before it can issue additional shares.

The authorization of capital stock does not result in a formal accounting entry. The reason is that the event has no immediate effect on either corporate assets or stockholders' equity.

- The number of authorized shares is often reported in the stockholders' equity section of the balance sheet.
- 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 Advanced Micro Devices was authorized to sell 100,000 shares of common stock and issued 80,000 shares, 20,000 shares would remain unissued.

> **HELPFUL HINT**
> **Examples of investment banking firms include** Goldman Sachs, JPMorgan Chase, and Morgan Stanley.

Issuance of Stock

A corporation can issue common stock **directly** to investors. Alternatively, it can issue the stock **indirectly** through an investment banking firm that specializes in bringing securities to the attention of prospective investors (see **Helpful Hint**). Direct issue is typical in closely held companies. Indirect issue is customary for a publicly held corporation.

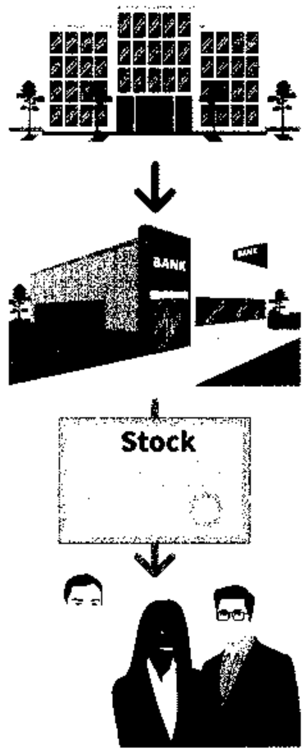
In an indirect issue, the investment banking firm may agree to **underwrite** the entire stock issue. In this arrangement, the investment banker buys the stock from the corporation at a stipulated price and resells the shares to investors. The corporation thus avoids any risk of being unable to sell 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 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 stock offering.

How does a corporation set the price for a new issue of stock? Among the factors to be considered are the following:

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.
5. The current state of the securities market.

The calculation can be complex and is properly the subject of a finance course.



Indirect issuance

Anatomy of a Fraud

The president, chief operating officer, and chief financial officer of SafeNet, a software encryption company, were each awarded employee stock options by the company's board of directors as part of their compensation package. Stock options enable an employee to buy a company's stock sometime in the future at the price that existed when the stock option was awarded.

For example, suppose that you received stock options today, when the stock price of your company was $30. Three years later, if the stock price rose to $100, you could "exercise" your options and buy the stock for $30 per share, thereby making $70 per share.

After being awarded their stock options, the three employees changed the award dates in the company's records to dates in the past, when the company's stock was trading at historical lows. For instance, using the previous example, they would choose a past date when the stock was 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.

Par and No-Par Value Stocks

Par value stock is capital stock 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 stockholders. Thus, in the past, most states required the corporation to sell its shares at par or above.

However, par value was often immaterial relative to the actual value of the company's stock—even at the time of issuance. Thus, its usefulness as a protective device to creditors was questionable.

[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 stock. Under a best-efforts arrangement, the banking firm is paid a fee or commission for its services.

- For example, **Facebook**'s par value is $0.000006 per share, yet its market price recently was $200.
- Thus, par has no relationship with market price (see **Helpful Hint**).

HELPFUL HINT

Market price is the current price at which a share of stock is bought and sold.

In the vast majority of cases, par value is an immaterial amount. As a consequence, today many states do not require a par value. Instead, they use other means to protect creditors.

No-par value stock is capital stock to which the charter has not assigned a value. No-par value stock is fairly common today. For example, **Nike** and **Procter & Gamble** both have no-par stock. In many states, the board of directors assigns a **stated value** to no-par shares.

ACTION PLAN

- **Review the characteristics of a corporation to understand which are advantages and which are disadvantages.**
- **Understand that corporations raise capital through the issuance of stock, which can be par or no-par.**

DO IT! 1a 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, stockholders of a corporation have unlimited liability.

______ 2. It is relatively easy for a corporation to obtain capital through the issuance of stock.

______ 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 capital stock includes a credit to the appropriate capital stock account.

______ 5. All states require a par value per share for capital stock.

Solution

1. False. The liability of stockholders 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 capital stock does not result in a formal accounting entry. **5.** False. Many states do not require a par value.

Related exercise material: BE11.1, DO IT! 11.1a, E11.1, and E11.2.

Corporate Capital

Owners' equity for a corporation is identified by various names: **stockholders' equity**, **shareholders' equity**, or **corporate capital**. The stockholders' equity section of a corporation's balance sheet consists of two parts:

1. Paid-in (contributed) capital.
2. Retained earnings (earned capital).

The distinction between **paid-in 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 all states. However, in many states they cannot declare dividends out of paid-in capital. Management, stockholders, and others often look to retained earnings for the continued existence and growth of the corporation.

Paid-In Capital

Paid-in capital is the total amount of cash and other assets paid into the corporation by stockholders in exchange for capital stock. As noted earlier, when a corporation has only one class of stock, it is **common stock**.

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 $130,000, the closing entry is:

Income Summary	130,000	
Retained Earnings		130,000
(To close Income Summary and transfer net income to Retained Earnings)		

A	=	L	+	SE
				−130,000 Inc
				+130,000 RE

Cash Flows
no effect

If Delta Robotics has a balance of $800,000 in common stock at the end of its first year, its stockholders' equity section is as shown in Illustration 11.4.

ILLUSTRATION 11.4
Stockholders' equity section

Delta Robotics
Balance Sheet (partial)

Stockholders' equity		
Paid-in capital		
Common stock	$800,000	
Retained earnings	130,000	
Total stockholders' equity		$930,000

Illustration 11.5 compares the equity accounts reported on a balance sheet for a proprietorship and a corporation.

ILLUSTRATION 11.5
Comparison of owners' equity accounts


Proprietorship | **Corporation**

Owner's Capital	
	Normal bal.

Common Stock	
	Normal bal.

Retained Earnings	
	Normal bal.

DO IT! 1b Corporate Capital

At the end of its first year of operation, Doral Corporation has $750,000 of common stock and net income of $122,000. Prepare (a) the closing entry for net income and (b) the stockholders' equity section at year-end.

Solution

a. Income Summary	122,000	
Retained Earnings		122,000
(To close Income Summary and transfer net income to Retained Earnings)		

b. Stockholders' equity		
Paid-in capital		
Common stock	$750,000	
Retained earnings	122,000	
Total stockholders' equity		$872,000

Related exercise material: DO IT! 11.1b.

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 stockholders' equity section, show (1) paid-in capital and (2) retained earnings.**

11.2 Accounting for Common, Preferred, and Treasury Stock

LEARNING OBJECTIVE 2

Explain how to account for the issuance of common, preferred, and treasury stock.

HELPFUL HINT

Stock is sometimes issued in exchange for services (payment to attorneys or consultants, for example) or for noncash assets (land or buildings). The value recorded for the shares issued is determined by either the market price of the shares or the value of the good or service received, depending upon which amount the company can more readily determine.

Accounting for Common Stock

Let's now look at how to account for new issues of common stock (see **Helpful Hint**). The primary objectives in accounting for the issuance of common stock are to:

1. Identify the specific sources of paid-in capital.
2. Maintain the distinction between paid-in capital and retained earnings.

As shown below, **the issuance of common stock affects only paid-in capital accounts**.

Issuing Par value Common Stock for Cash

As discussed earlier, par value does not indicate a stock's market price. The cash proceeds from issuing par value stock may be equal to, greater than, or less than par value. When a company records the issuance of common stock for cash, it credits the par value of the shares to Common Stock and records in a separate paid-in capital account the portion of the proceeds that is above or below par value.

To illustrate, assume that Hydro-Slide, Inc. issues 1,000 shares of $1 par value common stock at par for cash. The entry to record this transaction is as follows.

A	=	L	+	SE
+1,000				
				+1,000 CS

Cash Flows
+1,000

Cash	1,000	
Common Stock		1,000
(To record issuance of 1,000 shares of $1 par common stock at par)		

Now assume Hydro-Slide, Inc. issues an additional 1,000 shares of the $1 par value common stock for cash at $5 per share. The amount received above the par value, in this case $4 ($5 − $1), would be credited to Paid-in Capital in Excess of Par. The entry is as follows.

A	=	L	+	SE
+5,000				
				+1,000 CS
				+4,000 CS

Cash Flows
+5,000

Cash	5,000	
Common Stock (1,000 × $1)		1,000
Paid-in Capital in Excess of Par		4,000
(To record issuance of 1,000 shares of common stock in excess of par)		

The total paid-in capital from these two transactions is $6,000. If Hydro-Slide, Inc. has retained earnings of $27,000, the stockholders' equity section of the balance sheet is as shown in **Illustration 11.6**.

ILLUSTRATION 11.6
Stockholders' equity—paid-in capital in excess of par

Hydro-Slide, Inc.
Balance Sheet (partial)

Stockholders' equity	
Paid-in capital	
Common stock	$ 2,000
Paid-in capital in excess of par	4,000
Total paid-in capital	6,000
Retained earnings	27,000
Total stockholders' equity	$33,000

Some companies issue no-par stock with a stated value. For accounting purposes, companies treat the stated value in the same way as the par value. For example, if in our Hydro-Slide example the stock was no-par stock with a stated value of $1, the entries would be the same as those presented for the par stock except the term "Par Value" would be replaced with "Stated Value." If a company issues no-par stock that does not have a stated value, then it credits to the Common Stock account the full amount received. In such a case, there is no need for the Paid-in Capital in Excess of Stated Value account.

Accounting for Preferred Stock

To appeal to a larger segment of potential investors, a corporation may issue an additional class of stock, called preferred stock. **Preferred stock** has contractual provisions that give it preference or priority over common stock in certain areas. Typically, preferred stockholders have a priority in relation to (1) dividends and (2) assets in the event of liquidation. However, they sometimes do not have voting rights. **Facebook** had 543 million preferred shares held by investors at the end of 2011, prior to going public. Approximately 6% of U.S. companies have one or more classes of preferred stock.

Like common stock, companies issue preferred stock for cash or for noncash consideration.

- The entries for preferred stock transactions are similar to the entries for common stock.
- When a corporation has more than one class of stock, each paid-in capital account title should identify the stock to which it relates (e.g., Preferred Stock, Common Stock, Paid-in Capital in Excess of Par—Preferred Stock, and Paid-in Capital in Excess of Par—Common Stock).

Assume that Stine Corporation issues 10,000 shares of $10 par value preferred stock for $12 cash per share. The entry to record the issuance is as follows.

Cash	120,000	
Preferred Stock		100,000
Paid-in Capital in Excess of Par—Preferred Stock		20,000
(To record issuance of 10,000 shares of $10 par value preferred stock)		

A	=	L	+	SE
+120,000				
				+100,000 PS
				+20,000 PS

Cash Flows
+120,000

Preferred stock has either a par value or no-par value. In the stockholders' equity section of the balance sheet, companies show preferred stock first because of its dividend and liquidation preferences over common stock.

Investor Insight **Facebook**

Emmanuel Dunand/ AFP/Getty Images

How to Read Stock Quotes

Organized exchanges trade the stock of publicly held companies at dollar 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 stock during the year, the total volume of stock 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.

Facebook is listed on the Nasdaq exchange. Here is a recent listing for Facebook:

	52 Weeks						Net
Stock	**High**	**Low**	**Volume**	**High**	**Low**	**Close**	**Change**
Facebook	86.07	54.66	54,156,600	85.59	83.11	84.63	.629

These numbers indicate the following. The high and low market prices for the last 52 weeks have been $86.07 and $54.66. The trading volume for the day was 54,156,600 shares. The high, low, and closing prices for that date were $85.59, $83.11, and $84.63, respectively. The net change for the day was a decrease of $0.629 per share.

For stocks traded on organized exchanges, how are the dollar prices per share established? What factors might influence the price of shares in the marketplace? (Answer is available at the end of the chapter.)

ACTION PLAN

- **In issuing shares for cash, credit Common Stock for par value per share.**
- **Credit any additional proceeds in excess of par to a separate paid-in capital account.**
- **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.**

DO IT! 2a Issuance of Stock

Cayman Corporation begins operations on March 1 by issuing 100,000 shares of $1 par value common stock for cash at $12 per share. On March 28, Cayman issues 1,500 shares of $10 par value preferred stock for cash at $30 per share. Journalize the issuance of the common and preferred shares.

Solution

Mar. 1	Cash	1,200,000	
	Common Stock (100,000 × $1)		100,000
	Paid-in Capital in Excess of Par— Common Stock		1,100,000
	(To record issuance of 100,000 shares at $12 per share)		
Mar. 28	Cash	45,000	
	Preferred Stock (1,500 × $10)		15,000
	Paid-in Capital in Excess of Par— Preferred Stock		30,000
	(To record issuance of 1,500 shares at $30 per share)		

Related exercise material: BE11.2, BE11.3, BE11.4, DO IT! 11.2a, and E11.3.

Accounting for Treasury Stock

Treasury stock is a corporation's own stock that has been reacquired by the corporation and is being held for future use. A corporation may acquire treasury stock for various reasons:

1. To reissue the shares to officers and employees under bonus and stock compensation plans.
2. To increase trading of the company's stock in the securities market. Companies expect that buying their own stock will signal that management believes the stock is underpriced, which they hope will enhance its market price.
3. To have additional shares available for use in acquiring other companies.
4. To reduce the number of shares outstanding and thereby increase earnings per share.

A less frequent reason for purchasing treasury shares is to eliminate hostile shareholders by buying them out.

Many corporations have treasury stock. For example, in the United States approximately 65% of companies have treasury stock. During one quarter, companies in the **Standard & Poor's** 500-stock index spent a record of about $118 billion to buy treasury stock. In a recent year, **Nike** purchased more than 6 million treasury shares. At one point, stock repurchases were so substantial that a study by two Federal Reserve economists suggested that a sharp reduction in corporate purchases of treasury shares might result in a sharp drop in the value of the U.S. stock market.

Purchase of Treasury Stock

The purchase of treasury stock is generally accounted for by the **cost method**. This method derives its name from the fact that the Treasury Stock account is maintained at the cost of shares purchased. Under the cost method, **companies increase (debit) Treasury Stock by the price paid to reacquire the shares. Treasury Stock decreases by the same amount when the company later sells the shares.**

To illustrate, assume that on January 1, 2025, the stockholders' equity section for Mead, Inc. has 100,000 shares of $5 par value common stock issued and outstanding (currently held by stockholders). All of the shares were issued at par value. Retained earnings is $200,000. **Illustration 11.7** shows the stockholders' equity section of the balance sheet before purchase of treasury stock.

ILLUSTRATION 11.7
Stockholders' equity with no treasury stock

Mead, Inc. **Balance Sheet (partial)**	
Stockholders' equity	
Paid-in capital	
Common stock, $5 par value, 400,000 shares authorized,	
100,000 shares issued and outstanding	$500,000
Retained earnings	200,000
Total stockholders' equity	$700,000

On February 1, 2025, Mead acquires 4,000 shares of its stock at $8 per share. The entry is as follows.

Feb. 1	Treasury Stock	32,000	
	Cash		32,000
	(To record purchase of 4,000 shares of treasury stock at $8 per share)		

A	=	L	+	SE
				−32,000 TS
−32,000				

Cash Flows
−32,000

The Treasury Stock account would increase by the cost of the shares purchased ($32,000), (see **Helpful Hint**).

- The original paid-in capital account, Common Stock, would not be affected because **the number of issued shares does not change**.
- That is, once a share has been issued, a subsequent repurchase of that share as treasury stock does not affect its status as "issued."

HELPFUL HINT
Treasury Stock is a contra stockholders' equity account.

Companies show treasury stock as a deduction from total paid-in capital and retained earnings in the stockholders' equity section of the balance sheet. **Illustration 11.8** shows this presentation for Mead, Inc. Thus, the acquisition of treasury stock reduces stockholders' equity.

ILLUSTRATION 11.8
Stockholders' equity with treasury stock

Mead, Inc. **Balance Sheet (partial)**	
Stockholders' equity	
Paid-in capital	
Common stock, $5 par value, 400,000 shares authorized,	
100,000 shares issued and 96,000 shares outstanding	$500,000
Retained earnings	200,000
Total paid-in capital and retained earnings	700,000
Less: **Treasury stock** (4,000 shares)	32,000
Total stockholders' equity	$668,000

Company balance sheets disclose both the number of shares issued (100,000) and the number in the treasury (4,000). The difference is the number of shares of stock outstanding (96,000). The term **outstanding stock** means the number of shares of issued stock that are currently being held by stockholders.

In a bold (and some would say risky) move, Reebok at one time bought back nearly a third of its shares. This repurchase of shares dramatically reduced Reebok's available cash (see **Ethics Note**). 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 that the stock was severely underpriced. The repurchase of so many shares was meant to signal

ETHICS NOTE
The purchase of treasury stock reduces the cushion for creditors. To protect creditors, many states require that a portion of retained earnings equal to the cost of the treasury stock purchased be restricted from

Skeptics, however, suggested that Reebok's management repurchased the shares to make it less likely that the company would be acquired by another company (in which case Reebok's top managers would likely lose their jobs). Acquiring companies like to purchase companies with large cash reserves so they can pay off debt used in the acquisition. By depleting its cash through the purchase of treasury shares, Reebok became a less likely acquisition target.

ACTION PLAN

- **Record the purchase of treasury stock at cost.**
- **Report treasury stock as a deduction from stockholders' equity (contra account) at the bottom of the stockholders' equity section.**

DO IT! 2b Treasury Stock

Santa Anita Inc. purchases 3,000 shares of its $50 par value common stock for $180,000 cash on July 1. It expects to hold the shares in the treasury until resold. Journalize the treasury stock transaction.

Solution

July 1	Treasury Stock	180,000	
	Cash		180,000
	(To record the purchase of 3,000 shares at $60 per share)		

Related exercise material: **BE11.5, DO IT! 11.2b, E11.4, E11.5, and E11.8.**

11.3 Accounting for Dividends and Stock Splits

LEARNING OBJECTIVE 3

Explain how to account for cash dividends, stock dividends, and stock splits.

A dividend is a corporation's distribution of cash or stock to its stockholders on a pro rata (proportional to ownership) basis. Pro rata means that if you own 10% of the common shares, you will receive 10% of the dividend.

- Dividends can take four forms: cash, property, scrip (a promissory note to pay cash), or stock.
- Cash dividends predominate in practice although companies also declare stock 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 as a dollar amount per share**. (Sometimes they are reported on an annual basis.) For example, the recent **quarterly** dividend rate was 24 cents per share for Nike, 1 cent per share for GE, and 21 cents per share for Conagra Brands.

Cash Dividends

A **cash dividend** is a pro rata distribution of cash to stockholders. Cash dividends are not paid on treasury shares. 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 in which the company is incorporated. Payment of cash dividends from retained earnings is

legal in all states. In general, cash dividend distributions from only the balance in common stock (legal capital) are illegal.

A dividend declared out of paid-in capital is termed a **liquidating dividend**. Such a dividend reduces or "liquidates" the amount originally paid in by stockholders. Statutes vary considerably with respect to cash dividends based on paid-in capital in excess of par or stated value. Many states permit such dividends.

2. **Adequate cash.** In one year, Facebook had a balance in retained earnings of $77 billion but a cash balance of only $17.5 billion. If it had wanted to pay a dividend equal to its retained earnings, Facebook would have had to raise $37 billion more in cash. It would have been unlikely to do this because it would not be able to pay this much in dividends in future years. In addition, such a dividend would completely deplete Facebook's balance in retained earnings, so it would not be able to pay a dividend in the next year unless it had positive net income.
3. **Declared 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. However, a small dividend or a missed dividend may cause unhappiness among stockholders.

Many stockholders 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 such as **Amazon.com** pay no dividends, preferring to conserve cash to finance future capital expenditures.

Investors monitor a company's dividend practices. For example, regular dividend boosts in the face of irregular earnings can be a warning signal. Companies with high dividends and rising debt may be borrowing money to pay shareholders. Yet, low dividends may not be a negative sign because it may mean the company is reinvesting in itself, which may result in high returns through increases in the stock price. Presumably, investors seeking regular dividends buy stock in companies that pay periodic dividends, and those seeking growth in the stock price (capital gains) buy stock in companies that retain their earnings rather than pay dividends.

Entries for Cash Dividends

Three dates are important in connection with dividends:

1. The declaration date.
2. The record date.
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. Companies do not make any entries on the record date.

On the **declaration date**, the board of directors formally declares (authorizes) the cash dividend and announces it to stockholders. The declaration of a cash dividend **commits the corporation to a legal obligation.** The company must make an entry to recognize the increase in Cash Dividends and the increase in the liability Dividends Payable.

To illustrate, assume that on December 1, 2025, the directors of Media General declare a 50 cents per share cash dividend on 100,000 outstanding shares of $10 par value common stock. The dividend is $50,000 (100,000 × $0.50). The entry to record the declaration is as follows.

Declaration Date

Dec. 1	Cash Dividends	50,000	
	Dividends Payable		50,000
	(To record declaration of cash dividend)		

A	=	L	+	SE
				−50,000 Div
		+50,000		

Cash Flows
no effect

Media General debits the account Cash Dividends. Cash dividends decrease retained earnings.

Recall in Chapter 3 that we used an account called Dividends to record a cash dividend. Here, we use the specific title Cash Dividends to differentiate it from other types of dividends, such as stock dividends. Dividends Payable is a current liability. It will normally be paid within the next several months. *For homework problems, you should use the Cash Dividends account for recording cash 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 (see **Helpful Hint**). The stockholders' records maintained by the corporation supply this information. In the interval between the declaration date and the record date, the corporation updates its stock 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 stockholders 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 + SE
−50,000 (L)
−50,000 (A)

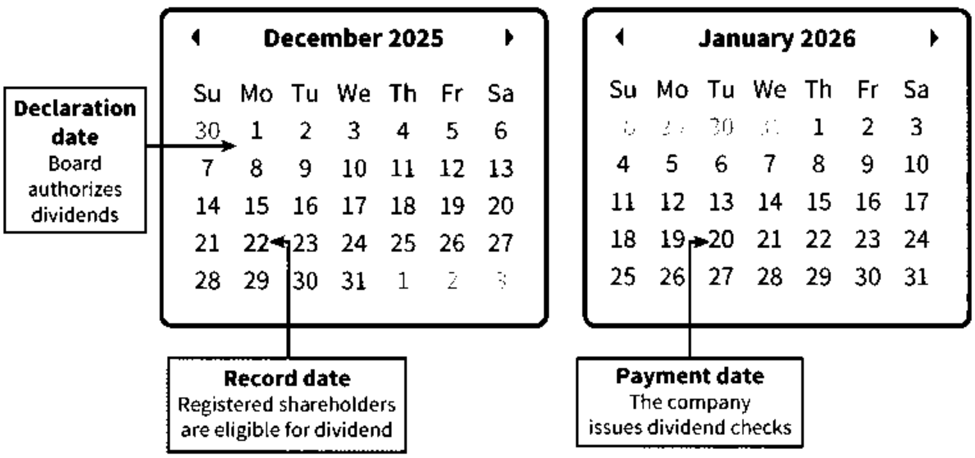
Cash Flows
−50,000

	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 stockholders' equity. The cumulative effect of the declaration and payment of a cash dividend is to **decrease both stockholders' equity and total assets.** Illustration 11.9 summarizes the three important dates associated with dividends for Media General.

ILLUSTRATION 11.9

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 on December 31, 2025, is as follows.

Dec. 31	Retained Earnings	50,000	
	Cash Dividends		50,000
	(To close Cash Dividends to Retained Earnings)		

Investor Insight


Palto/Getty Images

What About Dividends?

If you have some excess dollars that you want to invest, you might consider stocks that pay dividends. According to data from the Standard & Poor's (S&P) Dow Jones Indices, dividend income made up 33% of the monthly return of the S&P 500 between 1926 and 2015. What that means is that dividends comprise one-third of the return to shareholders.

In addition, data from 1927 to 2014 indicate that dividend payers outperformed non-dividend payers, averaging 10.4% annual growth versus 8.5%. If you do not think that difference is much, the table indicates how an annual investment of $10,000 would grow at each of these rates.

Growth Over	8.5% Annual Growth Rate	10.4% Annual Growth Rate
10 years	$ 161,000	$ 179,400
20 years	524,900	661,800
30 years	1,300,000	2,000,000

The dividend yield ratio is the annual dividend per share divided by the market price per share. Some companies have strong dividend yields, such as The Coca-Cola Company and AT&T. Others have been increasing dividend payouts at a strong clip, such as McDonald's, Microsoft, and Intel. Good luck in your future investing!

Source: Based on Selena Maranjian, "Dividend Stocks in 2017: 7 Stats Everyone Should Know," *The Motley Fool* (December 14, 2016).

What factors must management consider in deciding how large a dividend to pay? (Answer is available at the end of the chapter.)

Dividend Preferences

Preferred stockholders have the right to receive dividends before common stockholders.

- If the dividend rate on preferred stock is $5 per share, common stockholders cannot receive any dividends in the current year until preferred stockholders 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.

Dividend preferences

If a company does not pay dividends to preferred stockholders, it cannot pay dividends to common stockholders.

For preferred stock, companies state the per share dividend amount as a percentage of the par value or as a specified dollar amount. For example, Bank of America specified a 4.125% dividend on its preferred stock. At one time, PepsiCo paid $4.56 per share on its no-par preferred stock.

Most preferred stocks also have a preference on corporate assets if the corporation fails. This feature provides security for the preferred stockholder. The preference to assets may be for the par value of the shares or for a specified liquidating value. For example, Drive Shack's preferred stock entitles its holders to receive $25 per share, plus accrued and unpaid dividends, in the event of liquidation. The liquidation preference establishes the respective claims of creditors and preferred stockholders in litigation involving bankruptcy lawsuits.

Cumulative Dividend

Preferred stock often contains a **cumulative dividend** feature.

- This feature stipulates that preferred stockholders must be paid both current-year dividends and any unpaid prior-year dividends before common stockholders are paid any dividends.
- When preferred stock is cumulative, preferred 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 preferred stock outstanding. Each $100 share pays a $7 dividend (7% × $100 par value). The annual dividend is $35,000 (5,000 × $7 per share). If dividends are two years in arrears, preferred stockholders are entitled to receive the dividends shown in **Illustration 11.10**.

ILLUSTRATION 11.10

Computation of total dividends to preferred stock

Dividends in arrears ($35,000 × 2)	$ 70,000
Current-year dividends	35,000
Total preferred dividends	$105,000

Payment of a Cumulative Dividend

Preferred stockholders

The company cannot pay dividends to common stockholders until it pays the entire preferred dividend. In other words, companies cannot pay dividends to common stockholders while any preferred 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 corporation 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 preferred dividend for a period of time, "Not meeting your obligations on something like that is a major black mark on your record."

ACTION PLAN

- **Determine dividends on preferred shares by multiplying the dividend rate times the par value of the stock times the number of outstanding preferred shares.**
- **Understand the cumulative feature. If preferred stock is cumulative, then any missed dividends (dividends in arrears) and the current year's dividend must be paid to preferred stockholders before dividends are paid to common stockholders.**

DO IT! 3a Dividends on Preferred and Common Stock

MasterMind Corporation has 2,000 shares of 6%, $100 par value preferred stock outstanding at December 31, 2025. At December 31, 2025, the company declared a $60,000 cash dividend. Determine the dividend paid to preferred stockholders and common stockholders under each of the following scenarios.

1. The preferred stock is noncumulative, and the company has not missed any dividends in previous years.
2. The preferred stock is noncumulative, and the company did not pay a dividend in each of the two previous years.
3. The preferred stock is cumulative, and the company did not pay a dividend in each of the two previous years.

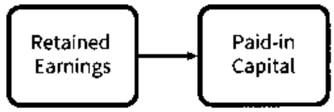
Solution

1. The company has not missed past dividends and the preferred stock is noncumulative. Thus, the preferred stockholders are paid only this year's dividend. The dividend paid to preferred stockholders would be $12,000 (2,000 × 6% × $100). The dividend paid to common stockholders would be $48,000 ($60,000 − $12,000).
2. The preferred stock is noncumulative. Thus, past unpaid dividends do not have to be paid. The dividend paid to preferred stockholders would be $12,000 (2,000 × 6% × $100). The dividend paid to common stockholders would be $48,000 ($60,000 − $12,000).
3. The preferred stock is cumulative. Thus, dividends that have been missed (dividends in arrears) must be paid. The dividend paid to preferred stockholders would be $36,000 (3 × 2,000 × 6% × $100). Of the $36,000, $24,000 relates to dividends in arrears and $12,000 relates to the current year's dividend on preferred stock. The dividend paid to common stockholders would be $24,000 ($60,000 − $36,000).

Related exercise material: BE11.7, DO IT! 11.3a, E11.10, and E11.13.

Stock Dividends

Stock Dividend



A **stock dividend** is a pro rata (proportional to ownership) distribution of the corporation's own stock to stockholders. Whereas a company pays cash in a cash dividend, a company issues shares of stock in a stock dividend.

- **A stock dividend** transfers an amount from retained earnings to paid-in capital, thus decreasing retained earnings and increasing paid-in capital.
- **Unlike a cash dividend,** a stock dividend does not decrease total stockholders' equity or total assets.

Because a stock dividend does not result in a distribution of assets, some view it as nothing more than a publicity gesture. Stock dividends are often issued by companies that do not have adequate cash to issue a cash dividend. Such companies may not want to announce that they are not going to issue a cash dividend at their expected time. By issuing a stock dividend, they "save face" by giving the appearance of distributing a dividend. Note that since a stock dividend neither increases nor decreases the assets in the company, investors are not receiving anything they did not already own. In a sense, it is like asking for two pieces of pie and having your host take one piece of pie and cut it into two smaller pieces. You are not better off, but you got your two pieces of pie.

To illustrate, assume that you have a 2% ownership interest in Cetus Inc. That is, you own 20 of its 1,000 shares of outstanding common stock. If Cetus declares a 10% stock dividend, it would issue 100 shares (1,000 × 10%) of stock. 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 of stock, but your ownership interest has not changed.**

Cetus has disbursed no cash and has assumed no liabilities. What, then, are the purposes and benefits of a stock dividend? Corporations issue stock dividends generally for one or more of the following reasons.

1. To satisfy stockholders' dividend expectations without spending cash.
2. To increase the marketability of the corporation's stock. When the number of shares outstanding increases, the market price per share decreases. Decreasing the market price of the stock makes it easier for smaller investors to purchase the shares.
3. To emphasize that a company has permanently reinvested in the business a portion of stockholders' equity, which therefore is now unavailable for cash dividends.

When the dividend is declared, the board of directors determines the size of the stock dividend and the value assigned to each dividend. In order to meet legal requirements, the per share amount must be at least equal to the par or stated value.

- Generally, if the company issues a **small stock dividend** (less than 20–25% of the corporation's outstanding stock), the value assigned to the dividend is the fair value (market price) per share.
- If a company issues a **large stock dividend** (greater than 20–25%), the price assigned to the dividend is the par or stated value.

Small stock dividends predominate in practice. In Appendix 11A, we illustrate entries for small stock dividends.

Effects of Stock Dividends

How do stock dividends affect stockholders' equity? They **change the composition of stockholders' equity** because they transfer a portion of retained earnings to paid-in capital. However, **total stockholders' equity remains the same.** Stock dividends also have no effect on the par or stated value per share, but the number of shares outstanding increases. **Illustration 11.11** shows these effects for Medland.

ILLUSTRATION 11.11
Stock dividend effects

	Before Dividend	Change	After Dividend
Stockholders' equity			
Paid-in capital			
Common stock, $10 par	$500,000	$ 50,000	$550,000
Paid-in capital in excess of par	—	25,000	25,000
Total paid-in capital	500,000	+75,000	575,000
Retained earnings	300,000	-75,000	225,000
Total stockholders' equity	**$800,000**	**$ 0**	**$800,000**
Outstanding shares	**50,000**	**+5,000**	**55,000**
Par value per share	**$10.00**	**$0**	**$10.00**

In this example, total paid-in capital increases by $75,000 (50,000 shares × 10% × $15) and retained earnings decreases by the same amount. Note also that total stockholders' equity remains unchanged at $800,000. The number of shares increases by 5,000 (50,000 × 10%).

Stock Splits

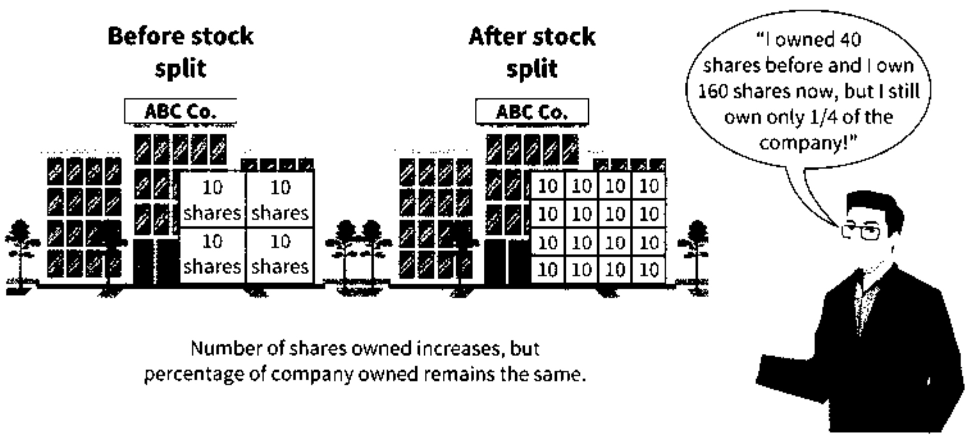
A **stock split**, like a stock dividend, involves issuance of additional shares to stockholders according to their percentage ownership.

HELPFUL HINT
A stock split changes the par value per share but does not affect any balances in stockholders' equity accounts.

- A stock split results in a reduction in the par or stated value per share (see **Helpful Hint**).
- The purpose of a stock split is to increase the marketability of the stock by lowering its market price per share. This, in turn, makes it easier for the corporation to issue additional stock.

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 stock split, the market price of **Nike**'s stock fell from $111 to approximately $55. The lower market price stimulated market activity. Within one year, the stock was trading above $100 again. **Illustration 11.12** shows the effect of a 4-for-1 stock split for stockholders.

ILLUSTRATION 11.12
Effect of stock split for stockholders



In a stock 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 share of $10 par value stock for two shares of $5 par value stock.

- A stock split does not have any effect on total paid-in capital, retained earnings, or total stockholders' equity.
- The number of shares outstanding increases, and par value per share decreases.

Illustration 11.13 shows these effects for Medland Corporation, assuming that it splits its 50,000 shares of common stock on a 2-for-1 basis.

ILLUSTRATION 11.13

Stock split effects

	Before Stock Split	Change	After Stock Split
Stockholders' equity			
Paid-in capital			
Common stock,	$500,000		$500,000
Paid-in capital in excess of par—common stock	-0-		-0-
Total paid-in capital	500,000	$ -0-	500,000
Retained earnings	300,000	-0-	300,000
Total stockholders' equity	**$800,000**	**$ -0-**	**$800,000**
Outstanding shares	**50,000**	**+50,000**	**100,000**
Par value per share	**$10.00**	**−$5.00**	**$5.00**

A stock split does not affect the balances in any stockholders' equity accounts. Therefore, **a company does not need to journalize a stock split.**

Illustration 11.14 summarizes the differences between stock dividends and stock splits.

ILLUSTRATION 11.14

Differences between the effects of stock dividends and stock splits

Item	Stock Dividend	Stock Split
Total paid-in capital	Increase	No change
Total retained earnings	Decrease	No change
Total par value (common stock)	Increase	No change
Par value per share	No change	Decrease
Outstanding shares	Increase	Increase
Total stockholders' equity	No change	No change

Investor Insight Berkshire Hathaway

A No-Split Philosophy

Hiob/iStock.com

Warren Buffett's company, Berkshire Hathaway, has two classes of shares. Until recently, the company had never split either class of stock. The class A stock has a market price of about $390,000 per share. Because the price per share is so high, the stock does not trade as frequently as the stock of other companies.

Buffett has always opposed stock splits because he feels that a lower stock price attracts short-term investors. He appears to be correct. For example, while more than 6 million shares of IBM are exchanged on the average day, only about 1,000 class A shares of Berkshire are traded. Despite Buffett's aversion to splits, in order to accomplish an acquisition, Berkshire decided to split its class B shares 50 to 1.

Sources: Scott Patterson, "Berkshire Nears Smaller Baby B's," *Wall Street Journal Online* (January 19, 2010); and Erik Holm, "Three Reasons Why Warren Buffett Never Split Berkshire's $250,000 Stock," *Wall Street Journal* (February 15, 2017).

Why does Warren Buffett usually oppose stock splits? (Answer is available at the end of the chapter.)

ACTION PLAN

- **Calculate the stock dividend's effect on retained earnings by multiplying the number of new shares times the market price of the stock (or par value for a large stock dividend).**
- **Recall that a stock dividend increases the number of shares without affecting total stockholders' equity.**
- **Recall that a stock split only increases the number of shares outstanding and decreases the par value per share.**

DO IT! 3b Stock Dividends and Stock Splits

Sing CD Company has had five years of record earnings. Due to this success, the market price of its 500,000 outstanding shares of $2 par value common stock has tripled from $15 per share to $45. During this period, paid-in capital remained the same at $2,000,000. Retained earnings increased from $1,500,000 to $10,000,000. President Joan Elbert is considering either a 10% stock dividend or a 2-for-1 stock split. She asks you to show the before-and-after effects of each option on retained earnings, total stockholders' equity, shares outstanding, and par value per share.

Solution

The stock 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 stock split is the same as it was before the split: $10,000,000. Total stockholders' equity does not change. The effects on the stockholders' equity accounts are as follows.

	Original Balances	After Dividend	After Split
Paid-in capital	$ 2,000,000	$ 4,250,000	$ 2,000,000
Retained earnings	10,000,000	7,750,000	10,000,000
Total stockholders' equity	$12,000,000	$12,000,000	$12,000,000
Shares outstanding	500,000	550,000	1,000,000
Par value per share	$2.00	$2.00	$1.00

Related exercise material: BE11.8, DO IT! 11.3b, E11.11, and E11.14.

11.4 Presentation and Analysis

LEARNING OBJECTIVE 4

Discuss how stockholders' equity is reported and analyzed.

Retained Earnings

Retained earnings is net income that a company retains in the business.

- The balance in retained earnings is part of the stockholders' claim on the total assets of the corporation.
- It does not, however, 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 $100,000 balance in retained earnings does not mean that there should be $100,000 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. **Illustration 11.15** shows recent amounts of retained earnings and cash in selected companies.

ILLUSTRATION 11.15

Retained earnings and cash balances

	(in millions)	
Company	Retained Earnings	Cash
Facebook	$ 77,345	$17,576
Alphabet	152,122	18,498
Nike	1,643	4,466
Starbucks	(7,816)	4,351
Amazon	93,404	42,122

When expenses exceed revenues, a **net loss** results. In contrast to net income, a net loss decreases retained earnings. In closing entries, a company debits a net loss to the Retained Earnings account. **It does not debit net losses to paid-in capital accounts.** To do so would destroy the distinction between paid-in and earned capital.

- If cumulative losses and dividends exceed cumulative income over a company's life, a debit balance in Retained Earnings results.
- A debit balance in Retained Earnings, such as that of **Groupon, Inc.** at one time, is a **deficit.**

A company reports a deficit as a deduction in the stockholders' equity section of the balance sheet, as shown in **Illustration 11.16.**

ILLUSTRATION 11.16

Stockholders' equity with deficit

Real World

Groupon, Inc.
Balance Sheet (partial)
(in thousands)

Stockholders' equity		
Paid-in capital		
Common stock	$ 70	
Paid-in capital in excess of par	1,885,301	
Total paid-in capital	1,885,371	
Accumulated deficit	(921,960)	
Total paid-in capital and retained earnings	963,411	
Less: Treasury stock	198,467	
Total stockholders' equity	$ 764,944	

Retained Earnings Restrictions

The balance in retained earnings is generally available for dividend declarations. Some companies state this fact. In some circumstances, however, there may be **retained earnings restrictions.** These make a portion of the balance currently unavailable for dividends. Restrictions result from one or more of these causes: legal, contractual, or voluntary.

Companies generally disclose retained earnings restrictions in the notes to the financial statements. For example, as shown in **Illustration 11.17**, **Tektronix Inc.**, a manufacturer of electronic measurement devices, recently had total retained earnings of $774 million, but the unrestricted portion was only $223.8 million.

ILLUSTRATION 11.17

Disclosure of unrestricted retained earnings

Real World

Tektronix Inc.
Notes to the Financial Statements

Certain of the Company's debt agreements require compliance with debt covenants. The Company had unrestricted retained earnings of $223.8 million after meeting those requirements.

Balance Sheet Presentation of Stockholders' Equity

In the stockholders' equity section of the balance sheet, companies report paid-in capital, retained earnings, accumulated other comprehensive income, and treasury stock. Within paid-in capital, two classifications are recognized:

1. **Capital stock**, which consists of preferred and common stock. Companies show preferred stock before common stock because of its preferential rights. They report information about the par value, shares authorized, shares issued, and shares outstanding for each class of stock.
2. **Additional paid-in capital**, which includes the excess of amounts paid in over par or stated value.

In some instances unrealized gains and losses are not included in net income. Instead, these excluded items, referred to as other comprehensive income items, are reported as part of a more inclusive earnings measure called comprehensive income. Examples of other comprehensive income items include certain adjustments to pension plan assets, types of foreign currency gains and losses, and some gains and losses on investments.

The items reported as other comprehensive income are closed each year to the **Accumulated Other Comprehensive Income** account. Thus, this account includes the cumulative amount of all previous items reported as other comprehensive income. This account can have either a debit or credit balance depending on whether or not accumulated gains exceed accumulated losses over the years. If accumulated losses exceed gains, then the company reports accumulated other comprehensive loss.

Illustration 11.18 presents the stockholders' equity section of the balance sheet of Graber Inc. (see **International Note**). The company discloses a retained earnings restriction in the notes. The stockholders' equity section for Graber Inc. includes most of the accounts discussed in this chapter. The disclosures pertaining to Graber's common stock indicate that 400,000 shares are issued, 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).

ILLUSTRATION 11.18

Stockholders' equity section of balance sheet

International Note

Like GAAP, under IFRS companies typically disclose separate categories of capital on the balance sheet. However, because of varying accounting treatments of certain transactions (such as treasury stock or asset revaluations), some categories used under IFRS vary from those under GAAP.

Graber Inc.
Balance Sheet (partial)

Stockholders' equity		
Paid-in capital		
Capital stock		
9% preferred stock, $100 par value, cumulative, 10,000 shares authorized, 6,000 shares issued and outstanding		$ 600,000
Common stock, no par, $5 stated value, 500,000 shares authorized, 400,000 shares issued, and 390,000 outstanding		2,000,000
Total capital stock		2,600,000
Additional paid-in capital		
Paid-in capital in excess of par—preferred stock	$ 30,000	
Paid-in capital in excess of stated value—common stock	1,050,000	
Total additional paid-in capital		1,080,000
Total paid-in capital		3,680,000
Retained earnings (see Note R)		1,050,000
Total paid-in capital and retained earnings		4,730,000
Accumulated other comprehensive income		110,000
Less: Treasury stock (10,000 common shares)		80,000
Total stockholders' equity		$4,760,000

Note R: Retained earnings is restricted for the cost of treasury stock, $80,000.

Keeping an Eye on Cash

The balance sheet presents the balances of a company's stockholders' equity accounts at a point in time. Companies report in the financing activities section of the statement of cash flows information regarding cash inflows and outflows during the year that resulted from equity transactions. The excerpt shown presents the cash flows from financing activities from the statement of cash flows of Tootsie Roll Industries, Inc. in a recent year. From this information, we learn that the company purchased treasury stock during the period, and its financing activities resulted in a net reduction in its cash balance.

Tootsie Roll Industries, Inc.
Statement of Cash Flows (partial)
(in thousands)

Shares purchased and retired	$(34,133)
Dividends paid in cash	(22,621)
Proceeds from bank loans	2,162
Repayment of bank loans	(2,289)
Net cash used in financing activities	$(56,881)

DO IT! 4a Stockholders' Equity Section

Jennifer Corporation has issued 300,000 shares of $3 par value common stock. It is authorized to issue 600,000 shares. The paid-in capital in excess of par value on the common stock is $380,000. The corporation has reacquired 15,000 shares at a cost of $50,000 and is currently holding those shares. It also had a cumulative other comprehensive loss of $82,000.

The corporation also has 4,000 shares issued and outstanding of 8%, $100 par value preferred stock. It is authorized to issue 10,000 shares. The paid-in capital in excess of par value on the preferred stock is $97,000. Retained earnings is $610,000.

Prepare the stockholders' equity section of the balance sheet.

ACTION PLAN

- **Present capital stock first; list preferred stock before common stock.**
- **Present additional paid-in capital after capital stock.**
- **Report retained earnings after capital stock and additional paid-in capital.**
- **Deduct treasury stock from total paid-in capital and retained earnings.**

Solution

Jennifer Corporation
Balance Sheet (partial)

Stockholders' equity		
Paid-in capital		
Capital stock		
8% preferred stock, $100 par value, 10,000 shares authorized, 4,000 shares issued and outstanding	$400,000	
Common stock, $3 par value, 600,000 shares authorized, 300,000 shares issued, and 285,000 shares outstanding	900,000	
Total capital stock		$1,300,000
Additional paid-in capital		
Paid-in capital in excess of par—preferred stock	97,000	
Paid-in capital in excess of par—common stock	380,000	
Total additional paid-in capital		477,000
Total paid-in capital		1,777,000
Retained earnings		610,000
Total paid-in capital and retained earnings		2,387,000
Accumulated other comprehensive loss		82,000
Less: Treasury stock (15,000 common shares) (at cost)		50,000
Total stockholders' equity		$2,255,000

Related exercise material: BE11.10, DO IT! 11.4a, E11.13, E11.16, and E11.17.

Analysis of Stockholders' Equity

Investors are interested in both a company's dividend record and its earnings performance. Although those two measures are often parallel, that is not always the case. Thus, investors should investigate each one separately.

Dividend Record

One way that companies reward stock investors for their investment is to pay them dividends.

- The **payout ratio** measures the percentage of earnings a company distributes in the form of cash dividends to common stockholders (see **Decision Tools**).
- It is computed by **dividing total cash dividends paid to common shareholders by net income**.

> **Decision Tools**
> The payout ratio helps users determine the portion of a company's earnings that its pays out in dividends.

Using the information shown below (amounts in millions), the payout ratio for **Nike** is calculated as shown in **Illustration 11.19**.

Dividends	$1,491
Net income	2,539

ILLUSTRATION 11.19
Payout ratio for Nike and Skechers

$$\text{Payout Ratio} = \frac{\text{Cash Dividends Paid on Common Stock}}{\text{Net Income}}$$

($ in millions)	Nike	Skechers
Payout ratio	$\frac{\$1{,}491}{\$2{,}539} = 58.7\%$	0.0%

Some analysts use a version of this ratio, which includes dividends on preferred stock. *Use the version presented in Illustration 11.19 for all homework.*

Companies attempt to set their dividend rate at a level that will be sustainable. Nike's payout ratio was relatively high at approximately 59%. Skechers, on the other hand, did not pay a dividend.

Companies that have high growth rates are characterized by low payout ratios because they reinvest most of their net income in the business. Thus, a low payout ratio is not necessarily bad news. Companies that believe they have many good opportunities for growth, such as **Facebook**, will reinvest those funds in the company rather than pay dividends. However, low dividend payments, or a cut in dividend payments, might signal that a company has liquidity or solvency problems and is trying to conserve cash by not paying dividends. Thus, investors and analysts should investigate the reason for low dividend payments.

Illustration 11.20 lists recent payout ratios of four well-known companies.

ILLUSTRATION 11.20
Payout ratios of companies

Company	Payout Ratio
Microsoft	24.5%
Kellogg	43.3%
Facebook	0%
Walmart	49.0%

> **Decision Tools**
> Return on common stockholders' equity helps users determine a company's return on its common stockholders' investment.

Earnings Performance

Another way to measure corporate performance is through profitability. A widely used ratio that measures profitability from the common stockholders' viewpoint is **return on common stockholders' equity (ROE)** (see **Decision Tools**).

- The ROE shows how many dollars of net income a company earned for each dollar of common stockholders' equity.
- It is computed by dividing net income available to common stockholders (Net income − Preferred dividends) by average common stockholders' equity.
- Common stockholders' equity is equal to total stockholders' equity minus any equity from preferred stock.

Using the previous information and the additional following information (amounts in millions), **Illustration 11.21** shows Nike's return on common stockholders' equity.

Preferred dividends	$ -0-
Beginning common stockholders' equity	9,040
Ending common stockholders' equity	8,055

ILLUSTRATION 11.21

Return on common stockholders' equity for Nike and Skechers

$$\text{Return on Common Stockholders' Equity} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Average Common Stockholders' Equity}}$$

($ in millions)	Nike	Skechers
Return on common stockholders' equity	$\frac{\$2{,}539 - \$0}{(\$9{,}040 + \$8{,}055) \div 2} = 29.7\%$	14.7%

Nike's return on common shareholders' equity was nearly double that of Skechers'. As a company grows larger, it becomes increasingly hard to sustain a high return. In Nike's case, since many believe the U.S. market for expensive sports shoes is saturated, it will need to grow either along new product lines, such as hiking shoes and golf equipment, or in new markets, such as Europe and Asia.

Debt versus Equity Decision

When obtaining long-term capital, corporate managers must decide whether to issue bonds or to sell common stock. Bonds have three primary advantages relative to common stock, as shown in **Illustration 11.22**.

ILLUSTRATION 11.22

Advantages of bond financing over common stock

Bond Financing | **Advantages**

1. **Stockholder control is not affected.** Bondholders do not have voting rights, so current owners (stockholders) retain full control of the company.

2. **Tax savings result.** Bond interest is deductible for tax purposes; dividends on stock are not.

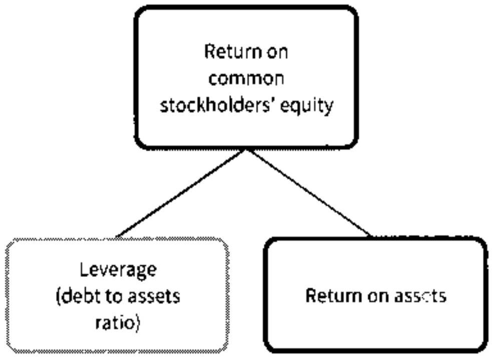
3. **Return on common stockholders' equity may be higher.** Although bond interest expense reduces net income, return on common stockholders' equity often is higher under bond financing because no additional shares of common stock are issued.

How does the debt versus equity decision affect the return on common stockholders' equity?

- **Illustration 11.23** shows that the return on common stockholders' equity is affected by the return on assets and the amount of leverage a company uses—that is, by the company's reliance on debt (often measured by the debt to assets ratio).
- **If a company wants to increase its return on common stockholders' equity, it can either increase its return on assets or increase its reliance on debt financing.**

ILLUSTRATION 11.23

Components of the return on common stockholders' equity



To illustrate the potential effect of debt financing on the return on common stockholders' equity, assume that Microsystems Inc. currently has 100,000 shares of common stock outstanding issued at $25 per share and no debt. It is considering two alternatives for raising an additional $5 million. Plan A involves issuing 200,000 shares of common stock at the current market price of $25 per share. Plan B involves issuing $5 million of 12% bonds at face value. Income before interest and taxes will be $1.5 million; income taxes are expected to be 30%. The alternative effects on the return on common stockholders' equity are shown in **Illustration 11.24**.

ILLUSTRATION 11.24

Effects on return on common stockholders' equity of issuing debt

	Plan A: Issue Stock	Plan B: Issue Bonds
Income before interest and taxes	$1,500,000	$1,500,000
Interest (12% × $5,000,000)	—	600,000
Income before income taxes	1,500,000	900,000
Income tax expense (30%)	450,000	270,000
Net income	$1,050,000	$ 630,000
Common stockholders' equity	$7,500,000	$2,500,000
Return on common stockholders' equity	14%	25.2%

Note that with long-term debt financing (bonds), net income is $420,000 ($1,050,000 − $630,000) less. However, the return on common stockholders' equity increases from 14% to 25.2% with the use of debt financing because net income is spread over a smaller amount of common stockholders' equity. **In general, as long as the return on assets rate exceeds the rate paid on debt, a company will increase the return on common stockholders' equity by the use of debt.**

After seeing this illustration, you might ask, why don't companies rely almost exclusively on debt financing rather than equity? Debt has one major disadvantage: **Debt reduces solvency.**

- The company locks in fixed payments that it must make in good times and bad.
- The company must pay interest on a periodic basis and must pay the principal (face value) of the bonds at maturity.
- A company with fluctuating earnings and a relatively weak cash position may experience great difficulty in meeting interest requirements in periods of low earnings. In the extreme, this can result in bankruptcy.

With common stock financing, on the other hand, the company can decide to pay low (or no) dividends if earnings are low.

DO IT! 4b Analyzing Stockholders' Equity

On January 1, 2025, Siena Corporation purchased 2,000 shares of treasury stock. Other information regarding Siena Corporation is provided below.

	2025	2024
Net income	$110,000	$110,000
Dividends on preferred stock	$10,000	$10,000
Dividends on common stock	$1,600	$2,000
Common stockholders' equity, beginning of year	$400,000*	$500,000
Common stockholders' equity, end of year	$400,000	$500,000

*Adjusted for purchase of treasury stock.

Compute (a) return on common stockholders' equity for each year, and (b) discuss its change from 2024 to 2025.

ACTION PLAN

- **Determine return on common stockholders' equity by dividing net income available to common stockholders by average common stockholders' equity.**

Solution

a.

	2025	2024
Return on common stockholders' equity	$\frac{(\$110{,}000 - \$10{,}000)}{(\$400{,}000 + \$400{,}000) \div 2} = 25\%$	$\frac{(\$110{,}000 - \$10{,}000)}{(\$500{,}000 + \$500{,}000) \div 2} = 20\%$

b. Between 2024 and 2025, return on common stockholders' equity improved from 20% to 25%. While this would appear to be good news for the company's common stockholders, this increase 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: BE11.12, DO IT! 11.4b, E11.18, E11.19, and E11.20.

USING THE DECISION TOOLS | adidas

adidas is one of Nike's competitors. In such a competitive and rapidly changing environment, one wrong step can spell financial disaster.

Instructions

The following facts are available from a recent adidas annual report. As a German company, adidas reports under International Financial Reporting Standards (IFRS). Using this information, evaluate its (a) payout ratio and (b) earnings per share and return on common stockholders' equity (ROE).

(in millions)	
Dividends declared	€320
Net income	€1,017
Preferred dividends	0
Shares outstanding at end of year	201
Beginning common stockholders' equity	€6,472
Ending common stockholders' equity	€5,666

Solution

a. A measure to evaluate a company's dividend record is the payout ratio. For adidas, this measure is calculated as follows.

Payout ratio $\frac{€320}{€1{,}017} = 31.5\%$

b. There are many measures of earnings performance. Some of those presented thus far in the text were earnings per share and the return on common stockholders' equity. These measures for adidas are calculated as follows.

Earnings per share	$\dfrac{€1{,}017 - 0}{(201 + 200) \div 2} = €5.07$
Return on common stockholders' equity	$\dfrac{€1{,}017 - 0}{(€6{,}472 + €5{,}666) \div 2} = 16.8\%$

Appendix 11A Entries for Stock Dividends

LEARNING OBJECTIVE *5

Prepare entries for stock dividends.

To illustrate the accounting for stock dividends, assume that Medland Corporation has a balance of $300,000 in retained earnings and declares a 10% stock dividend on its 50,000 shares of $10 par value common stock. The current fair value of its stock is $15 per share. The number of shares to be issued is 5,000 (10% × 50,000), and the total amount to be debited to Stock Dividends is $75,000 (5,000 × $15). The entry to record this transaction at the declaration date is as follows.

A	=	L	+	SE
				−75,000 Div
				+50,000 CS
				+25,000 CS

Cash Flows
no effect

Stock Dividends	75,000	
Common Stock Dividends Distributable		50,000
Paid-in Capital in Excess of Par		25,000
(To record declaration of 10% stock dividend)		

At the declaration date, Medland increases (debits) Stock Dividends for the fair value of the stock issued, increases (credits) Common Stock Dividends Distributable for the par value of the dividend shares (5,000 × $10), and increases (credits) the excess over par (5,000 × $5) to an additional paid-in capital account.

HELPFUL HINT

Note that the dividend account title is *distributable*, not *payable*.

- Stock Dividends is closed to Retained Earnings at the end of the accounting period.
- Common Stock Dividends Distributable is a stockholders' equity account (see Helpful Hint). It is not a liability because assets will not be used to pay the dividend.

If Medland prepares a balance sheet before it issues the dividend shares, it reports the distributable account in paid-in capital as an addition to common stock issued, as shown in Illustration 11A.1.

ILLUSTRATION 11A.1

Statement presentation of common stock dividends distributable

Medland Corporation
Balance Sheet (partial)

Paid-in capital	
Common stock	$500,000
Common stock dividends distributable	50,000
Paid-in capital in excess of par—common stock	25,000
Total paid-in capital	$575,000

When Medland issues the dividend shares, it decreases Common Stock Dividends Distributable and increases Common Stock as follows.

Common Stock Dividends Distributable	50,000	
Common Stock		50,000
(To record issuance of 5,000 shares in a stock dividend)		

A	=	L	+	SE
				−50,000 CS
				+50,000 CS

Cash Flows
no effect

Review and Practice

Learning Objectives Review

1 Discuss the major characteristics of a corporation.

The major characteristics of a corporation are separate legal existence, limited liability of stockholders, transferable ownership rights, ability to acquire capital, continuous life, corporation management, government regulations, and additional taxes.

2 Explain how to account for the issuance of common, preferred, and treasury stock.

When a company records issuance of common stock or preferred for cash, it credits the par value of the shares to Common Stock or Preferred Stock. It records in a separate paid-in capital account the portion of the proceeds that is above par value. When no-par common stock has a stated value, the entries are similar to those for par value stock. When no-par common stock does not have a stated value, the entire proceeds from the issue are credited to Common Stock.

Companies generally use the cost method in accounting for treasury stock. Under this approach, a company debits Treasury Stock at the price paid to reacquire the shares.

3 Explain how to account for cash dividends, stock dividends, and stock splits.

Companies make entries for dividends at the declaration date and the payment date. At the declaration date, the entries for a cash dividend are debit Cash Dividends and credit Dividends Payable.

Preferred stock has contractual provisions that give it priority over common stock in certain areas. Typically, preferred stockholders have a preference as to (1) dividends and (2) assets in the event of liquidation. However, they sometimes do not have voting rights.

The effects of stock dividends and splits are as follows. Small stock dividends transfer an amount equal to the fair value of the shares issued from retained earnings to the paid-in capital accounts. Stock splits reduce the par value per share of the common stock while increasing the number of shares so that the balance in the Common Stock account remains the same.

4 Discuss how stockholders' equity is reported and analyzed.

Additions to retained earnings consist of net income. Deductions consist of net loss and cash and stock dividends. In some instances, portions of retained earnings are restricted, making that portion unavailable for the payment of dividends.

In the stockholders' equity section of the balance sheet, companies report paid-in capital and retained earnings and identify specific sources of paid-in capital. Within paid-in capital, companies show two classifications: capital stock and additional paid-in capital. If a corporation has treasury stock, it deducts the cost of treasury stock from total paid-in capital and retained earnings to determine total stockholders' equity.

A company's dividend record can be evaluated by looking at what percentage of net income it chooses to pay out in dividends, as measured by the payout ratio (dividends divided by net income). Earnings performance is measured with the return on common stockholders' equity (income available to common stockholders divided by average common stockholders' equity).

*5 Prepare entries for stock dividends.

To record the declaration of a small stock dividend (less than 20%), debit Stock Dividends for an amount equal to the fair value of the shares issued. Record a credit to a temporary stockholders' equity account—Common Stock Dividends Distributable—for the par value of the shares, and credit the balance to Paid-in Capital in Excess of Par. When the shares are issued, debit Common Stock Dividends Distributable and credit Common Stock.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Should the company incorporate?	Capital needs, growth expectations, type of business, tax status	Corporations have limited liability, better capital-raising ability, and professional managers. But they suffer from additional taxes, government regulations, and separation of ownership from management.	Must carefully weigh the costs and benefits in light of the particular circumstances.
What portion of its earnings does the company pay out in dividends?	Net income and total cash dividends on common stock	$\text{Payout ratio} = \dfrac{\text{Cash dividends paid on common stock}}{\text{Net income}}$	A low ratio may suggest that the company is retaining its earnings for investment in future growth.
What is the company's return on common stockholders' investment?	Earnings available to common stockholders and average common stockholders' equity	$\text{Return on common stockholders' equity} = \dfrac{\text{Net income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$	A high measure suggests strong earnings performance from common stockholders' perspective.

Glossary Review

Accumulated Other Comprehensive Income This account includes the cumulative amount of all previous items reported as other comprehensive income. (p. 11-26).

Authorized stock The amount of stock that a corporation is authorized to sell as indicated in its charter. (p. 11-8).

Cash dividend A pro rata (proportional to ownership) distribution of cash to stockholders. (p. 11-16).

Charter A document that describes a corporation's name and purpose, types of stock and number of shares authorized, names of individuals involved in the formation, and number of shares each individual has agreed to purchase. (p. 11-6).

Corporation A company organized as a separate legal entity, with most of the rights and privileges of a person. (p. 11-3).

Cumulative dividend A feature of preferred stock entitling the stockholder to receive current and unpaid prior-year dividends before common stockholders receive any dividends. (p. 11-19).

Declaration date The date the board of directors formally authorizes the dividend and announces it to stockholders. (p. 11-17).

Deficit A debit balance in Retained Earnings. (p. 11-25).

Dividend A distribution by a corporation to its stockholders on a pro rata (proportional to ownership) basis. (p. 11-16).

Dividends in arrears Preferred dividends that were supposed to be declared but were not declared during a given period. (p. 11-19).

Liquidating dividend A dividend declared out of paid-in capital. (p. 11-17).

No-par value stock Capital stock that has not been assigned a value in the corporate charter. (p. 11-10).

Organization costs Costs incurred in the formation of a corporation, including legal and state fees and promotional expenditures. (p. 11-7).

Outstanding stock Capital stock that has been issued and is being held by stockholders. (p. 11-15).

Paid-in capital The amount stockholders paid in to the corporation in exchange for shares of ownership. (p. 11-10).

Par value stock Capital stock that has been assigned a value per share in the corporate charter. (p. 11-9).

Payment date The date cash dividend payments are made to stockholders. (p. 11-18).

Payout ratio A measure of the percentage of earnings a company distributes in the form of cash dividends to common stockholders. (p. 11-28).

Preferred stock Capital stock that has contractual preferences over common stock in certain areas. (p. 11-13).

Privately held corporation A corporation that has only a few stockholders and whose stock is not available for sale to the general public. (p. 11-3).

Publicly held corporation A corporation that may have thousands of stockholders and whose stock is traded on a national securities market. (p. 11-3).

Record date The date when the company determines ownership of outstanding shares for dividend purposes. (p. 11-18).

Retained earnings Net income that a company retains in the business. (p. 11-10).

Retained earnings restrictions Circumstances that make a portion of retained earnings currently unavailable for dividends. (p. 11-25).

Return on common stockholders' equity (ROE) A measure of profitability from the stockholders' point of view; computed by dividing net income minus preferred dividends by average common stockholders' equity. (p. 11-28).

Stated value The amount per share assigned by the board of directors to no-par stock. (p. 11-10).

Stock dividend A pro rata (proportional to ownership) distribution of the corporation's own stock to stockholders. (p. 11-21).

Stock split The issuance of additional shares of stock to stockholders accompanied by a reduction in the par or stated value per share. (p. 11-22).

Treasury stock A corporation's own stock that has been reacquired by the corporation and is being held for future use. (p. 11-14).

Practice Multiple-Choice Questions

1. (LO 1) Which of these is **not** a major advantage of a corporation?
   a. Separate legal existence.
   b. Continuous life.
   c. Government regulations.
   d. Transferable ownership rights.

2. (LO 1) A major **disadvantage** of a corporation is:
   a. limited liability of stockholders.
   b. additional taxes.
   c. transferable ownership rights.
   d. None of the answer choices is correct.

3. (LO 1) Which of these statements is **false**?
   a. Ownership of common stock gives the owner a voting right.
   b. The stockholders' equity section begins with paid-in capital.
   c. The authorization of capital stock does not result in a formal accounting entry.
   d. Legal capital is intended to protect stockholders.

4. (LO 2) ABC Corp. issues 1,000 shares of $10 par value common stock at $12 per share. When the transaction is recorded, credits are made to:
   a. Common Stock $10,000 and Paid-in Capital in Excess of Stated Value $2,000.
   b. Common Stock $12,000.
   c. Common Stock $10,000 and Paid-in Capital in Excess of Par $2,000.
   d. Common Stock $10,000 and Retained Earnings $2,000.

5. (LO 2) Treasury stock may be repurchased:
   a. to reissue the shares to officers and employees under bonus and stock compensation plans.
   b. to signal to the stock market that management believes the stock is underpriced.
   c. to have additional shares available for use in the acquisition of other companies.
   d. More than one of the answer choices is correct.

6. (LO 3) Preferred stock may have priority over common stock **except** in:
   a. dividend preference.
   b. preference to assets in the event of liquidation.
   c. cumulative dividends.
   d. voting.

7. (LO 3) U-Bet Corporation has 10,000 shares of 8%, $100 par value, cumulative preferred stock outstanding at December 31, 2025. No dividends were declared in 2023 or 2024. If U-Bet wants to pay $375,000 of dividends in 2025, common stockholders will receive:
   a. $0. **c.** $215,000.
   b. $295,000. **d.** $135,000.

8. (LO 3) Entries for cash dividends are required on the:
   a. declaration date and the record date.
   b. record date and the payment date.
   c. declaration date, record date, and payment date.
   d. declaration date and the payment date.

9. (LO 3) Which of these statements about stock dividends is **true**?
   a. Stock dividends reduce a company's cash balance.
   b. A stock dividend has no effect on total stockholders' equity.
   c. A stock dividend decreases total stockholders' equity.
   d. A stock dividend ordinarily will increase total stockholders' equity.

10. (LO 3) Zealot Inc. has retained earnings of $500,000 and total stockholders' equity of $2,000,000. It has 100,000 shares of $8 par value common stock outstanding, which is currently selling for $30 per share. If Zealot declares a 10% stock dividend on its common stock:
   a. net income will decrease by $80,000.
   b. retained earnings will decrease by $80,000 and total stockholders' equity will increase by $80,000.
   c. retained earnings will decrease by $300,000 and total stockholders' equity will increase by $300,000.
   d. retained earnings will decrease by $300,000 and total paid-in capital will increase by $300,000.

11. (LO 4) In the stockholders' equity section of the balance sheet, common stock:
   a. is listed before preferred stock.
   b. is added to total capital stock.
   c. is part of paid-in capital.
   d. is part of additional paid-in capital.

12. (LO 4) In the stockholders' equity section, the cost of treasury stock is deducted from:
   a. total paid-in capital and retained earnings.
   b. retained earnings.
   c. total stockholders' equity.
   d. common stock in paid-in capital.

13. (LO 4) The return on common stockholders' equity is usually increased by all of the following, **except**:

   a. an increase in the return on assets ratio.
   b. an increase in the use of debt financing.
   c. an increase in the company's stock price.
   d. an increase in the company's net income.

14. (LO 4) Thomas is nearing retirement and would like to invest in a stock that will provide a good steady income. Thomas should choose a stock with a:

   a. high current ratio.
   b. high dividend payout.
   c. high earnings per share.
   d. high price-earnings ratio.

15. (LO 4) Jackson Inc. reported net income of $186,000 during 2025 and paid dividends of $26,000 on common stock. It also paid dividends on its 10,000 shares of 6%, $100 par value, noncumulative preferred stock. Common stockholders' equity was $1,200,000 on January 1, 2025, and $1,600,000 on December 31, 2025. The company's return on common stockholders' equity for 2025 is:

   a. 10.0%. **c.** 7.1%.
   b. 9.0%. **d.** 13.3%.

16. (LO 4) If everything else is held constant, earnings per share is increased by:

   a. the payment of a cash dividend to common shareholders.
   b. the payment of a cash dividend to preferred shareholders.
   c. the issuance of new shares of common stock.
   d. the purchase of treasury stock.

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.** Legal capital is intended to protect creditors, not stockholders. The other choices are true statements.

4. **c.** Common Stock should be credited for $10,000 and Paid-in Capital in Excess of Par should be credited for $2,000. The stock is par value stock, not stated value stock, and this excess is contributed, not earned, capital. The other choices are therefore incorrect.

5. **d.** Treasury stock may be repurchased to reissue the shares as part of bonus and stock compensation plans, to signal to the stock market that the stock is underpriced, and to have additional shares available for use in the acquisition of other companies. Choice (a), (b), (c) are all correct, but (d) is the best answer.

6. **d.** Preferred stock usually does not have voting rights and therefore does not have priority over common stock on this issue. The other choices are true statements.

7. **d.** The preferred stockholders will receive a total of $240,000 of dividends [dividends in arrears ($80,000 × 2 years) + current-year dividends ($80,000)]. If U-Bet wants to pay a total of $375,000 in 2025, then common stockholders will receive $135,000 ($375,000 − $240,000), not (a) $0, (b) $295,000, or (c) $215,000.

8. **d.** Entries are required for dividends on the declaration date and the payment date, but not the record date. The other choices are therefore incorrect.

9. **b.** A stock dividend moves amounts from retained earnings to paid-in capital and has no effect on stockholders' equity or cash. The other choices are therefore incorrect.

10. **d.** A 10% stock dividend on the company's common stock will increase the number of shares issued by 10,000 (100,000 × 10%). At a market price of $30 per share, total paid-in capital will increase by $300,000 (10,000 shares × $30/share) and retained earnings will decrease by that same amount. The other choices are therefore incorrect.

11. **c.** Common stock is part of paid-in capital. The other choices are incorrect because common stock (a) is listed after preferred stock, (b) is not added to total capital stock but is part of capital stock, and (d) is part of capital stock, not additional paid-in capital.

12. **a.** The cost of treasury stock is deducted from total paid-in capital and retained earnings. The other choices are therefore incorrect.

13. **c.** An increase in the company's stock price has no effect on the return on common stockholders' equity. The other choices are incorrect because (a) an increase in a firm's return on assets, (b) an increase in a firm's use of debt financing, and (c) an increase in a firm's net income will all increase the return on common stockholders' equity.

14. **b.** Thomas should focus on a high dividend payout. The other choices are incorrect because a stock with a (a) high current ratio, (c) high earnings per share, or (d) high price-earnings ratio may or may not pay dividends on a consistent basis.

15. **b.** Return on common stockholders' equity is net income available to common stockholders divided by average common stockholders' equity. Net income available to common stockholders is net income less preferred dividends = $126,000 [$186,000 − (10,000 × .06 × $100)]. The company's return on common stockholders' 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%.

16. **d.** The purchase of treasury stock reduces the number of shares outstanding, which is the denominator of earnings per share (EPS). With a smaller denominator, EPS is larger. The other choices are incorrect because (a) the payment of a cash dividend to common stockholders does not affect the earnings or the number of outstanding shares, so EPS will stay the same; (b) the payment of a cash dividend to preferred stockholders will reduce the amount of earnings available to the common stockholders, thus reducing EPS; and (c) the issuance of new shares of common stock would not affect earnings but will increase the number of outstanding shares, thereby reducing EPS.

Practice Brief Exercises

1. (LO 2) On April 10, Leury Corporation issues 3,000 shares of $5 par value common stock for cash at $14 per share. Journalize the issuance of the stock.

Prepare entries for issuance of par value common stock.

Solution

1. April 10	Cash (3,000 × $14)	42,000	
	Common Stock (3,000 × $5)		15,000
	Paid-in Capital in Excess of Par—Common Stock (3,000 × $9)		27,000

2. (LO 2) On June 1, Omar Corporation purchases 600 shares of its $5 par value common stock for the treasury at a cash price of $10 per share. Journalize the treasury stock transaction.

Prepare entries for treasury stock transactions.

Solution

2. June 1	Treasury Stock (600 × $10)	6,000	
	Cash		6,000

3. (LO 3) Giovanni Corporation has 70,000 shares of common stock outstanding. It declares a $2 per share cash dividend on November 15 to stockholders of record on December 15. 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.

Solution

3. Nov. 15	Cash Dividends (70,000 × $2/share)	140,000	
	Dividends Payable		140,000
Dec. 31	Dividends Payable	140,000	
	Cash		140,000

4. (LO 3) The stockholders' equity section of Ynoa Corporation consists of common stock ($5 par) $3,000,000 and retained earnings $1,000,000. A 15% stock dividend (90,000 shares) is declared when the market price per share is $11. Show the before-and-after effects of the dividend on (a) the components of stockholders' equity, (b) shares outstanding, and (c) par value per share.

Show before-and-after effects of a stock dividend.

Solution

	Before Dividend	After Dividend
4. a. Stockholders' equity		
Paid-in capital		
Common stock, $5 par	$3,000,000	$3,450,000
In excess of par	—	540,000
Total paid-in capital	3,000,000	3,990,000
Retained earnings	1,000,000	10,000
Total stockholders' equity	$4,000,000	$4,000,000
b. Outstanding shares	600,000	690,000
c. Par value per share	$5.00	$5.00

5. (LO 4) Navarez Corporation has the following accounts at December 31: Common Stock, $2 par, 50,000 shares issued, $100,000; Paid-in Capital in Excess of Par—Common Stock $40,000; Retained Earnings $65,000; and Treasury Stock, 2,000 shares, $17,000. Prepare the stockholders' equity section of the balance sheet.

Prepare stockholders' equity section.

Solution

5\. Stockholders' equity

Paid-in capital	
Common stock, $2 par value, 50,000 shares issued, and 48,000 shares outstanding	$100,000
In excess of par—common stock	40,000
Total paid-in capital	140,000
Retained earnings	65,000
Total paid-in capital and retained earnings	205,000
Less: Treasury stock (2,000 common shares)	17,000
Total stockholders' equity	$188,000

Practice Exercises

Journalize issuance of common and preferred stock and purchase of treasury stock.

1\. **(LO 2)** Maci Co. had the following transactions during the current period.

June 12	Issued 60,000 shares of $5 par value common stock for cash of $370,000.
July 11	Issued 1,000 shares of $100 par value preferred stock for cash at $112 per share.
Nov. 28	Purchased 2,000 shares of treasury stock for $70,000.

Instructions

Journalize the transactions.

Solution

1. June 12	Cash	370,000	
	Common Stock (60,000 × $5)		300,000
	Paid-in Capital in Excess of Par—Common Stock		70,000
July 11	Cash (1,000 × $112)	112,000	
	Preferred Stock (1,000 × $100)		100,000
	Paid-in Capital in Excess of Par—Preferred Stock (1,000 × $12)		12,000
Nov. 28	Treasury Stock	70,000	
	Cash		70,000

Journalize cash dividends; indicate statement presentation.

2\. **(LO 3, 4)** On January 1, Chong Corporation had 95,000 shares of no-par common stock issued and outstanding. The stock has a stated value of $5 per share. During the year, the following occurred.

Apr. 1	Issued 25,000 additional shares of common stock for $17 per share.
June 15	Declared a cash dividend of $1 per share to stockholders of record on June 30.
July 10	Paid the $1 cash dividend.
Dec. 1	Issued 2,000 additional shares of common stock for $19 per share.
15	Declared a cash dividend on outstanding shares of $1.20 per share to stockholders 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 × $1)	120,000	
	Dividends Payable		120,000
July 10	Dividends Payable	120,000	
	Cash		120,000
Dec. 15	Cash Dividends (122,000 × $1.20)	146,400	
	Dividends Payable		146,400

b. In the retained earnings statement, dividends of $266,400 will be deducted. In the balance sheet, Dividends Payable of $146,400 will be reported as a current liability.

Practice Problem

Journalize transactions and prepare stockholders' equity section.

Rolman Corporation is authorized to issue 1,000,000 shares of $5 par value common stock. In its first year, the company has the following stock transactions.

Jan. 10	Issued 400,000 shares of stock at $8 per share.
Sept. 21	Purchased 10,000 shares of common stock for the treasury at $9 per share.
Dec. 24	Declared a cash dividend of 10 cents per share on common stock outstanding.

Instructions

a. Journalize the transactions.

b. Prepare the stockholders' equity section of the balance sheet, assuming the company had retained earnings of $150,600 at December 31 and an accumulated other comprehensive loss of $105,000.

Solution

a.

Jan. 10	Cash	3,200,000	
	Common Stock (400,000 × $5)		2,000,000
	Paid-in Capital in Excess of Par		1,200,000
	(To record issuance of 400,000 shares of $5 par value stock)		
Sept. 21	Treasury Stock	90,000	
	Cash		90,000
	(To record purchase of 10,000 shares of treasury stock at cost)		
Dec. 24	Cash Dividends [(400,000 – 10,000) × $0.10]	39,000	
	Dividends Payable		39,000
	(To record declaration of 10 cents per share cash dividend)		

b.

Rolman Corporation
Balance Sheet (partial)

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, $5 par value, 1,000,000 shares authorized, 400,000 shares issued, 390,000 outstanding	$2,000,000
Additional paid-in capital	
Paid-in capital in excess of par—common stock	1,200,000
Total paid-in capital	3,200,000
Retained earnings	150,600
Total paid-in capital and retained earnings	3,350,600
Accumulated other comprehensive loss	105,000
Less: Treasury stock (10,000 shares)	90,000
Total stockholders' equity	$3,155,600

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Note: All asterisked Questions, Exercises, and Problems relate to material in the appendix to the chapter.

Questions

1. Joe, a student, asks your help in understanding some characteristics of a corporation. Explain each of these to Joe.
   - **a.** Separate legal existence.
   - **b.** Limited liability of stockholders.
   - **c.** Transferable ownership rights.

2. **a.** Your friend G. C. Jones cannot understand how the characteristic of corporate management is both an advantage and a disadvantage. Clarify this problem for G. C.
   b. Identify and explain two other disadvantages of a corporation.

3. Nona Jaymes believes a corporation must be incorporated in the state in which its headquarters office is located. Is Nona correct? Explain.

4. What are the basic ownership rights of common stockholders 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. What are the two principal components of stockholders' equity?

7. The corporate charter of Gage Corporation allows the issuance of a maximum of 100,000 shares of common stock. During its first 2 years of operation, Gage sold 70,000 shares to shareholders and reacquired 4,000 of these shares. After these transactions, how many shares are authorized, issued, and outstanding?

8. Which is the better investment—common stock with a par value of $5 per share or common stock with a par value of $20 per share?

9. For what reasons might a company like IBM repurchase some of its stock (treasury stock)?

10. Monet, Inc. purchases 1,000 shares of its own previously issued $5 par common stock for $11,000. Assuming the shares are held in the treasury, what effect does this transaction have on (a) net income, (b) total assets, (c) total paid-in capital, and (d) total stockholders' equity?

11. **a.** What are the principal differences between common stock and preferred stock?
    b. Preferred stock may be cumulative. Discuss this feature.
    c. How are dividends in arrears presented in the financial statements?

12. Identify the events that result in credits and debits to retained earnings.

13. Indicate how each of these accounts should be classified in the stockholders' equity section of the balance sheet.
    - **a.** Common Stock.
    - **b.** Paid-in Capital in Excess of Par.
    - **c.** Retained Earnings.
    - **d.** Treasury Stock.
    - **e.** Paid-in Capital in Excess of Stated Value.
    - **f.** Preferred Stock.

14. What three conditions must be met before a cash dividend is paid?

15. Three dates associated with Petrie Company's cash dividend are May 1, May 15, and May 31. Discuss the significance of each date and give the entry at each date.

16. Contrast the effects of a cash dividend and a stock dividend on a corporation's balance sheet.

17. Doris Angel asks, "Since stock dividends don't change anything, why declare them?" What is your answer to Doris?

18. Jayne Corporation has 10,000 shares of $15 par value common stock outstanding when it announces a 3-for-1 split. Before the split, the stock had a market price of $120 per share. After the split, how many shares of stock will be outstanding, and what will be the approximate market price per share?

19. The board of directors is considering a stock split or a stock dividend. They understand that total stockholders' equity will remain the same under either action. However, they are not sure of the different effects of the two actions on other aspects of stockholders' equity. Explain the differences to the directors.

20. What was the cost of **Apple**'s treasury stock acquired in fiscal year 2020? (*Hint:* Refer to Apple's statement of cash flows.)

21. **a.** What is the purpose of a retained earnings restriction?
    b. Identify the possible causes of retained earnings restrictions.

22. Thom Inc.'s common stock has a par value of $1 and a current market price of $15. Explain why these amounts are different.

23. What is the formula for the payout ratio? What does it indicate?

24. Explain the circumstances under which debt financing will increase the return on common stockholders' equity.

25. Under what circumstances will the return on assets and the return on common stockholders' equity be equal?

26. Sauer Corp. has a return on assets of 12%. It plans to issue bonds at 8% and use the cash to repurchase stock. What effect will this have on its debt to assets ratio and on its return on common stockholders' equity?

Brief Exercises

List advantages and disadvantages of a corporation.

BE11.1 (LO 1), K Hana Ascot is planning to start a business. Identify for Hana the advantages and disadvantages of the corporate form of business organization.

Journalize issuance of par value common stock.

BE11.2 (LO 2), AP On May 10, Pilar Corporation issues 2,500 shares of $5 par value common stock for cash at $13 per share. Journalize the issuance of the stock.

Journalize issuance of no-par common stock.

BE11.3 (LO 2), AP On June 1, Forrest Inc. issues 3,000 shares of no-par common stock at a cash price of $7 per share. Journalize the issuance of the shares.

BE11.4 (LO 2), AP Layes Inc. issues 8,000 shares of $100 par value preferred stock for cash at $106 per share. Journalize the issuance of the preferred stock.

Journalize issuance of preferred stock.

BE11.5 (LO 2), AP On July 1, Raney Corporation purchases 500 shares of its $5 par value common stock for the treasury at a cash price of $9 per share. Journalize the treasury stock transaction.

Prepare entries for treasury stock transactions.

BE11.6 (LO 3), AP Basse Corporation has 7,000 shares of common stock outstanding. It declares a $1 per share cash dividend on November 1 to stockholders 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.

BE11.7 (LO 3), AP M. Bot Corporation has 10,000 shares of 8%, $100 par value, cumulative preferred stock outstanding at December 31, 2025. No dividends were declared in 2023 or 2024. If M. Bot wants to pay $375,000 of dividends in 2025, what amount of dividends will common stockholders receive?

Determine dividends paid to common stockholders.

BE11.8 (LO 3), AP The stockholders' equity section of Mabry Corporation's balance sheet consists of common stock ($8 par) $1,000,000 and retained earnings $300,000. A 10% stock dividend (12,500 shares) is declared when the market price per share is $19. Show the before-and-after effects of the dividend on (a) the components of stockholders' equity and (b) the shares outstanding.

Show before-and-after effects of a stock dividend.

BE11.9 (LO 3), K Indicate whether each of the following transactions would increase (+), decrease (−), or not affect (N/A) total assets, total liabilities, and total stockholders' equity.

Compare impact of cash dividend, stock dividend, and stock split.

Transaction	Assets	Liabilities	Stockholders' Equity
a. Declared cash dividend.			
b. Paid cash dividend declared in (a).			
c. Declared stock dividend.			
d. Distributed stock dividend declared in (c).			
e. Split stock 3-for-1.			

BE11.10 (LO 4), AP Sudz Corporation has these accounts at December 31: Common Stock, $10 par, 5,000 shares issued, $50,000; Paid-in Capital in Excess of Par $22,000; Retained Earnings $42,000; and Treasury Stock, 500 shares, $11,000. Prepare the stockholders' equity section of the balance sheet.

Prepare a stockholders' equity section.

BE11.11 (LO 4), C Hans Miken, president of Miken Corporation, believes that it is a good practice for a company to maintain a constant payout of dividends relative to its earnings. Last year, net income was $600,000, and the corporation paid $120,000 in dividends. This year, due to some unusual circumstances, the corporation had income of $1,600,000. Hans expects next year's net income to be about $700,000. What was Miken Corporation's payout ratio last year? If it is to maintain the same payout ratio, what amount of dividends would it pay this year? Is this necessarily a good idea—that is, what are the pros and cons of maintaining a constant payout ratio in this scenario?

Evaluate a company's dividend record.

BE11.12 (LO 4), AP SUPERVALU, one of the largest grocery retailers in the United States, is headquartered in Minneapolis. Suppose the following financial information (in millions) was taken from the company's 2025 annual report: net sales $44,597, net income $393, beginning stockholders' equity $2,581, and ending stockholders' equity $2,887. There were no dividends paid on preferred stock. Compute the return on common stockholders' equity. Provide a brief interpretation of your findings.

Calculate the return on common stockholders' equity.

BE11.13 (LO 4), AP Emron Inc. is considering these two alternatives to finance its construction of a new $2 million plant:

Compare bond financing to stock financing.

1. Issuance of 200,000 shares of common stock at the market price of $10 per share.
2. Issuance of $2 million, 6% bonds at face value.

Complete the table and indicate which alternative is preferable.

	Issue Stock	Issue Bonds
Income before interest and taxes	$1,500,000	$1,500,000
Interest expense from bonds	______	______
Income before income taxes		
Income tax expense (30%)	______	______
Net income	$ ______	$ ______
Outstanding shares	______	700,000
Earnings per share	$ ______	$ ______

*BE11.14 (LO 5), AP Stossel Corporation has 200,000 shares of $10 par value common stock outstanding. It declares a 12% stock dividend on December 1 when the market price per share is $17. The dividend shares are issued on December 31. Prepare the entries for the declaration and distribution of the stock dividend.

Prepare entries for a stock dividend.

DO IT! Exercises

Analyze statements about corporate organization.

DO IT! 11.1a (LO 1), C 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 stockholders is normally limited to their investment in the corporation.

_____ 3. The relatively low amount of government regulation of corporations is an advantage of the corporate form of business.

_____ 4. There is no journal entry to record the authorization of capital stock.

_____ 5. No-par value stock is quite rare today.

Close net income and prepare stockholders' equity section.

DO IT! 11.1b (LO 1), AP At the end of its first year of operation, Goss Corporation has $1,000,000 of common stock and net income of $236,000. Prepare (a) the closing entry for net income and (b) the stockholders' equity section at year-end.

Journalize issuance of stock.

DO IT! 11.2a (LO 2), AP Beauty Island Corporation began operations on April 1 by issuing 55,000 shares of $5 par value common stock for cash at $13 per share. In addition, Beauty Island issued 1,000 shares of $1 par value preferred stock for $6 per share. Journalize the issuance of the common and preferred shares.

Journalize treasury stock transaction.

DO IT! 11.2b (LO 2), AP Dinosso Corporation purchased 2,000 shares of its $10 par value common stock for $76,000 on August 1. It will hold these in the treasury until resold. Journalize the treasury stock transaction.

Determine dividends paid to preferred and common stockholders.

DO IT! 11.3a (LO 3), AP Sparks Corporation has 3,000 shares of 8%, $100 par value preferred stock outstanding at December 31, 2025. At December 31, 2025, the company declared a $105,000 cash dividend. Determine the dividend paid to preferred stockholders and common stockholders under each of the following scenarios.

1. The preferred stock is noncumulative, and the company has not missed any dividends in previous years.
2. The preferred stock is noncumulative, and the company did not pay a dividend in each of the two previous years.
3. The preferred stock is cumulative, and the company did not pay a dividend in each of the two previous years.

Determine effects of stock dividend and stock split.

DO IT! 11.3b (LO 3), AP Spears Company has had 4 years of record earnings. Due to this success, the market price of its 400,000 shares of $2 par value common stock has increased from $6 per share to $50. During this period, paid-in capital remained the same at $2,400,000. Retained earnings increased from $1,800,000 to $12,000,000. CEO Don Ames is considering either (1) a 15% stock dividend or (2) a 2-for-1 stock split. He asks you to show the before-and-after effects of each option on (a) retained earnings, (b) total stockholders' equity, and (c) par value per share.

Prepare stockholders' equity section.

DO IT! 11.4a (LO 4), AP Hoyle Corporation has issued 100,000 shares of $5 par value common stock. It was authorized 500,000 shares. The paid-in capital in excess of par value on the common stock is $263,000. The corporation has reacquired 7,000 shares at a cost of $46,000 and is currently holding those shares. It also had accumulated other comprehensive income of $67,000.

The corporation also has 2,000 shares issued and outstanding of 9%, $100 par value preferred stock. It was authorized 10,000 shares. The paid-in capital in excess of par value on the preferred stock is $23,000. Retained earnings is $372,000. Prepare the stockholders' equity section of the balance sheet.

Compute return on common stockholders' equity and discuss changes.

DO IT! 11.4b (LO 4), AP On January 1, 2025, Vahsholtz Corporation purchased 5,000 shares of treasury stock. Other information regarding Vahsholtz Corporation is provided as follows.

	2025	2024
Net income	$110,000	$100,000
Dividends on preferred stock	$ 30,000	$ 30,000
Dividends on common stock	$ 25,000	$ 20,000
Weighted-average number of common shares outstanding	45,000	50,000
Common stockholders' equity beginning of year	$750,000	$600,000
Common stockholders' equity end of year	$830,000	$750,000

Compute (a) return on common stockholders' equity for each year, and (b) discuss the changes in each.

Exercises

E11.1 (LO 1), C Andrea has prepared the following list of statements about corporations.

Identify characteristics of a corporation.

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 U.S. 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 stock from one owner to another requires the approval of either the corporation or other stockholders.
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 state and federal regulations than partnerships or proprietorships.

Instructions

Identify each statement as true or false. If false, indicate how to correct the statement.

E11.2 (LO 1), C Andrea (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.

1. Corporation management is both an advantage and a disadvantage of a corporation compared to a proprietorship or a partnership.
2. Limited liability of stockholders, 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 share of common stock gives the stockholder the ownership rights to vote at stockholder meetings, share in corporate earnings, keep the same percentage ownership when new shares of stock 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 capital stock.
7. Publicly held corporations usually issue stock directly to investors.
8. The trading of capital stock on a securities exchange involves the transfer of already issued shares from an existing stockholder to another investor.
9. The market price of common stock 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 stockholders in exchange for capital stock.

Instructions

Identify each statement as true or false. If false, indicate how to correct the statement.

E11.3 (LO 2), AP During its first year of operations, Mona Corporation had these transactions pertaining to its common stock.

Journalize issuance of common stock.

Jan. 10	Issued 30,000 shares for cash at $5 per share.
July 1	Issued 60,000 shares for cash at $7 per share.

Instructions

a. Journalize the transactions, assuming that the common stock has a par value of $5 per share.

b. Journalize the transactions, assuming that the common stock is no-par with a stated value of $1 per share.

Journalize issuance of common stock and preferred stock and purchase of treasury stock.

E11.4 (LO 2), AP Sagan Co. had these transactions during the current period.

June 12	Issued 80,000 shares of $1 par value common stock for cash of $300,000.
July 11	Issued 3,000 shares of $100 par value preferred stock for cash at $106 per share.
Nov. 28	Purchased 2,000 shares of treasury stock for $9,000.

Instructions

Prepare the journal entries for the Sagan Co. transactions.

Journalize issuance of common and preferred stock and purchase of treasury stock.

E11.5 (LO 2), AP Quay Co. had the following transactions during the current period.

Mar. 2	Issued 5,000 shares of $5 par value common stock 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 $5 par value common stock for cash of $375,000.
July 11	Issued 1,000 shares of $100 par value preferred stock for cash at $110 per share.
Nov. 28	Purchased 2,000 shares of treasury stock for $80,000.

Instructions

Journalize the transactions.

Journalize preferred stock transactions and indicate statement presentation.

E11.6 (LO 2, 4), AP Penland Corporation is authorized to issue both preferred and common stock. The par value of the preferred is $50. During the first year of operations, the company had the following events and transactions pertaining to its preferred stock.

Feb. 1	Issued 40,000 shares for cash at $51 per share.
July 1	Issued 60,000 shares for cash at $56 per share.

Instructions

a. Journalize the transactions.

b. Post to the stockholders' equity accounts. (Use T-accounts.)

c. Discuss the statement presentation of the accounts.

Answer questions about stockholders' equity section.

E11.7 (LO 2, 4), C The stockholders' equity section of Lachlin Corporation's balance sheet at December 31 is presented here.

Lachlin Corporation
Balance Sheet (partial)

Stockholders' equity	
Paid-in capital	
Preferred stock, cumulative, 10,000 shares authorized, 6,000 shares issued and outstanding	$ 600,000
Common stock, no par, 750,000 shares authorized, 580,000 shares issued	2,900,000
Total paid-in capital	3,500,000
Retained earnings	1,158,000
Total paid-in capital and retained earnings	4,658,000
Less: Treasury stock (6,000 common shares)	32,000
Total stockholders' equity	$4,626,000

Instructions

From a review of the stockholders' equity section, answer the following questions.

a. How many shares of common stock are outstanding?

b. Assuming there is a stated value, what is the stated value of the common stock?

c. What is the par value of the preferred stock?

d. If the annual dividend on preferred stock is $36,000, what is the dividend rate on preferred stock?

e. If dividends of $72,000 were in arrears on preferred stock, what would be the balance reported for retained earnings?

Prepare correct entries for capital stock transactions.

E11.8 **(LO 2), AN** Mesa Corporation 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 what he had learned earlier about corporation accounting. During the first month, he made the following entries for the corporation's capital stock.

May 2	Cash	104,000	
	Capital Stock		104,000
	(Issued 8,000 shares of $10 par value common stock at $13 per share)		
10	Cash	530,000	
	Capital Stock		530,000
	(Issued 10,000 shares of $20 par value preferred stock at $53 per share)		
15	Capital Stock	7,200	
	Cash		7,200
	(Purchased 600 shares of common stock for the treasury at $12 per share)		

Instructions

On the basis of the explanation for each entry, prepare the entries that should have been made for the capital stock transactions.

Journalize cash dividends and indicate statement presentation.

E11.9 **(LO 3), AP** On January 1, Graves Corporation had 60,000 shares of no-par common stock issued and outstanding. The stock has a stated value of $4 per share. During the year, the following transactions occurred.

Apr. 1	Issued 9,000 additional shares of common stock for $11 per share.
June 15	Declared a cash dividend of $1.50 per share to stockholders of record on June 30.
July 10	Paid the $1.50 cash dividend.
Dec. 1	Issued 4,000 additional shares of common stock for $12 per share.
15	Declared a cash dividend on outstanding shares of $1.60 per share to stockholders of record on December 31.

Instructions

a. Prepare the entries, if any, on each of the three dates that involved dividends.

b. How are dividends and dividends payable reported in the financial statements prepared at December 31?

Allocate cash dividends to preferred and common stock.

E11.10 **(LO 3), AP** Knudsen Corporation was organized on January 1, 2024. During its first year, the corporation issued 2,000 shares of $50 par value preferred stock and 100,000 shares of $10 par value common stock. At December 31, the company declared the following cash dividends: 2024, $5,000; 2025, $12,000; and 2026, $28,000.

Instructions

a. Show the allocation of dividends to each class of stock, assuming the preferred stock dividend is 6% and noncumulative.

b. Show the allocation of dividends to each class of stock, assuming the preferred stock dividend is 7% and cumulative.

c. Journalize the declaration of the cash dividend at December 31, 2026, under part (b).

Compare effects of a stock dividend and a stock split.

E11.11 **(LO 3), AP** On October 31, the stockholders' equity section of Manolo Company's balance sheet consists of common stock $648,000 and retained earnings $400,000. Manolo is considering the following two courses of action: (1) declaring a 5% stock dividend on the 81,000 $8 par value shares outstanding or (2) effecting a 2-for-1 stock split that will reduce par value to $4 per share. The current market price is $17 per share.

Instructions

Prepare a tabular summary of the effects of the alternative actions on the company's stockholders' equity and outstanding shares. Use these column headings: **Before Action**, **After Stock Dividend**, and **After Stock Split**.

Journalize transactions for stock issuance, treasury stock purchase, cash dividend, and closing entries.

E11.12 **(LO 2, 3), AP** The stockholders' equity accounts of Ripley Corporation on January 1, 2025, were as follows.

Preferred Stock (8%, $100 par noncumulative, 5,000 shares authorized)	$ 400,000
Common Stock ($10 stated value, 800,000 shares authorized)	1,500,000
Paid-in Capital in Excess of Par—Preferred Stock	55,000
Paid-in Capital in Excess of Stated Value—Common Stock	880,000
Retained Earnings	760,000
Treasury Stock (8,000 common shares)	64,000

During 2025, the corporation had the following transactions and events pertaining to its stockholders' equity.

Mar 1	Issued 6,000 shares of common stock for $85 per share.
June 22	Purchased 1,000 additional shares of common treasury stock at $11 per share.
Sept. 1	Declared an 8% cash dividend on preferred stock, payable October 1.
Oct. 1	Paid the dividend declared on September 1.
Dec. 1	Declared a $0.70 per share cash dividend to common stockholders of record on December 15, payable December 31, 2025.
31	Determined that net income for the year was $110,000. Paid the dividend declared on December 1.

Instructions

Journalize the transactions for the dates shown. Include entries to close net income and dividends to Retained Earnings.

Determine preferred stock dividends.

E11.13 **(LO 3), AP** Marsh Corporation issued 900,000 of $1.10 noncumulative preferred stock. In its first year of operations, Marsh paid $650,000 of dividends to its preferred stockholders. In its second year, the company paid dividends of $550,000 to its preferred stockholders.

Instructions

a. What is the total annual preferred dividend supposed to be for the preferred stockholders?

b. Calculate any dividends in arrears in years 1 and 2. Would your answer change if the preferred stock was cumulative rather than noncumulative? Explain.

c. If a company has dividends in arrears, explain how the company should report them in the financial statements.

d. Marsh wants to pay dividends to its common stockholders in the third year. Is Marsh required to pay dividends first to its preferred stockholders before paying dividends to its common stockholders? Would your answer change if the preferred stock was cumulative rather than noncumulative? Explain.

Compare cash dividend, stock dividend, and stock split.

E11.14 **(LO 3), AN** Laine Inc. is considering one of the three following courses of action: (1) paying a $0.50 cash dividend, (2) distributing a 5% dividend, or (3) effecting a 2-for-1 stock split. The current share price is $14 per share.

Instructions

Help Laine make its decision by completing the following table (treat each possibility independently).

	Before Action	(1) After Cash Dividend	(2) After Stock Dividend	(3) After Stock Split
Total assets	$1,250,000			
Total liabilities	$ 250,000			
Stockholders' equity				
Common stock	600,000			
Retained earnings	400,000			
Total stockholders' equity	1,000,000			
Total liabilities and stockholders' equity	$1,250,000			
Number of common shares	100,000			

E11.15 (LO 4), AP **Wells Fargo & Company**, headquartered in San Francisco, is one of the nation's largest financial institutions. Suppose it reported the following selected accounts (in millions) as of December 31, 2025.

Prepare a stockholders' equity section.

Retained Earnings	$41,563
Preferred Stock	8,485
Common Stock—1\frac{2}{3}$ par value, authorized 6,000,000,000 shares; issued 5,245,971,422 shares	8,743
Treasury Stock—67,346,829 common shares	(2,450)
Paid-in Capital in Excess of Par—Common Stock	52,878
Accumulated Other Comprehensive Income	8,327

Instructions

Prepare the stockholders' equity section of the balance sheet for Wells Fargo as of December 31, 2025.

E11.16 (LO 4), AP The following stockholders' equity accounts, arranged alphabetically, are in the ledger of Ryder Corporation at December 31, 2025.

Prepare a stockholders' equity section.

Common Stock ($2 stated value)	$1,600,000
Paid-in Capital in Excess of Par—Preferred Stock	45,000
Paid-in Capital in Excess of Stated Value—Common Stock	1,050,000
Preferred Stock (8%, $100 par, noncumulative)	600,000
Retained Earnings	1,334,000
Treasury Stock (12,000 common shares)	72,000

Instructions

Prepare the stockholders' equity section of the balance sheet at December 31, 2025.

E11.17 (LO 4), AP The following accounts appear in the ledger of Paisan Inc. after the books are closed at December 31, 2025.

Prepare a stockholders' equity section.

Common Stock (no-par, $1 stated value, 400,000 shares authorized, 250,000 shares issued)	$ 250,000
Paid-in Capital in Excess of Stated Value—Common Stock	1,200,000
Preferred Stock ($50 par value, 8%, 40,000 shares authorized, 14,000 shares issued)	700,000
Retained Earnings	920,000
Treasury Stock (9,000 common shares)	64,000
Paid-in Capital in Excess of Par—Preferred Stock	24,000
Accumulated Other Comprehensive Loss	31,000

Instructions

Prepare the stockholders' equity section at December 31, assuming $100,000 of retained earnings is restricted for plant expansion. (Use Note R.)

E11.18 (LO 4), AP The following financial information is available for Flintlock Corporation.

Calculate ratios to evaluate dividend and earnings performance.

(in millions)	2025	2024
Average common stockholders' equity	$2,532	$2,591
Dividends declared for common stockholders	298	611
Dividends declared for preferred stockholders	40	40
Net income	504	555

Instructions

Calculate the payout ratio and return on common stockholders' equity for 2025 and 2024. Comment on your findings.

Calculate ratios to evaluate dividend and earnings performance.

E11.19 **(LO 4), AP** Suppose the following financial information is available for **Walgreens.**

(in millions)	2025	2024
Average common stockholders' equity	$13,622.5	$11,986.5
Dividends declared for common stockholders	471	394
Dividends declared for preferred stockholders	0	0
Net income	2,006	2,157

Instructions

Calculate the payout ratio and return on common stockholders' equity for 2025 and 2024. Comment on your findings.

Calculate ratios to evaluate profitability and solvency.

E11.20 **(LO 4), AN** Kojak Corporation decided to issue common stock and used the $300,000 proceeds to redeem all of its outstanding bonds on January 1, 2025. The following information is available for the company for 2025 and 2024.

	2025	2024
Net income	$ 182,000	$ 150,000
Dividends declared for preferred stockholders	8,000	8,000
Average common stockholders' equity	1,000,000	700,000
Total assets	1,200,000	1,200,000
Current liabilities	100,000	100,000
Total liabilities	200,000	500,000

Instructions

a. Compute the return on common stockholders' equity for both years.

b. Explain how it is possible that net income increased but the return on common stockholders' equity decreased.

c. Compute the debt to assets ratio for both years, and comment on the implications of this change in the company's solvency.

Compare issuance of stock financing to issuance of bond financing.

E11.21 **(LO 4), AN** Baja Airlines is considering these two alternatives for financing the purchase of a fleet of airplanes:

1. Issue 50,000 shares of common stock at $40 per share. (Cash dividends have not been paid nor is the payment of any contemplated.)
2. Issue 12%, 10-year bonds at face value for $2,000,000.

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 shares of common stock outstanding prior to the new financing.

Instructions

Determine the effect on net income and earnings per share for (a) issuing stock and (b) issuing bonds. Assume the new shares or new bonds will be outstanding for the entire year.

Compute ratios and interpret.

E11.22 **(LO 4), AN** Top management of Cabo company is considering two alternative capital structures for 2025. The first (the "no debt" structure) would be to have $1,000,000 in assets and $1,000,000 in stockholders' equity, with 40,000 shares outstanding the entire year. This is the structure the company had on December 31, 2024. Alternatively, (the "with debt" structure) on January 1, 2025, the company could issue $400,000 in debt at 4% interest and immediately use the proceeds to repurchase 20,000 shares of stock for $400,000. The expected amount of net income (ignoring taxes), prior to any interest costs, is $100,000 for 2025.

Assume the company pays dividends on common stock equal to its net income each year. Also, assume the accrued interest on the debt was paid at December 31, 2025, and the company has no other debt outstanding at year-end. Also, assume the company has $1,000,000 in assets at both the beginning and the end of 2025.

Instructions

a. Compute the company's net income and earnings per share under both structures. (Ignore income taxes in your computations.)

b. Compute the company's return on common stockholders' equity and return on assets under both structures.

c. Compute the company's debt to assets ratio under both structures.

d. Discus the impact that the borrowing had on the company's profitably and solvency. Was it a good idea to borrow the money to buy the treasury stock?

***E11.23 (LO 5), AP** On January 1, 2025, Lenne Corporation had $1,200,000 of common stock outstanding that was issued at par and retained earnings of $750,000. The company issued 30,000 shares of common stock at par on July 1 and earned net income of $400,000 for the year.

Journalize stock dividends.

Instructions

Journalize the declaration of a 15% stock dividend on December 10, 2025, for the following two independent assumptions.

a. Par value is $10 and market price is $15.

b. Par value is $5 and market price is $8.

Problems

P11.1 (LO 2, 4), AP Tidal Corporation was organized on January 1, 2025. It is authorized to issue 20,000 shares of 6%, $50 par value preferred stock and 500,000 shares of no-par common stock with a stated value of $1 per share. The following stock transactions were completed during the first year.

Journalize stock transactions, post, and prepare paid-in capital section.

Jan. 10	Issued 70,000 shares of common stock for cash at $4 per share.
Mar. 1	Issued 12,000 shares of preferred stock for cash at $53 per share.
May 1	Issued 120,000 shares of common stock for cash at $6 per share.
Sept. 1	Issued 5,000 shares of common stock for cash at $5 per share.
Nov. 1	Issued 3,000 shares of preferred stock for cash at $56 per share.

Instructions

a. Journalize the transactions.

b. Post to the stockholders' equity accounts. (Use T-accounts.)

c. Prepare the paid-in capital portion of the stockholders' equity section at December 31, 2025.

c. Tot. paid-in capital $1,829,000

P11.2 (LO 2, 3, 4), AP The stockholders' equity accounts of Cyrus Corporation on January 1, 2025, were as follows.

Journalize transactions, post, and prepare a stockholders' equity section; calculate ratios.

Preferred Stock (7%, $100 par noncumulative, 5,000 shares authorized)	$ 300,000
Common Stock ($4 stated value, 300,000 shares authorized)	1,000,000
Paid-in Capital in Excess of Par—Preferred Stock	15,000
Paid-in Capital in Excess of Stated Value—Common Stock	480,000
Retained Earnings	688,000
Treasury Stock (5,000 common shares)	40,000

During 2025, the corporation had the following transactions and events pertaining to its stockholders' equity.

Feb. 1	Issued 5,000 shares of common stock for $30,000.
Mar. 20	Purchased 1,000 additional shares of common treasury stock at $7 per share.
Oct. 1	Declared a 7% cash dividend on preferred stock, payable November 1.
Nov. 1	Paid the dividend declared on October 1.
Dec. 1	Declared a $0.50 per share cash dividend to common stockholders of record on December 15, payable December 31, 2025.
31	Determined that net income for the year was $280,000. Paid the dividend declared on December 1.

Instructions

a. Journalize the transactions. (Include entries to close net income and dividends to Retained Earnings.)

b. Enter the beginning balances in the accounts and post the journal entries to the stockholders' equity accounts. (Use T-accounts.)

c. Tot. paid-in capital $1,825,000

c. Prepare the stockholders' equity section of the balance sheet at December 31, 2025.

d. Calculate the payout ratio, earnings per share, and return on common stockholders' equity. (*Note:* Use the common shares outstanding on January 1 and December 31 to determine the average shares outstanding.)

Prepare a stockholders' equity section.

P11.3 **(LO 2, 3, 4), AP** On December 31, 2024, Jons Company had 1,300,000 shares of $5 par common stock issued and outstanding. At December 31, 2024, stockholders' equity had the amounts listed here.

Common Stock	$6,500,000
Additional Paid-in Capital	1,800,000
Retained Earnings	1,200,000

Transactions during 2025 and other information related to stockholders' equity accounts were as follows.

1. On January 10, issued at $107 per share 120,000 shares of $100 par value, 9% cumulative preferred stock.
2. On February 8, reacquired 15,000 shares of its common stock for $11 per share.
3. On May 9, declared the yearly cash dividend on preferred stock, payable June 10, to stockholders of record on May 31.
4. On June 8, declared a cash dividend of $1.20 per share on the common stock outstanding, payable on July 10 to stockholders of record on July 1.
5. Net income for 2025 was $3,600,000.

Instructions

b. Tot. stockholders' equity $23,153,000

a. Record the journal entries that are required for items 1–5 above.

b. Prepare the stockholders' equity section of Jons' balance sheet at December 31, 2025.

Reproduce Retained Earnings account, and prepare a stockholders' equity section.

P11.4 **(LO 3, 4), AP** The ledger of Waite Corporation at December 31, 2025, after the books have been closed, contains the following stockholders' equity accounts.

Preferred Stock (10,000 shares issued)	$1,000,000
Common Stock (300,000 shares issued)	1,500,000
Paid-in Capital in Excess of Par—Preferred Stock	200,000
Paid-in Capital in Excess of Stated Value—Common Stock	1,600,000
Retained Earnings	2,860,000

A review of the accounting records reveals this information:

1. Preferred stock is 8%, $100 par value, noncumulative. Since January 1, 2024, 10,000 shares have been outstanding; 20,000 shares are authorized.
2. Common stock is no-par with a stated value of $5 per share; 600,000 shares are authorized.
3. The January 1, 2025, balance in Retained Earnings was $2,380,000.
4. On October 1, 60,000 shares of common stock were sold for cash at $9 per share.
5. A cash dividend of $400,000 was declared and properly allocated to preferred and common stock on November 1. No dividends were paid to preferred stockholders in 2024.
6. Net income for the year was $880,000.
7. On December 31, 2025, the directors authorized disclosure of a $160,000 restriction of retained earnings for plant expansion. (Use Note A.)

Instructions

b. Tot. paid-in capital $4,300,000

a. Reproduce the Retained Earnings account (T-account) for the year.

b. Prepare the stockholders' equity section of the balance sheet at December 31.

Prepare entries for stock transactions, and prepare a stockholders' equity section.

P11.5 **(LO 2, 4), AP** Layes Corporation has been authorized to issue 20,000 shares of $100 par value, 7%, noncumulative preferred stock and 1,000,000 shares of no-par common stock. The corporation assigned a $5 stated value to the common stock. At December 31, 2025, the ledger contained the following balances pertaining to stockholders' equity.

Preferred Stock	$ 150,000
Paid-in Capital in Excess of Par—Preferred Stock	20,000
Common Stock	2,000,000
Paid-in Capital in Excess of Stated Value—Common Stock	1,520,000
Treasury Stock (4,000 common shares)	36,000
Retained Earnings	82,000
Accumulated Other Comprehensive Income	51,000

The preferred stock was issued for $170,000 cash. All common stock issued was for cash. In November 4,000 shares of common stock were purchased for the treasury at a per share cost of $9. No dividends were declared in 2025.

Instructions

a. Prepare the journal entries for the following.

1. Issuance of preferred stock for cash.
2. Issuance of common stock for cash.
3. Purchase of common treasury stock for cash.

b. Prepare the stockholders' equity section of the balance sheet at December 31, 2025.

b. Tot. stockholders' equity $3,787,000

P11.6 (LO 2, 3, 4), AP On January 1, 2025, Kimbel Inc. had these stockholders' equity balances.

Prepare a stockholders' equity section.

Excel

Common Stock, $1 par (2,000,000 shares authorized, 600,000 shares issued and outstanding)	$ 600,000
Paid-in Capital in Excess of Par	1,500,000
Retained Earnings	700,000
Accumulated Other Comprehensive Income	60,000

During 2025, the following transactions and events occurred.

1. Issued 50,000 shares of $1 par value common stock for $3 per share.
2. Issued 60,000 shares of common stock for cash at $4 per share.
3. Purchased 20,000 shares of common stock for the treasury at $3.80 per share.
4. Declared and paid a cash dividend of $207,000.
5. Earned net income of $410,000.
6. Had other comprehensive income of $17,000.

Instructions

Prepare the stockholders' equity section of the balance sheet at December 31, 2025.

Tot. stockholders' equity $3,394,000

P11.7 (LO 4), AP **Writing** Spahn Company manufactures backpacks. During 2025, Spahn issued bonds at 10% interest and used the cash proceeds to purchase treasury stock. The following financial information is available for Spahn Company for the years 2025 and 2024.

Evaluate a company's profitability and solvency.

	2025	2024
Sales revenue	$ 9,000,000	$ 9,000,000
Net income	2,240,000	2,500,000
Interest expense	500,000	140,000
Tax expense	670,000	750,000
Dividends paid on common stock	890,000	1,026,000
Dividends paid on preferred stock	300,000	300,000
Total assets (year-end)	14,500,000	16,875,000
Average total assets	15,687,500	17,763,000
Total liabilities (year-end)	6,000,000	3,000,000
Avg. total common stockholders' equity	9,400,000	14,100,000

Instructions

a. Use the information above to calculate the following ratios for both years: (1) return on assets, (2) return on common stockholders' equity, (3) payout ratio, (4) debt to assets ratio, and (5) times interest earned.

b. Referring to your findings in part (a), discuss the changes in the company's profitability from 2024 to 2025.

c. Referring to your findings in part (a), discuss the changes in the company's solvency from 2024 to 2025.

d. Based on your findings in (b), was the decision to issue debt to purchase common stock a wise one?

Prepare dividend entries, prepare a stockholders' equity section, and calculate ratios.

***P11.8 (LO 3, 4, 5), AP** On January 1, 2025, Tacoma Corporation had these stockholders' equity accounts.

Common Stock ($10 par value, 70,000 shares issued and outstanding)	$700,000
Paid-in Capital in Excess of Par	500,000
Retained Earnings	620,000

During the year, the following transactions occurred.

Jan. 15	Declared a $0.50 cash dividend per share to stockholders of record on January 31, payable February 15.
Feb. 15	Paid the dividend declared in January.
Apr. 15	Declared a 10% stock dividend to stockholders of record on April 30, distributable May 15. On April 15, the market price of the stock was $14 per share.
May 15	Issued the shares for the stock dividend.
Dec. 1	Declared a $0.60 per share cash dividend to stockholders of record on December 15, payable January 10, 2026.
31	Determined that net income for the year was $400,000.

Instructions

a. Journalize the transactions. (Include entries to close net income and dividends to Retained Earnings.)

b. Enter the beginning balances and post the entries to the stockholders' equity T-accounts. (*Note:* Open additional stockholders' equity accounts as needed.)

c. Prepare the stockholders' equity section of the balance sheet at December 31.

d. Calculate the payout ratio and return on common stockholders' equity.

c. Tot. stockholders' equity $2,138,800

Continuing Case

Cookie Creations

leungchopan/ Shutterstock.com

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 through 10.)

CC11 Part 1 Because Natalie has been so successful with Cookie Creations and her friend Curtis Lesperance has been just as successful with his coffee shop, they conclude that they could benefit from each other's business expertise. Curtis and Natalie next evaluate the different types of business organization. Because of the advantage of limited personal liability, they decide to form a corporation.

Natalie and Curtis are very excited about this new business venture. They come to you with information they have gathered about their companies and with a number of questions.

Part 2 After establishing their company's fiscal year to be October 31, Natalie and Curtis began operating Cookie & Coffee Creations Inc. on November 1, 2024. On that date, they issued both preferred and common stock. Natalie and Curtis now want to prepare financial information for the first year of operations.

Go to Wiley Course Resources for complete case details and instructions.

Comprehensive Accounting Cycle Review

Journalize transactions and prepare financial statements.

ACR11.1 (LO 2, 3, 4), AP Hawkeye Corporation's balance sheet at December 31, 2024, is presented as follow.

Hawkeye Corporation
Balance Sheet
December 31, 2024

Cash	$ 24,600	Accounts payable	$ 25,600
Accounts receivable	45,500	Common stock ($10 par)	80,000
Allowance for doubtful accounts	(1,500)	Retained earnings	127,400
			$233,000
Supplies	4,400		
Land	40,000		
Buildings	142,000		
Accumulated depreciation—buildings	(22,000)		
	$233,000		

During 2025, the following transactions occurred.

1. On January 1, Hawkeye issued 1,200 shares of $40 par, 7% preferred stock for $49,200.
2. On January 1, Hawkeye also issued 900 shares of the $10 par value common stock for $21,000.
3. Hawkeye performed services for $320,000 on account.
4. On April 1, 2025, Hawkeye collected fees of $36,000 in advance for services to be performed from April 1, 2025, to March 31, 2026.
5. Hawkeye collected $276,000 from customers on account.
6. Hawkeye bought $35,100 of supplies on account.
7. Hawkeye paid $32,200 on accounts payable.
8. Hawkeye reacquired 400 shares of its common stock on June 1 for $28 per share.
9. Paid other operating expenses of $188,200.
10. On December 31, 2025, Hawkeye declared the annual cash dividend on preferred stock and a $1.20 per share dividend on the outstanding common stock, all payable on January 15, 2026.
11. An account receivable of $1,700 which originated in 2024 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 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 salvage 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, 2025.

c. Prepare an income statement and a retained earnings statement for the year ending December 31, 2025, and a classified balance sheet as of December 31, 2025.

b. Totals $740,690
c. Net income $81,970
Tot. assets $421,000

Journalize transactions and prepare financial statements.

ACR11.2 (LO 2, 3, 4), AP Karen Noonan opened Clean Sweep Inc. on February 1, 2025. During February, the following transactions were completed.

Feb.	1	Issued 5,000 shares of Clean Sweep common stock for $13,000. Each share has a $1.50 par.
	1	Borrowed $8,000 on a 2-year, 6% note payable.
	1	Paid $9,020 to purchase used floor and window cleaning equipment from a company going out of business ($4,820 was for the floor equipment and $4,200 for the window equipment).
	1	Paid $220 for February Internet and phone services.
	3	Purchased cleaning supplies for $980 on account.
	4	Hired 4 employees. Each will be paid $480 per 5-day work week (Monday–Friday). Employees will begin working Monday, February 9.
	5	Obtained insurance coverage for $9,840 per year. Coverage runs from February 1, 2025, through January 31, 2026. Karen paid $2,460 cash for the first quarter of coverage.
	5	Discussions with the insurance agent indicated that providing outside window cleaning services would cost too much to insure. Karen sold the window cleaning equipment for $3,950 cash.
	16	Billed customers $3,900 for cleaning services performed through February 13, 2025.
	17	Received $540 from a customer for 4 weeks of cleaning services to begin February 21, 2025. (By paying in advance, this customer received 10% off the normal weekly fee of $150.)
	18	Paid $300 on amount owed on cleaning supplies.
	20	Paid $3 per share to buy 300 shares of Clean Sweep common stock from a shareholder who disagreed with management goals. The shares will be held as treasury shares.
	23	Billed customers $4,300 for cleaning services performed through February 20.
	24	Paid cash for employees' wages for 2 weeks (February 9–13 and 16–20).
	25	Collected $2,500 cash from customers billed on February 16.
	27	Paid $220 for Internet and phone services for March.
	28	Declared and paid a cash dividend of $0.20 per share.

Instructions

a. Journalize the February transactions. (You do not need to include an explanation for each journal entry.)

b. Post to the ledger accounts (Use T-accounts.)

c. Trial bal. totals $30,420

c. Prepare a trial balance at February 28, 2025.

d. Journalize the following adjustments. (Round all amounts to whole dollars.)

1. Services performed for customers through February 27, 2025, but unbilled and uncollected were $3,800.
2. Received notice that a customer who was billed $200 for services performed February 10 has filed for bankruptcy. Clean Sweep does not expect to collect any portion of this outstanding receivable.
3. Clean Sweep uses the allowance method to estimate bad debts. Clean Sweep estimates that 3% of its month-end receivables will not be collected.
4. Record 1 month of depreciation for the floor equipment. Use the straight-line method, an estimated life of 4 years, and $500 salvage value.
5. Record 1 month of insurance expense.
6. An inventory count shows $400 of supplies on hand at February 28.
7. One week of services were performed for the customer who paid in advance on February 17.
8. Accrue for wages owed through February 28, 2025.
9. Accrue for interest expense for 1 month.
10. Karen estimates a 20% income tax rate. (*Hint:* Prepare an income statement up to "income before taxes" to help with the income tax calculation.)

e. Post adjusting entries to the T-accounts.

f. Prepare an adjusted trial balance.

g. Net income $3,117
Tot. assets $26,101

g. Prepare a multiple-step income statement, a retained earnings statement, and a properly classified balance sheet as of February 28, 2025.

h. Journalize closing entries.

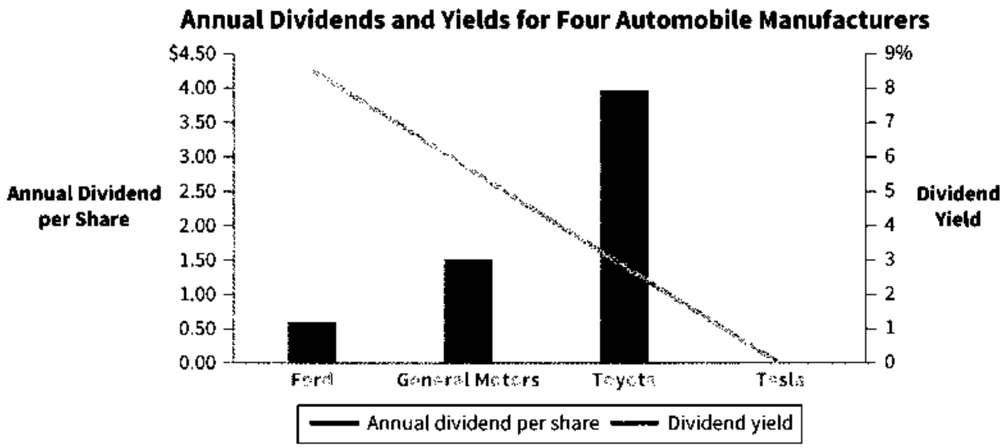
Data Analytics in Action

Using Data Visualization to Analyze Dividends

DA11.1 Data visualization can be used to compare dividends and stock prices.

Example: Recall the *Investor Insight* box "What About Dividends?" presented in the chapter. The dividend yield ratio is the annual dividend per share divided by the market price per share. Two factors can contribute to a high dividend yield: (1) the payment of a large dividend, which causes the numerator to be large, or (2) having a low share market price, which causes the denominator to be small.

Ford Motor Company is considered to have a high dividend yield. But how does Ford's dividend yield compare to its competitors? Consider the following chart, which presents the dividends per share and dividend yields for Ford, General Motors, Toyota, and Tesla.



Source: Based on MarketBeat and Nasdaq.

If you examine the pattern of dividend yields, observe that both General Motors and Toyota have higher dividends than Ford, while Tesla currently pays no dividends. The dividend yields are much higher for Ford than those of General Motors and Toyota, while Tesla has a zero yield due to not paying dividends.

For this case, you will review data for these four companies to determine how the effect of stock market prices can help explain the dividend yield. You will create and analyze a combo column and line chart to determine how an investor might balance stock prices and dividend yields when deciding which stocks to buy.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Analytics to Compare the Effect of Stock Splits

DA11.2 Warren Buffet, the CEO of Berkshire Hathaway, does not believe in stock splits, as noted in the Investor Insight box "A No-Split Philosophy" presented in the chapter. On the other hand, The Walt Disney Company stock has been split a few times. For this case, you will use stock prices from both companies to create and analyze a line chart and a combo clustered column and line chart.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Analytics to Understand the Behavior of Income over Time

DA11.3 For this case, you will use Nike data regarding annual net income and annual shares outstanding to calculate earnings per share, create a combo clustered column and line chart to visualize the data, and evaluate trends and possible causes that may influence decisions about investing in Nike.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Analytics to Understand the Behavior of Stock Prices over Time

DA11.4 Investors buy and sell stocks every day. Volume of trade is the total quantity of shares or contracts traded for a specified security. While the market price changes constantly during the day, the most common reporting of the price is the last trade of the day, called the closing price. For this case, you will use 5 years of data about closing stock price and volume for Nike to calculate the average market price and the average volume of shares traded daily, and create a combo chart for the closing stock price, average price, volume, and average volume to evaluate trends and possible causes of the trends that may influence whether you would choose to invest in Nike.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Analytics to Understand the Performance of Environmental, Social, and Corporate Governance (ESG) over Time

DA11.5 Stakeholders increasingly care about environmental, social, and corporate governance (ESG) performance. Companies often share their goals and benchmarks along with ESG reports to their shareholders. For this case, you will use an excerpt of data from Nike's ESG report to create a line chart documenting the yearly percentages for the three categories, evaluate any trends you see, and indicate how that information might influence decisions about investing in Nike.

Go to Wiley Course Resources for complete case details and instructions.

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT11.1 The stockholders' equity section of **Apple Inc.**'s balance sheet is shown in the Consolidated Statement of Financial Position in Appendix A. The complete annual report, including the notes to its financial statements, is available at the company's website.

Instructions

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 26, 2020? (Round to the nearest full percent.)

c. How many shares of common stock were outstanding at September 28, 2019, and at September 26, 2020?

d. Calculate the payout ratio, earnings per share, and return on common stockholders' equity for 2020.

Comparative Analysis Problem: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT11.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements of **Under Armour, Inc.** are presented in Appendix C.

Instructions

a. Based on the information in these financial statements, compute the 2020 return on common stockholders' equity, debt to assets ratio, and return on assets for each company.

b. What conclusions concerning the companies' profitability can be drawn from these ratios? Which company relies more on debt to boost its return to common shareholders?

c. Compute the payout ratio for each company. Which pays out a higher percentage of its earnings?

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT11.3 The financial statements of **Amazon.com, Inc.** are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

a. Based on the information in these financial statements, compute the return on common stockholders' equity, debt to assets ratio, and return on assets for each company for the most recent year provided.

b. What conclusions concerning the companies' profitability can be drawn from these ratios? Which company relies more on debt to boost its return to common shareholders?

c. Compute the payout ratio for each company. Which pays out a higher percentage of its earnings?

Interpreting Financial Statements

CT11.4 Marriott Corporation split into two companies: **Host Marriott Corporation** and **Marriott International**. Host Marriott retained ownership of the corporation's vast hotel and other properties, while Marriott International, rather than owning hotels, managed them. The purpose of this split was to free Marriott International from the "baggage" associated with Host Marriott, thus allowing it to be more aggressive in its pursuit of growth. The following information (in millions) is provided for each corporation for their first full year operating as independent companies.

	Host Marriott	Marriott International
Sales revenue	$1,501	$8,415
Net income	(25)	200
Total assets	3,822	3,207
Total liabilities	3,112	2,440
Common stockholders' equity	710	767

Instructions

a. The two companies were split by the issuance of shares of Marriott International to all shareholders of the previous combined company. Discuss the nature of this transaction.

b. Calculate the debt to assets ratio for each company.

c. Calculate the return on assets and return on common stockholders' equity for each company.

d. The company's debtholders were fiercely opposed to the original plan to split the two companies because the original plan had Host Marriott absorbing the majority of the company's debt. They relented only when Marriott International agreed to absorb a larger share of the debt. Discuss the possible reasons the debtholders were opposed to the plan to split the company.

Real-World Focus

CT11.5 You should become familiar with reviewing the stockholders' equity section of an annual report to identify its major components.

Instructions

Select a well-known company, search the Internet for its most recent annual report, and then answer the following questions.

a. What is the company's name?

b. What classes of capital stock has the company issued?

c. For each class of stock:

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 stock? How many shares?

Decision-Making Across the Organization

CT11.6 During a recent period, the fast-food chain **Wendy's International** purchased many treasury shares. This caused the number of shares outstanding to fall from 124 million to 105 million. The following information was drawn from the company's financial statements (in millions).

	Information for the Year after Purchase of Treasury Stock	Information for the Year before Purchase of Treasury Stock
Net income	$ 193.6	$ 123.4
Total assets	2,076.0	1,837.9
Average total assets	2,016.9	1,889.8
Total common stockholders' equity	1,029.8	1,068.1
Average common stockholders' equity	1,078.0	1,126.2
Total liabilities	1,046.3	769.9
Average total liabilities	939.0	763.7
Interest expense	30.2	19.8
Income taxes	113.7	84.3
Cash provided by operations	305.2	233.8
Cash dividends paid on common stock	26.8	31.0
Preferred stock dividends	0	0
Average number of common shares outstanding	109.7	119.9

Instructions

Use the information provided to answer the following questions.

a. Compute earnings per share, return on common stockholders' equity, and return on assets for both years. Discuss the change in the company's profitability over this period.

b. Compute the dividend payout ratio. Also compute the average cash dividend paid per share of common stock (dividends paid divided by the average number of common shares outstanding). Discuss any change in these ratios during this period and the implications for the company's dividend policy.

c. Compute the debt to assets ratio and times interest earned. Discuss the change in the company's solvency.

d. Based on your findings in (a) and (c), discuss to what extent any change in the return on common stockholders' equity was the result of increased reliance on debt.

e. Does it appear that the purchase of treasury stock and the shift toward more reliance on debt were wise strategic moves?

Communication Activity

CT11.7 Earl Kent, your uncle, is an inventor who has decided to incorporate. Uncle Earl 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 a state incorporation application. Can you tell me the difference among the following terms: (1) authorized stock, (2) issued stock, (3) outstanding stock, and (4) preferred stock?"

Instructions

In a brief note, differentiate for Uncle Earl the four different stock terms. Write the letter to be friendly, yet professional.

Ethics Cases

CT11.8 The R&D division of Pele Corp. has just developed a chemical for sterilizing the vicious Brazilian "killer bees" which are invading Mexico and the southern United States. The president of Pele is anxious to get the chemical on the market because Pele profits need a boost—and his job is in jeopardy because of decreasing sales and profits. Pele 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 Pele's R&D division strongly recommends further research in the laboratory to test the 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 lab." 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 Pele Corp. from such lawsuits. We can't lose any more than our investment in the new corporation, and we'll invest 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, Pele creates a new wholly owned corporation called Cabo Inc., 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 Pele shield itself against losses of Cabo Inc.?

CT11.9 Cooper Corporation has paid 60 consecutive quarterly cash dividends (15 years). The last 6 months have been a real cash drain on the company, however, as profit margins have been greatly narrowed by increasing competition. With a cash balance sufficient to meet only day-to-day operating needs, the president, Sonny Boyd, has decided that a stock dividend instead of a cash dividend should be declared. He tells Cooper's financial vice president, Dana Marks, to issue a press release stating that the company is extending its consecutive dividend record with the issuance of a 5% stock dividend. "Write the press release convincing the stockholders that the stock dividend is just as good as a cash dividend," he orders. "Just watch our stock rise when we announce the stock dividend; it must be a good thing if that happens."

Instructions

a. Who are the stakeholders in this situation?

b. Is there anything unethical about president Boyd's intentions or actions?

c. What is the effect of a stock dividend on a corporation's stockholders' equity accounts? Which would you rather receive as a stockholder—a cash dividend or a stock dividend? Why?

All About You

CT11.10 In response to the Sarbanes-Oxley Act, many companies have implemented formal ethics codes. Many other organizations also have ethics codes.

Instructions

Obtain the ethics code from an organization that you belong to (e.g., student organization, business school, employer, or a volunteer organization). Evaluate the ethics code based on how clearly it identifies proper and improper behavior. Discuss its strengths, and how it might be improved.

FASB Codification Activity

CT11.11 If your school has a subscription to the FASB Codification, log in and prepare responses to the following.

a. What is the stock dividend?

b. What is a stock split?

c. At what percentage point does the issuance of additional shares qualify as a stock dividend, as opposed to a stock split?

Considering People, Planet, and Profit

CT11.12 *VentureBeat.com* has an article entitled "Startups: Should You Incorporate as a Public Benefit Corporation?"

Instructions

Do an online search on VentureBeat and the title of the article. Read the article and then answer the following questions.

a. How does the article describe public benefit corporations? What is the difference between a public benefit corporation and a "B Corp." What companies does the article say have both certifications?

b. Are public benefit corporations and non-profit corporations the same thing?

c. How are the public benefit goals of a public benefit corporation enforced?

d. In what way can public benefit corporation status protect a company from lawsuits? What example does the article give?

Answers to Insight and Accounting Across the Organization Questions

The Impact of Corporate Social Responsibility **Q:** Why are CSR-related shareholder proposals increasing? **A:** These proposals are increasing as more and more investors believe that environmental and social factors can significantly impact shareholder value over the long term.

How to Read Stock Quotes **Q:** For stocks traded on organized exchanges, how are the dollar prices per share established? What factors might influence the price of shares in the marketplace? **A:** The dollar prices per share are established by the interaction between buyers and sellers of the shares. Factors that might influence stock prices include a company's anticipated future earnings, its current financial position, and the current state of the economy.

What About Dividends? **Q:** What factors must management consider in deciding how large a dividend to pay? **A:** Stockholders who invest in companies that historically pay dividends will expect to receive dividends and therefore monitor its dividend practices. The payment of a large cash dividend could lead to liquidity problems for a company. However, a small (or missed) dividend might cause dissatisfaction among stockholders.

A No-Split Philosophy **Q:** Why does Warren Buffett usually oppose stock splits? **A:** 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 stock price discourages short-term investment.

CHAPTER 12

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Statement of Cash Flows

Chapter Preview

The balance sheet, 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 **Eastman Kodak** finance cash dividends of $649 million in a year in which it earned only $17 million? How could **United Air Lines** purchase new planes that cost $1.9 billion in a year in which it reported a net loss of over $2 billion? How did the companies that spent a combined fantastic $4.1 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.

Feature Story

Got Cash?

Companies must be ready to respond to changes quickly in order to survive and thrive. This requires careful management of cash. One company that managed cash successfully in its early years was Microsoft. During those years, the company paid much of its payroll with stock options (rights to purchase company stock in the future at a given price) instead of cash. This conserved cash and turned more than a thousand of its employees into millionaires.

Eventually, Microsoft had a different kind of cash problem. It reached a more "mature" stage in life, generating so much cash—roughly $1 billion per month—that it could not always figure out what to do with it. At one time, Microsoft had accumulated $60 billion.

The company said it was accumulating cash to invest in new opportunities, buy other companies, and pay off pending lawsuits. Microsoft's stockholders complained that holding all this cash was putting a drag on the company's profitability. Why? Because Microsoft had the cash invested in very low-yielding government securities. Stockholders felt that the company either should find new investment projects that would bring higher returns, or return some of the cash to stockholders.

Finally, Microsoft announced a plan to return cash to stockholders by paying a special one-time $32 billion dividend. This special dividend was so large that, according to the U.S. Commerce Department, it caused total personal income in the United States to rise by 3.7% in one month—the largest increase ever recorded by the agency. (It also made the holiday season brighter, especially for retailers in the Seattle area.) Microsoft also doubled its regular annual dividend to $3.50 per share. Further, it announced that it would spend another $30 billion buying treasury stock.

Apple also has encountered this cash "problem." Recently, Apple had approximately $100 billion in liquid assets (cash, cash equivalents, and investment securities). The company was generating $69 billion of cash per year from its operating activities but spending only about $10 billion on plant assets. In response to shareholder pressure, Apple announced that it would begin to pay a quarterly dividend of $2.65 per share and buy back up to $10 billion of its stock. Analysts noted that the dividend consumes only $10 billion of cash per year. This leaves Apple wallowing in cash. The rest of us should have such problems.

Source: Based on "Business: An End to Growth? Microsoft's Cash Bonanza," *The Economist* (July 23, 2005), p. 61.

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Discuss the usefulness and format of the statement of cash flows.	• Usefulness of the statement of cash flows • Classification of cash flows • Significant noncash activities • Format of the statement of cash flows	**DO IT! 1** Classification of Cash Flows
LO 2 Prepare a statement of cash flows using the indirect method.	• Indirect and direct methods • Indirect method—Computer Services Company • 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	**DO IT! 2a** Cash Flows from Operating Activities **2b** Indirect Method
LO 3 Analyze the statement of cash flows.	• The corporate life cycle • Free cash flow	**DO IT! 3** Free Cash Flow

Go to the Review and Practice section at the end of the chapter for a review of key concepts and practice applications with solutions.

Visit Wiley Course Resources for additional tutorials and practice opportunities.

12.1 Usefulness and Format of the Statement of Cash Flows

LEARNING OBJECTIVE 1

Discuss the usefulness and format of the statement of cash flows.

The balance sheet, income statement, and retained earnings statement provide only limited information about a company's cash flows (cash receipts and cash payments).

- Comparative balance sheets show the net 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 based on the accrual basis of accounting. But, it does not indicate the amount of cash generated by operating activities.
- The retained earnings statement shows cash dividends declared. But, it does not show 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 (see Helpful Hint).

HELPFUL HINT

In this chapter, when we refer to cash, we are also including cash equivalents (short-term, highly liquid, very low-risk securities).

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 helps 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 better predict the amounts, timing, and uncertainty of future cash flows 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 stockholders 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 (see Ethics Note). 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 net 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 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

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 generate 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 stockholders, repurchasing shares, and paying dividends.

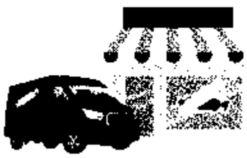
The operating activities category is the most important. It shows the cash provided by company operations. This source of cash is generally considered to be the best measure of a company's ability to generate sufficient cash to continue as a going concern.

Illustration 12.1 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.*

ILLUSTRATION 12.1

Typical receipt and payment classifications

Operating Activities



Investing Activities

Financing Activities

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 long-term 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 long-term liabilities and stockholders' equity**
- Cash inflows:
  - From sale of common and preferred stock.
  - From issuance of debt (bonds and notes).
- Cash outflows:
  - To stockholders as dividends.
  - To redeem long-term debt or reacquire capital stock (treasury stock).

Note the following general guidelines.

1. Operating activities involve income statement items.
2. Investing activities involve cash flows resulting from changes in investments and long-term asset items.
3. Financing activities involve cash flows resulting from changes in long-term liability and stockholders' equity items.

Companies classify as operating activities some cash flows related to investing or financing activities. For example, receipts of investment revenue (interest and dividends) are classified as operating activities. So are payments of interest to lenders. Why are these considered operating activities? **Because companies report these items in the income statement, where results of operations are shown.**

Significant Noncash Activities

Not all of a company's significant activities involve cash. Examples of significant noncash activities are as follows.

1. Direct issuance of common stock to purchase assets.
2. Conversion of bonds into common stock.
3. Direct issuance of debt to purchase assets.
4. Exchanges of plant assets.

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 schedule** at the bottom of the statement of cash flows or in a **separate note or supplementary schedule** to the financial statements (see Helpful Hint). The reporting of these noncash activities in a separate schedule satisfies the **full disclosure principle.**

In solving homework assignments, you should present significant noncash investing and financing activities in a separate schedule at the bottom of the statement of cash flows (see the last item in Illustration 12.2 below).

HELPFUL HINT

Do not include noncash investing and financing activities in the body of the statement of cash flows. Report this information in a separate schedule.

Accounting Across the Organization Target Corporation

⊙TARGET

BCFC/Shutterstock.com

Net *What?*

Net income is not the same as net cash provided by operating activities. The table shows some results from recent annual reports (dollars in millions), including **Target Corporation.** Note how the numbers differ greatly across the list even though all these companies engage in retail merchandising.

Company	Net Income	Net Cash Provided by Operating Activities
Kohl's Corporation	$ 889	$ 1,884
Walmart Inc.	16,669	25,591
J. C. Penney Company, Inc.	(1,388)	(1,814)
Costco Wholesale Corp.	4,002	8,861
Target Corporation	1,971	6,520

In general, why do differences exist between net income and net cash provided by operating activities? (Answer is available at the end of the chapter.)

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 noncash investing and financing activities. **Illustration 12.2** shows a widely used form of the statement of cash flows.

ILLUSTRATION 12.2

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
Noncash investing and financing activities		
(List of individual noncash 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.
- The net increase or decrease in cash is added to the beginning cash balance to arrive at the ending cash balance—the same amount reported on the balance sheet.

The FASB now requires that restricted cash be included with cash and cash equivalents when reconciling the beginning and ending amounts on the statement 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 generate revenues and expenses and enter into the determination of net income.
- Report as investing activities transactions that (a) acquire and dispose of investments and long-term assets and (b) lend money and collect loans.
- Report as financing activities transactions that (a) obtain cash from issuing debt and repay the amounts borrowed and (b) obtain cash from stockholders and pay them dividends.

DO IT! 1 Classification of Cash Flows

During its first week, Duffy & Stevenson Company had these transactions.

1. Issued 100,000 shares of common stock at par for $800,000 cash.
2. Borrowed $200,000 from Castle Bank, signing a 5-year note bearing 8% interest.
3. Purchased two semi-trailer trucks for $170,000 cash.
4. Paid employees $12,000 for salaries and wages.
5. Collected $20,000 cash for services performed.

Classify each of these transactions by type of cash flow activity. (*Hint:* Refer to Illustration 12.1.)

Solution

1. Financing activity.
2. Financing activity.
3. Investing activity.
4. Operating activity.
5. Operating activity.

Related exercise material: BE12.1, BE12.2, BE12.3, DO IT! 12.1, E12.1, E12.2, and E12.3.

12.2 Preparing the Statement of Cash Flows—Indirect Method

LEARNING OBJECTIVE 2

Prepare a statement of cash flows using the indirect method.

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.

1. **Comparative balance sheets.** Information in the comparative balance sheets indicates the amount of the changes in assets, liabilities, and stockholders' equity from the beginning to the end of the period.
2. **Current income statement.** Information in this statement helps determine the amount of net cash provided or used by operating activities during the period.
3. **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, explained in Illustration 12.3.

ILLUSTRATION 12.3
Three major steps in preparing the statement of cash flows

	Explanation
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 balance sheets and selected additional data.
Step 2 Analyze changes in noncurrent asset and liability accounts and stockholders' equity accounts and report as investing and financing activities, or disclose as noncash transactions.	This step involves analyzing comparative balance sheet 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 balance sheet to make sure the amounts agree.	The difference between the beginning and ending cash balances can be easily computed from comparative balance sheets.

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 (98%) use this method. Companies favor the indirect method for two reasons:
  1. It is easier and less costly to prepare.
  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. It is prepared by adjusting each item in the income statement from the accrual basis to the cash basis.

The FASB 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 12A illustrates the direct method.

Indirect Method—Computer Services Company

To explain how to prepare a statement of cash flows using the indirect method, we use financial information from Computer Services Company. **Illustration 12.4** presents Computer Services' current- and previous-year balance sheets, its current-year income statement, and

ILLUSTRATION 12.4

Comparative balance sheets, income statement, and additional information for Computer Services Company

Computer Services Company
Comparative Balance Sheets
December 31

	2025	2024	Change in Account Balance Increase/ Decrease
Assets			
Current assets			
Cash	$ 55,000	$ 33,000	$ 22,000 Increase
Accounts receivable	20,000	30,000	10,000 Decrease
Inventory	15,000	10,000	5,000 Increase
Prepaid expenses	5,000	1,000	4,000 Increase
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
Total assets	$398,000	$138,000	
Liabilities and Stockholders' Equity			
Current liabilities			
Accounts payable	$ 28,000	$ 12,000	$ 16,000 Increase
Income taxes payable	6,000	8,000	2,000 Decrease
Long-term liabilities			
Bonds payable	130,000	20,000	110,000 Increase
Stockholders' equity			
Common stock	70,000	50,000	20,000 Increase
Retained earnings	164,000	48,000	116,000 Increase
Total liabilities and stockholders' equity	$398,000	$138,000	

Computer Services Company
Income Statement
For the Year Ended December 31, 2025

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 2025:

1. Depreciation expense was comprised of $6,000 for building and $3,000 for equipment.
2. 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 common stock at par for $20,000 cash.
6. Declared and paid a $29,000 cash dividend.

We now apply the three steps for preparing a statement of cash flows to the information provided for Computer Services Company.

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 generally accepted accounting principles (GAAP), most companies use the accrual basis of accounting.

- This basis requires that companies record revenue when a performance obligation is satisfied and record expenses when incurred.
- Revenues include credit sales for which the company has not yet collected cash.
- Expenses incurred include some items that have not yet been 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 12.5** lists the three types of adjustments.

ILLUSTRATION 12.5
Three types of adjustments to convert net income to net cash provided by operating activities

Net Income	+/–	Adjustments	=	Net Cash Provided/ Used by Operating Activities
		• **Add back noncash expenses,** such as depreciation expense and amortization expense. • **Deduct gains and add losses** that resulted from investing and financing activities. • **Analyze changes** to noncash current asset and current liability accounts.		

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 noncash charge.
- The company must add it back to net income to negate the effect of the expense to arrive at net cash provided by operating activities (see **Helpful Hint**).

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.

Computer Services reports depreciation expense in the statement of cash flows as shown in **Illustration 12.6**.

ILLUSTRATION 12.6
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

Companies frequently list depreciation and similar noncash charges, such as amortization of intangible assets and bad debt expense, as the first adjustment to net income in the statement of cash flows.

Loss on Disposal of Plant Assets

Illustration 12.1 shows that cash received from the sale (disposal) of plant assets is reported in the investing activities section. Because of this, **companies 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 the disposal of plant assets (book value $7,000, less $4,000 cash received from disposal of plant assets). The journal entry to record this transaction would have been as follows.

Cash	4,000	
Accumulated Depreciation—Equipment	1,000	
Loss on Disposal of Plant Assets	3,000	
Equipment		8,000

- The company's loss of $3,000 should be added to net income in order to determine net cash provided by operating activities.
- The loss reduced net income but did not reduce cash.

Illustration 12.7 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. (The cash received of $4,000 will be reported in the investing activities section, as discussed later.)

ILLUSTRATION 12.7
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 net income in order to determine net cash provided by operating activities.
- **In the case of either a gain or a loss, companies report the actual amount of cash received from the sale in the investing activities section of the statement of cash flows.**

Changes to Noncash 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 as incurred.

- Accounts Receivable reflects amounts owed to the company for sales that have been made but for which cash collections have not yet been received.
- Prepaid Insurance reflects insurance that has been paid for but has not yet expired (therefore has not been expensed).
- Salaries and Wages Payable reflects salaries and wages expense that has been incurred 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 Noncash Current Assets The adjustments required for changes in noncash 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 12.8 shows that Computer Services had $507,000 in sales revenue (as reported on the income statement), but it collected $517,000 in cash.

ILLUSTRATION 12.8
Analysis of accounts receivable

Accounts Receivable

1/1/25	Balance	30,000	Receipts from customers	517,000
	Sales revenue	507,000		
12/31/25	Balance	20,000		

As shown in Illustration 12.9, 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 earned 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 cost of inventory 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 12.9).
- 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 prepaid expenses is greater than the actual expenses reported on an accrual basis.

- In other words, the company has made cash payments in the current period that will not be charged to expenses until future periods.
- 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 12.9).

ILLUSTRATION 12.9
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 greater 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 12.10, 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 12.10, to adjust net income to a cash basis, the company must reduce net income by $2,000.

Illustration 12.10 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.

ILLUSTRATION 12.10
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

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. Noncash charges such as depreciation and amortization.
2. Gains and losses on the disposal of plant assets.
3. Changes in noncash current asset and current liability accounts.

Illustration 12.11 provides a summary of these changes and required adjustments.

ILLUSTRATION 12.11
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
Noncash Charges	Depreciation expense	Add
	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 noncash current asset account	Deduct
	Decrease in noncash current asset account	Add
	Increase in current liability account	Add
	Decrease in current liability account	Deduct

Anatomy of a Fraud

For more than a decade, the top executives at the Italian dairy products company Parmalat engaged in multiple frauds that 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 dollars

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.

DO IT! 2a Cash Flows from Operating Activities

Josh's PhotoPlus reported net income of $73,000 for 2025. 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 balance sheets show the following balances.

	12/31/24	12/31/25
Accounts receivable	$17,000	$21,000
Accounts payable	6,000	2,200

Calculate net cash provided by operating activities for Josh's PhotoPlus.

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: BE12.4, BE12.5, BE12.6, DO IT! 12.2a, E12.4, E12.5, and E12.6.

ACTION PLAN

- **Add noncash 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 noncash current asset and current liability accounts to compute net cash provided by operating activities.**

Step 2: Investing and Financing Activities

Analyze Changes in Noncurrent Asset and Liability Accounts and Stockholders' Equity Accounts and Report as Investing and Financing Activities, or as Noncash Investing and Financing Activities

Increase in Land As indicated from the change in the Land account and the additional information, Computer Services purchased land with a value of $110,000. This activity is generally classified as an investing activity. However, by directly exchanging bonds for land, the issuance of bonds payable for land has no effect on cash. But, it is a significant noncash investing and financing activity that merits disclosure in a separate schedule (see Illustration 12.14).

Increase in Buildings As the additional data indicate, Computer Services acquired an office building for $120,000 cash. This is a cash outflow reported in the investing activities section (see Illustration 12.14).

HELPFUL HINT
The investing and financing activities are measured and reported the same way under both the direct and indirect methods.

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 for $25,000, and (2) the sale for $4,000 of equipment costing $8,000. These transactions are investing activities (see **Helpful Hint**). 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 in **Illustration 12.12** shows the reasons for the change in this account during the year.

ILLUSTRATION 12.12
Analysis of equipment

Equipment

1/1/25	Balance	10,000	Cost of equipment sold	8,000
	Purchase of equipment	25,000		
12/31/25	Balance	27,000		

A	=	L	+	SE
+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 noncash transaction in a separate schedule at the bottom of the statement.

HELPFUL HINT
When companies issue stocks 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 stocks or face value of bonds).

Increase in Common Stock The balance sheet reports an increase in Common Stock of $20,000. The additional information section notes that this increase resulted from the issuance of new shares of stock for cash at par. This is a cash inflow reported in the financing activities section (see **Helpful Hint**).

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 declared of $29,000 decreased retained earnings. The company adjusts net income to net cash provided by operating activities in the operating activities section. The T-account shown in **Illustration 12.13** shows the reasons for the change in this account during the year.

ILLUSTRATION 12.13
Analysis of retained earnings

Retained Earnings

Dividends declared	29,000	1/1/25	Balance	48,000
			Net income	145,000
		12/31/25	Balance	164,000

Payment of the dividends (not the declaration) is a **cash outflow that the company reports as a financing activity**. Since the balance sheet does not report a Cash Dividends Payable account, the declared cash dividends of $29,000 must have been paid.

HELPFUL HINT
Note that in the investing and financing activities sections, positive numbers indicate cash inflows (receipts), and negative numbers indicate cash outflows (payments).

Statement of Cash Flows—2025

Using the previous information, we can now prepare a statement of cash flows for 2025 for Computer Services Company as shown in **Illustration 12.14** (see **Helpful Hint**).

ILLUSTRATION 12.14
Statement of cash flows, 2025—indirect method

Computer Services Company
Statement of Cash Flows—Indirect Method
For the Year Ended December 31, 2025

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)	
Sale of equipment	4,000	
Net cash used by investing activities		(141,000)
Cash flows from financing activities		
Issuance of common stock	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
Noncash 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 Balance Sheet to Make Sure the Amounts Agree

Illustration 12.14 indicates that the net change in cash during the period was an increase of $22,000. This agrees with the change in Cash account reported on the comparative balance sheets in Illustration 12.4.

Accounting Across the Organization

Soubrette/Getty Images

Burning Through Our Cash

Box (cloud storage), **FireEye** (cybersecurity), and **MobileIron** (mobile security of data) are a few of the tech companies that have issued or are about to issue stock to the public. Investors now have to determine whether these tech companies have viable products and high chances for success.

An important consideration in evaluating a tech company is determining its financial flexibility—its ability to withstand adversity if an economic setback occurs. One way to measure financial flexibility is to assess a company's cash burn rate, which determines how long its cash will hold out if the company is expending more cash than it is receiving.

FireEye, for example, used cash in excess of $50 million in 2013. But the company also had over $150 million as a cash cushion, so it would have taken over 30 months for it to run out of cash. And even though Box has a much lower cash burn rate than FireEye, it still has over a year's cushion. Compare that to the tech companies in 2000, when over one-quarter of them were on track to run out of cash within a year. And many did. Fortunately, the tech companies of today seem to be better equipped to withstand an economic setback.

Source: Based on Shira Ovide, "Tech Firms' Cash Hoards Cool Fears of a Meltdown," *Wall Street Journal* (May 14, 2014).

What implications does a company's cash burn rate have for its survival? (Answer is available at the end of the chapter.)

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.**

DO IT! 2b Indirect Method

Use the following information to prepare a statement of cash flows using the indirect method.

Reynolds Company
Comparative Balance Sheets
December 31

	2025	2024	Change Increase/ Decrease
Assets			
Cash	$ 54,000	$ 37,000	$ 17,000 Increase
Accounts receivable	68,000	26,000	42,000 Increase
Inventory	54,000	–0–	54,000 Increase
Prepaid expenses	4,000	6,000	2,000 Decrease
Land	45,000	70,000	25,000 Decrease
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
Totals	$569,000	$386,000	
Liabilities and Stockholders' Equity			
Accounts payable	$ 23,000	$ 40,000	$ 17,000 Decrease
Accrued expenses payable	10,000	–0–	10,000 Increase
Bonds payable	110,000	150,000	40,000 Decrease
Common stock ($1 par)	220,000	60,000	160,000 Increase
Retained earnings	206,000	136,000	70,000 Increase
Totals	$569,000	$386,000	

Reynolds Company
Income Statement
For the Year Ended December 31, 2025

Sales revenue		$890,000
Cost of goods sold	$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		$125,000

Additional information:

1. Operating expenses include depreciation expense of $33,000, $10,000 for the building and $23,000 for the equipment.
2. Land was sold at its book value for cash.
3. Cash dividends of $55,000 were declared and paid in 2025.
4. Equipment with a cost of $166,000 was purchased for cash. Equipment with a cost of $41,000 and a book value of $36,000 was sold for $34,000 cash.
5. Bonds of $40,000 were redeemed at their face value for cash.
6. Common stock ($1 par) was issued at par for $160,000 cash.

Solution

Reynolds Company Statement of Cash Flows—Indirect Method For the Year Ended December 31, 2025		
Cash flows from operating activities		
Net income		$ 125,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	$ 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	
Sale of equipment	34,000	
Purchase of equipment	(166,000)	
Net cash used by investing activities		(107,000)
Cash flows from financing activities		
Redemption of bonds	(40,000)	
Issuance of common stock	160,000	
Payment of cash 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		$ 54,000

Related exercise material: BE12.7, DO IT! 12.2b, E12.7, E12.8, E12.9 and E12.10.

12.3 Analyzing the Statement of Cash Flows

LEARNING OBJECTIVE 3

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. In this section, we review the corporate life cycle and free cash flow.

The Corporate Life Cycle

All products go through a series of phases called the product life cycle. The phases (in order of their occurrence) are as follows.

- The **introductory phase** occurs at the beginning of a company's life, when it purchases plant assets and begins to produce and sell products.
- During the **growth phase**, the company strives to expand its production and sales.

- In the **maturity phase**, sales and production level off.
- During the **decline phase**, sales of the product decrease due to a weakening in consumer demand.

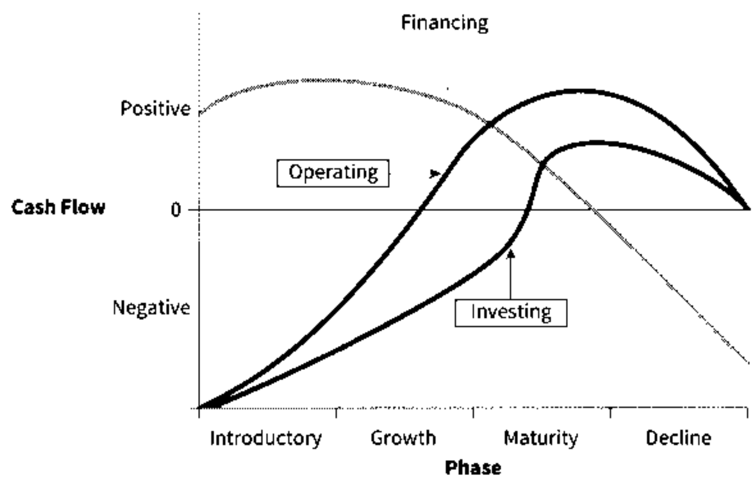
In the same way that products have life cycles, companies have life cycles as well. Companies generally have more than one product, and not all of a company's products are in the same phase of the product life cycle at the same time. This sometimes makes it difficult to classify a company's phase. Still, we can characterize a company as being in one of the four corporate life cycle phases because the majority of its products are in a particular product life cycle phase.

Illustration 12.15 shows that the phase a company is in affects its cash flows. In the **introductory phase**, we expect that the company will not generate positive cash from operations.

- Cash used in operations will exceed cash generated by operations in the introductory phase.
- The company spends considerable amounts to purchase productive assets such as buildings and equipment.
- To support its asset purchases, the company issues stock or debt.

ILLUSTRATION 12.15
Impact of corporate life cycle on cash flows

Corporate Life Cycle Phase and Cash Flows



Thus, during the introductory phase, we expect negative cash from operations, negative cash from investing, and positive cash from financing.

During the **growth phase**, we expect to see the company start to generate small amounts of cash from operations. During this phase, net cash provided by operating activities on the statement of cash flows is less than net income.

- One reason net income exceeds cash flow from operations during this period is explained by the difference between the cash paid for inventory and the amount expensed as cost of goods sold. Since the company projects increasing sales, the size of inventory purchases increases. Thus, in the growth phase, the company expenses less inventory on an accrual basis than it purchases on a cash basis.
- Also, collections on accounts receivable lag behind sales, and accrual sales during a period exceed cash collections during that period.
- Cash needed for asset acquisitions will continue to exceed net cash provided by operating activities. The company makes up the deficiency by issuing new stock or debt.

Thus, in the growth phase, the company continues to show negative cash from investing activities and positive cash from financing activities.

During the **maturity phase**, net cash provided by operating activities and net income are approximately the same. Cash generated from operations exceeds investing needs. Thus, in the maturity phase, the company starts to pay dividends, retire debt, or buy back stock.

Finally, during the **decline phase**, net cash provided by operating activities decreases. Cash from investing activities might actually become positive as the company sells off excess assets. Cash from financing activities may be negative as the company buys back stock and redeems debt.

Consider Microsoft. During its early years, it had significant product development costs and little revenue. Microsoft was lucky in that its agreement with IBM to provide the operating system for IBM PCs gave it an early steady source of cash to support growth. As noted in the Feature Story, Microsoft conserved cash by paying employees with stock options rather than cash.

Today, Microsoft could be characterized as being in the maturity phase. It continues to spend considerable amounts on research and development and investment in new assets. In recent years, though, its net cash provided by operating activities has exceeded its net income. Also, cash from operations over this period exceeded cash used for investing, and common stock repurchased exceeded common stock issued. For Microsoft, as for any large company, the challenge is to maintain its growth. In the software industry, where products become obsolete very quickly, the challenge is particularly great.

Investor Insight

rafalulicki/Getty Images

Operating with Negative Cash

Listed here are amounts (in millions) of net income and net cash provided (used) by operating, investing, and financing activities for a variety of companies at one time. The final column suggests each company's likely phase in the life cycle based on these figures.

Company	Net Income	Net Cash Provided (Used) by Operating Activities	Net Cash Provided (Used) by Investing Activities	Net Cash Provided (Used) by Financing Activities	Likely Phase in Life Cycle
Amazon.com	$ 476	$1,405	$ (42)	$ (50)	Early maturity
LDK Solar	(144)	(81)	(329)	462	Introductory/early growth
United States Steel	879	1,745	(4,675)	(1,891)	Maturity
Kellogg	1,103	1,503	(601)	(788)	Early decline
Southwest Airlines	645	2,845	(1,529)	493	Early maturity
Starbucks	673	1,331	(1,202)	(172)	Maturity

Why do companies have negative net cash provided by operating activities during the introductory phase? (Answer is available at the end of the chapter.)

Free Cash Flow

In the statement of cash flows, net cash provided by operating activities is intended to indicate the cash-generating capability of the company. Analysts have noted, however, that **cash provided by operating activities fails to take into account that a company must invest in new plant 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 (see Decision Tools).

Decision Tools

Free cash flow helps users determine the amount of cash the company generated to expand operations or pay additional dividends.

Consider the following example. Suppose that MPC produced and sold 10,000 personal computers this year. It reported $100,000 cash provided by operating activities. In order to maintain production at 10,000 computers, MPC invested $15,000 in equipment. It chose to pay $5,000 in dividends. Its free cash flow was $80,000 ($100,000 – $15,000 – $5,000). The company could use this $80,000 either to purchase new assets, pay off debt, or pay an $80,000 dividend. In practice, free cash flow is often calculated with the formula in Illustration 12.16. Alternative definitions also exist.

ILLUSTRATION 12.16
Free cash flow

Free Cash Flow	=	Net Cash Provided by Operating Activities	−	Capital Expenditures	−	Cash Dividends

Illustration 12.17 provides basic information excerpted from the 2019 statement of cash flows of Apple Inc.

ILLUSTRATION 12.17
Apple's cash flow information ($ in millions)

Real World

Apple Inc.
Statement of Cash Flows (partial)
For the Year Ended September 28, 2019

Net cash provided by operating activities		$69,391
Cash flows from investing activities		
Purchases of marketable securities	$(39,630)	
Proceeds from maturities of marketable securities	40,102	
Proceeds from sales of marketable securities	56,988	
Payments for acquisition of property, plant and equipment	(10,495)	
Payment made in connection with business acquisitions, net	(624)	
Purchases of non-marketable securities	(1,001)	
Proceeds from non-marketable securities	1,634	
Other	(1,078)	
Cash generated by/(used in) investing activities		$45,896
Cash paid for dividends		$(14,119)

Apple's free cash flow is calculated as shown in Illustration 12.18 (in millions). Apple generated approximately $45 billion of free cash flow. This is a significant amount of cash generated in a single year. It is available for the acquisition of new assets, the buyback and retirement of stock or debt, or the payment of dividends.

ILLUSTRATION 12.18
Calculation of Apple's free cash flow ($ in millions)

Net cash provided by operating activities	$69,391
Less: Expenditures on property, plant, and equipment	10,495
Dividends paid	14,119
Free cash flow	$44,777

Apple's cash from operations of $69.4 billion exceeds its 2019 net income of $55.3 billion by $14.1 billion. This lends additional credibility to Apple's income number as an indicator of potential future performance. If anything, Apple's net income might understate its actual performance.

Keeping an Eye on Cash

Cash flow is closely monitored by analysts and investors for many reasons and in a variety of ways. One measure that is gaining increased attention is "price to cash flow." This is a variant of the price to earnings (P-E) ratio, which has been a staple of analysts for a long time. The difference is that rather than divide the company's stock price by its earnings per share (an accrual-accounting–based number), the price to cash flow ratio divides the company's stock price by its cash flow per share. A high measure suggests that the stock price is high relative to the company's ability to generate cash. A low measure indicates that the company's stock might be a bargain.

The following table provides values for some well-known companies in a recent year. While you should not use this measure as the sole factor in choosing a stock, it can serve as a useful screen by which to identify companies that merit further investigation.

Company	Price/Cash Flow	Price/EPS
Microsoft	55.6	62.5
Apple	11.1	12.5
Nike	19.1	24.8
Walmart	9.0	15.7
JetBlue	7.9	11.1

DO IT! 3 Free Cash Flow

Chicago Corporation issued the following statement of cash flows for 2025.

Chicago Corporation
Statement of Cash Flows—Indirect Method
For the Year Ended December 31, 2025

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 common stock	10,000	
Payment on long-term note payable	(5,000)	
Payment of cash 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 Chicago Corporation. (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 = $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: BE12.8, BE12.9, BE12.10, BE12.11, DO IT! 12.3, E12.8, and E12.10.

USING THE DECISION TOOLS | Intel Corporation

Intel Corporation is the leading producer of computer chips for personal computers. A primary competitor is **Qualcomm**. Financial statement data for Intel for a recent year are provided below.

Intel Corporation
Statement of Cash Flows
(in millions)

Net cash provided by operating activities	$ 33,145
Net cash used for investing activities	(14,405)
Net cash used for financing activities	(17,565)
Net increase (decrease) in cash and cash equivalents	$ 1,175

Note. Cash spent on property, plant, and equipment was $16,213. Cash paid for dividends was $5,576.

Instructions

Calculate free cash flow for Intel and compare it with that of Qualcomm ($3,431 million).

Solution

Intel's free cash flow is $11,356 million ($33,145 – $16,213 – $5,576). Qualcomm's is $3,431 million. This gives Intel an advantage in the ability to move quickly to invest in new projects.

Appendix 12A Statement of Cash Flows—Direct Method

LEARNING OBJECTIVE *4

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 use the transactions of Computer Services Company for 2025. **Illustration 12A.1** presents information related to 2025 for the company.

To prepare a statement of cash flows under the direct method, we apply the three steps outlined in Illustration 12.3 for the indirect method.

ILLUSTRATION 12A.1

Comparative balance sheets, income statement, and additional information for Computer Services Company

Computer Services Company
Comparative Balance Sheets
December 31

	2025	2024	Change in Account Balance Increase/Decrease
Assets			
Current assets			
Cash	$ 55,000	$ 33,000	$ 22,000 Increase
Accounts receivable	20,000	30,000	10,000 Decrease
Inventory	15,000	10,000	5,000 Increase
Prepaid expenses	5,000	1,000	4,000 Increase
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
Total assets	$398,000	$138,000	
Liabilities and Stockholders' Equity			
Current liabilities			
Accounts payable	$ 28,000	$ 12,000	$ 16,000 Increase
Income taxes payable	6,000	8,000	2,000 Decrease
Long-term liabilities			
Bonds payable	130,000	20,000	110,000 Increase
Stockholders' equity			
Common stock	70,000	50,000	20,000 Increase
Retained earnings	164,000	48,000	116,000 Increase
Total liabilities and stockholders' equity	$398,000	$138,000	

Computer Services Company
Income Statement
For the Year Ended December 31, 2025

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 2025:

1. Depreciation expense was comprised of $6,000 for building and $3,000 for equipment.
2. 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 common stock at par for $20,000 cash.
6. Declared and paid a $29,000 cash dividend.

Step 1: Operating Activities

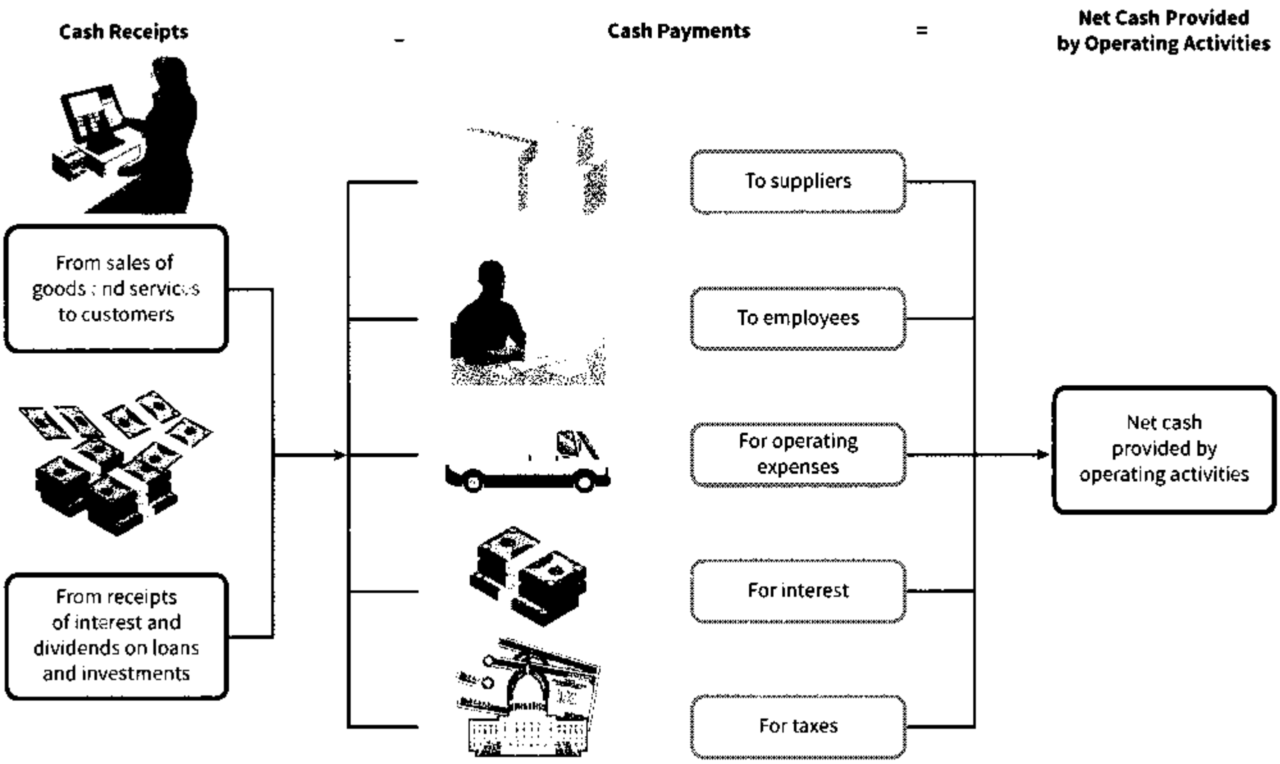
Determine Net Cash Provided/Used by Operating Activities by Converting Net Income Components from an Accrual Basis to a Cash Basis

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 12A.2**.

ILLUSTRATION 12A.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 Company using the direct method.

Cash Receipts from Customers The income statement for Computer Services reported sales revenue from customers of $507,000. How much of that was cash receipts? To answer that, a company considers the change in accounts receivable during the year. When accounts receivable increases 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 12A.3**.

ILLUSTRATION 12A.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 12A.4**.

ILLUSTRATION 12A.4
Analysis of accounts receivable

Accounts Receivable

1/1/25	Balance	30,000	Receipts from customers	517,000
	Sales revenue	507,000		
12/31/25	Balance	20,000		

Illustration 12A.5 shows the relationships among cash receipts from customers, sales revenue, and changes in accounts receivable (see **Helpful Hint**).

ILLUSTRATION 12A.5
Equation 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.

HELPFUL HINT
The T-account in Illustration 12A.4 shows that sales revenue plus decrease in accounts receivable equals cash receipts.

In 2025, Computer Services' inventory increased $5,000. It computes purchases as shown in **Illustration 12A.6**.

ILLUSTRATION 12A.6
Computation of purchases

Cost of goods sold	$150,000
Add: Increase in inventory	5,000
Purchases	**$155,000**

Computer Services can also determine purchases from an analysis of the Inventory account, as shown in **Illustration 12A.7**.

ILLUSTRATION 12A.7
Analysis of inventory

Inventory

1/1/25	Balance	10,000	Cost of goods sold	150,000
	Purchases	155,000		
12/31/25	Balance	15,000		

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 increases 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 shown in **Illustration 12A.8**.

ILLUSTRATION 12A.8
Computation of cash payments to suppliers

Purchases	$155,000
Deduct: Increase in accounts payable	16,000
Cash payments to suppliers	**$139,000**

Computer Services also can determine cash payments to suppliers from an analysis of the Accounts Payable account, as shown in **Illustration 12A.9**.

ILLUSTRATION 12A.9
Analysis of accounts payable

Accounts Payable

Payments to suppliers	139,000	1/1/25	Balance	12,000
			Purchases	155,000
		12/31/25	Balance	28,000

Illustration 12A.10 shows the relationships among cash payments to suppliers, cost of goods sold, changes in inventory, and changes in accounts payable (see **Helpful Hint**).

ILLUSTRATION 12A.10
Equation to compute cash payments to suppliers—direct method

Cash Payments to Suppliers = **Cost of Goods Sold** { **+ Increase in Inventory** or **− Decrease in Inventory** } { **+ Decrease in Accounts Payable** or **− Increase in Accounts Payable** }

HELPFUL HINT
The T-account in Illustration 12A.9 shows that purchases less increase in accounts payable equals payments to suppliers.

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.

Adjustments for Prepaid Expenses If prepaid expenses increase 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.

Adjustments for Accrued Expenses 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 shown in Illustration 12A.11.

ILLUSTRATION 12A.11
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 12A.12 shows the relationships among cash payments for operating expenses, changes in prepaid expenses, and changes in accrued expenses payable.

ILLUSTRATION 12A.12
Equation to compute cash payments for operating expenses—direct method

$$\begin{array}{c}\text{Cash}\\\text{Payments}\\\text{for}\\\text{Operating}\\\text{Expenses}\end{array} = \begin{array}{c}\text{Operating}\\\text{Expenses}\end{array} \begin{cases} + \text{ Increase in Prepaid Expenses} \\ \text{or} \\ - \text{ Decrease in Prepaid Expenses} \end{cases} \begin{cases} + \text{ Decrease in Accrued Expenses Payable} \\ \text{or} \\ - \text{ Increase in Accrued Expenses Payable} \end{cases}$$

Depreciation Expense and Loss on Disposal of Plant Assets Computer Services' depreciation expense in 2025 was $9,000.

- Depreciation expense is not shown on a statement of cash flows under the direct method because it is a noncash 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 noncash 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 balance sheet did not report interest payable for 2024 or 2025, the amount reported as interest 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 tax expense reported in the income statement. Cash payments for income taxes were therefore $49,000 as shown in Illustration 12A.13.

ILLUSTRATION 12A.13
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**

Computer Services can also determine cash payments for income taxes from an analysis of the Income Taxes Payable account, as shown in **Illustration 12A.14**.

ILLUSTRATION 12A.14
Analysis of income taxes payable

Income Taxes Payable

Cash payments for income taxes	49,000	1/1/25	Balance	8,000
			Income tax expense	47,000
		12/31/25	Balance	6,000

Illustration 12A.15 shows the relationships among cash payments for income taxes, income tax expense, and changes in income taxes payable.

ILLUSTRATION 12A.15
Equation to compute cash payments for income taxes—direct method

$$\text{Cash Payments for Income Taxes} = \text{Income Tax Expense} \begin{cases} + \text{ Decrease in Income Taxes Payable} \\ \text{or} \\ - \text{ Increase in Income Taxes Payable} \end{cases}$$

The operating activities section of the statement of cash flows of Computer Services is shown in **Illustration 12A.16**.

ILLUSTRATION 12A.16
Operating activities section of the statement of cash flows

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

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. Note that whether a company uses the indirect or direct method, the net cash provided by operating activities is the same.

Step 2: Investing and Financing Activities

Analyze Changes in Noncurrent Asset and Liability Accounts and Stockholders' Equity Accounts and Report as Investing and Financing Activities, or Disclose as Noncash Transactions

Increase in Land As indicated from the change in the Land account and the additional information, Computer Services purchased land for $110,000 by directly exchanging bonds for the land. The exchange of bonds payable for land has no effect on cash. But, it is a significant noncash investing and financing activity that merits disclosure in a separate schedule (see Illustration 12A.18).

Increase in Buildings As the additional data indicate, Computer Services acquired an office building for $120,000 cash. This is a cash outflow reported in the investing activities section (see Illustration 12A.18).

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 (see Helpful Hint). The company should report each transaction separately. The statement in Illustration 12A.18 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 in Illustration 12A.17 shows the reasons for the change in this account during the year.

HELPFUL HINT
The investing and financing activities are measured and reported the same under both the direct and indirect methods.

ILLUSTRATION 12A.17
Analysis of equipment

Equipment

1/1/25	Balance	10,000	Cost of equipment sold	8,000
	Purchase of equipment	25,000		
12/31/25	Balance	27,000		

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

A = L + SE
+4,000
+1,000
−3,000 Exp
−8,000
Cash Flows
+4,000

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 12A.18 reports this noncash transaction in a separate schedule at the bottom of the statement.

Increase in Common Stock The balance sheet reports an increase in Common Stock of $20,000. The additional information section notes that this increase resulted from the issuance of new shares of stock. This is a cash inflow reported in the financing activities section in Illustration 12A.18 (see Helpful Hint).

HELPFUL HINT
When companies issue stocks 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 stocks or face value of bonds).

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. **Payment of the dividends (not the declaration) is a cash outflow that the company reports as a financing activity in Illustration 12A.18.**

Statement of Cash Flows—2025

Illustration 12A.18 shows the statement of cash flows for Computer Services Company.

ILLUSTRATION 12A.18
Statement of cash flows, 2025—direct method

Computer Services Company
Statement of Cash Flows—Direct Method
For the Year Ended December 31, 2025

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

ILLUSTRATION 12A.18
(continued)

Cash flows from investing activities		
Sale of equipment	4,000	
Purchase of building	(120,000)	
Purchase of equipment	(25,000)	
Net cash used by investing activities		(141,000)
Cash flows from financing activities		
Issuance of common stock	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
Noncash 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 Balance Sheet to Make Sure the Amounts Agree

Illustration 12A.18 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 balance sheets in Illustration 12A.1.

Appendix 12B Worksheet for the Indirect Method

LEARNING OBJECTIVE *5

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 to 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 12B.1 shows the skeleton format of the worksheet for preparation of the statement of cash flows.

The following guidelines are important in preparing a worksheet.

1. In the balance sheet 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 balance sheet 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 balance sheet accounts, all changes in account balances have been reconciled.

ILLUSTRATION 12B.1
Format of worksheet

	A	B	C	D	E
1	**XYZ Company Worksheet Statement of Cash Flows for the Year Ended . . .**				
2		**End of Last Year Balances**	**Reconciling Items Debit**	**Credit**	**End of Current Year Balances**
3	**Balance Sheet Accounts**				
4	Debit balance accounts	XX	XX	XX	XX
5		XX	XX	XX	XX
6	Totals	XXX			XXX
7	Credit balance accounts	XX	XX	XX	XX
8		XX	XX	XX	XX
9	Totals	XXX			XXX
10					
11	**Statement of Cash Flows Effects**				
12	Operating activities				
13	Net income		XX		
14	Adjustments to net income		XX	XX	
15	Investing activities				
16	Receipts and payments		XX	XX	
17	Financing activities				
18	Receipts and payments		XX	XX	
19	Totals		XXX	XXX	
20	Increase (decrease) in cash		(XX)	XX	
21	Totals		XXX	XXX	

Sheet1

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 balance sheet accounts. They are used only to facilitate the preparation of the statement of cash flows.

Preparing the Worksheet

Preparing a worksheet involves a series of prescribed steps. The steps in this case are:

1. Enter in the balance sheet accounts section the balance sheet accounts and their beginning and ending balances.
2. Enter in the reconciling columns of the worksheet the data that explain the changes in the balance sheet 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 2025 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 balance sheets, income statement, and selected data for 2025 are presented in Illustration 12B.2.

ILLUSTRATION 12B.2

Comparative balance sheets, income statement, and additional information for Computer Services Company

Computer Services Company
Comparative Balance Sheets
December 31

		B	C	D
		2025	**2024**	**Change in Account Balance Increase/Decrease**
3	**Assets**			
4	Current assets			
5	Cash	$55,000	$33,000	$22,000 Increase
6	Accounts receivable	20,000	30,000	10,000 Decrease
7	Inventory	15,000	10,000	5,000 Increase
8	Prepaid expenses	5,000	1,000	4,000 Increase
9	Property, plant, and equipment			
10	Land	130,000	20,000	110,000 Increase
11	Buildings	160,000	40,000	120,000 Increase
12	Accumulated depreciation—buildings	(11,000)	(5,000)	6,000 Increase
13	Equipment	27,000	10,000	17,000 Increase
14	Accumulated depreciation—equipment	(3,000)	(1,000)	2,000 Increase
15	Total assets	$398,000	$138,000	
16				
17	**Liabilities and Stockholders' Equity**			
18	Current liabilities			
19	Accounts payable	$28,000	$12,000	$16,000 Increase
20	Income taxes payable	6,000	8,000	2,000 Decrease
21	Long-term liabilities			
22	Bonds payable	130,000	20,000	110,000 Increase
23	Stockholders' equity			
24	Common stock	70,000	50,000	20,000 Increase
25	Retained earnings	164,000	48,000	116,000 Increase
26	Total liabilities and stockholders' equity	$398,000	$138,000	

Computer Services Company
Income Statement
For the Year Ended December 31, 2025

		B	C	D
2	Sales revenue			$507,000
3	Cost of goods sold		$150,000	
4	Operating expenses (excluding depreciation)		111,000	
5	Depreciation expense		9,000	
6	Loss on disposal of plant assets		3,000	
7	Interest expense		42,000	315,000
8	Income before income taxes			192,000
9	Income tax expense			47,000
10	Net income			$145,000

Additional information for 2025:

1. Depreciation expense was comprised of $6,000 for building and $3,000 for equipment.
2. 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 common stock at par for $20,000 cash.
6. Declared and paid a $29,000 cash dividend.

Determining the Reconciling Items

Companies generally use one of two approaches to determine the reconciling items:

1. Complete the changes affecting net cash provided by operating activities and then determine the effects of financing and investing transactions.
2. Analyze the balance sheet accounts in the order in which they are listed on the worksheet.

We will follow this second 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 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 increased $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

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 noncash investing and financing activity (see **Helpful Hint**). The worksheet entry is:

d. Land	110,000	
Bonds Payable		110,000

HELPFUL HINT

These amounts are asterisked in the worksheet to indicate that they result from a significant noncash transaction.

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 disposal of plant assets (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—Sale of Equipment	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 taxes 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. 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 noncash investing and financing activity. Worksheet entry (d) above is the only entry necessary.

Common Stock The balance sheet reports an increase in Common Stock of $20,000. The additional information section notes that this increase resulted from the issuance of new shares of common stock at par for cash. This is a cash inflow reported in the financing section. The worksheet entry is:

j. Financing—Issuance of Common Stock	20,000	
Common Stock		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 **noncash 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 firm's cash increased $22,000 in 2025. 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 balance sheet 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 Company is shown in **Illustration 12B.3**.

ILLUSTRATION 12B.3
Completed worksheet—indirect method

	A	B	C	D	E
1	**Computer Services Company** **Worksheet** **Statement of Cash Flows for the Year Ended December 31, 2025**				
2		**Balance 12/31/24**	**Reconciling Items** **Debit**	**Credit**	**Balance 12/31/25**
3	**Balance Sheet Accounts**				
4	**Debits**				
5	Cash	33,000	(o) 22,000		55,000
6	Accounts Receivable	30,000		(a) 10,000	20,000
7	Inventory	10,000	(b) 5,000		15,000
8	Prepaid Expenses	1,000	(c) 4,000		5,000
9	Land	20,000	(d) 110,000*		130,000
10	Buildings	40,000	(e) 120,000		160,000
11	Equipment	10,000	(f) 25,000	(g) 8,000	27,000
12	Total	144,000			412,000
13	**Credits**				
14	Accounts Payable	12,000		(h) 16,000	28,000
15	Income Taxes Payable	8,000	(i) 2,000		6,000
16	Bonds Payable	20,000		(d) 110,000*	130,000
17	Accumulated Depreciation—Buildings	5,000		(k) 6,000	11,000
18	Accumulated Depreciation—Equipment	1,000	(g) 1,000	(l) 3,000	3,000
19	Common Stock	50,000		(j) 20,000	70,000
20	Retained Earnings	48,000	(n) 29,000	(m) 145,000	164,000
21	Total	144,000			412,000
22					
23	**Statement of Cash Flows Effects**				
24	Operating activities				
25	Net income		(m) 145,000		
26	Decrease in accounts receivable		(a) 10,000		
27	Increase in inventory			(b) 5,000	
28	Increase in prepaid expenses			(c) 4,000	
29	Increase in accounts payable		(h) 16,000		
30	Decrease in income taxes payable			(i) 2,000	
31	Depreciation expense		(k) 6,000		
32			(l) 3,000		
33	Loss on disposal of plant assets		(g) 3,000		
34	Investing activities				
35	Purchase of building			(e) 120,000	
36	Purchase of equipment			(f) 25,000	
37	Sale of equipment		(g) 4,000		
38	Financing activities				
39	Issuance of common stock		(j) 20,000		
40	Payment of dividends			(n) 29,000	
41	Totals		525,000	503,000	
42	Increase in cash			(o) 22,000	
43	Totals		525,000	525,000	
44	* Significant noncash investing and financing activity.				

Sheet1

Appendix 12C Statement of Cash Flows—T-Account Approach

LEARNING OBJECTIVE *6

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:

Assets = Liabilities + Stockholders' Equity

Now, let's rewrite the left-hand side as:

Cash + Noncash Assets = Liabilities + Stockholders' Equity

Next, rewrite the equation by subtracting Noncash Assets from each side to isolate Cash on the left-hand side:

Cash = Liabilities + Stockholders' Equity − Noncash Assets

Finally, if we insert the Δ symbol (which means "change in"), we have:

Δ Cash = Δ Liabilities + Δ Stockholders' Equity − Δ Noncash Assets

What this means is that the change in cash is equal to the change in all of the other balance sheet accounts. Another way to think about this is that if we analyze the changes in all of the noncash balance sheet 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:

- Prepare a large Cash T-account with sections for operating, investing, and financing activities.
- Then, prepare smaller T-accounts for all of the other noncash balance sheet 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 12.3.

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 apply this approach to the example of Computer Services Company that is presented in the chapter. Each of the adjustments in **Illustration 12C.1** 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 component 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 (equipment) is a debit to the operating section of the Cash T-account. Finally, Equipment is credited for $8,000.

4–8. Next, post each of the changes to the noncash 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.

ILLUSTRATION 12C.1 T-account approach

Cash

	Debit	Credit	
Operating			
(1) Net income	145,000	5,000	Inventory (5)
(2) Depreciation expense	9,000	4,000	Prepaid expenses (6)
(3) Loss on equipment	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) Sold equipment	4,000	120,000	Purchased building (10)
		25,000	Purchased equipment (11)
		141,000	Net cash used by investing activities
Financing			
(12) Issued common stock	20,000	29,000	Dividends paid (13)
		9,000	Net cash used by financing activities
Net increase in cash	22,000		

Accounts Receivable

Debit	Credit
30,000	
	10,000 (4)
20,000	

Inventory

Debit	Credit
10,000	
(5) 5,000	
15,000	

Prepaid Expenses

Debit	Credit
1,000	
(6) 4,000	
5,000	

Land

Debit	Credit
20,000	
(9) 110,000	
130,000	

Buildings

Debit	Credit
40,000	
(10) 120,000	
160,000	

Accumulated Depreciation—Buildings

Debit	Credit
	5,000
	6,000 (2)
	11,000

Equipment

Debit	Credit
10,000	
(11) 25,000	8,000 (3)
27,000	

Accumulated Depreciation—Equipment

Debit	Credit
	1,000
(3) 1,000	3,000 (2)
	3,000

Accounts Payable

Debit	Credit
	12,000
	16,000 (7)
	28,000

Income Taxes Payable

Debit	Credit
	8,000
(8) 2,000	
	6,000

Bonds Payable

Debit	Credit
	20,000
	110,000 (9)
	130,000

Common Stock

Debit	Credit
	50,000
	20,000 (12)
	70,000

Retained Earnings

Debit	Credit
	48,000
	145,000 (1)
(13) 29,000	
	164,000

9. Analyze the changes in the noncurrent 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 noncash event that requires disclosure 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. Common Stock is credited for $20,000 for the issuance of shares of stock, 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 noncash accounts have been explained. All that remains is to subtotal each section of the Cash T-account and compare the total change in cash with the change shown on the balance sheet. 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

1 Discuss the usefulness and format 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. 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 long-term asset items. Financing activities involve cash flows resulting from changes in long-term liability and stockholders' equity items.

2 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 noncurrent asset, liability, and stockholders' equity accounts and report as investing and financing activities, or disclose as noncash transactions. (3) Compare the net change in cash on the statement of cash flows with the change in the Cash account reported on the balance sheet to make sure the amounts agree.

3 Analyze the statement of cash flows.

During the introductory stage, net cash provided by operating activities and net cash provided by investing activities are negative, and net cash provided by financing activities is positive. During the growth stage, net cash provided by operating activities becomes positive but is still not sufficient to meet investing needs. During the maturity stage, net cash provided by operating activities exceeds investing needs, so the company begins to retire debt. During the decline stage, net cash provided by operating activities is reduced, net cash provided by investing activities becomes positive (from selling off assets), and net cash provided by financing activities becomes more negative.

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.

*4 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 adjusting each item in the income statement from the accrual basis to the cash basis. The direct method reports cash receipts less cash payments to arrive at net cash provided by operating activities. (2) Analyze changes in noncurrent asset and liability accounts and stockholders' equity accounts and report as investing and financing activities, or disclose as noncash transactions. (3) Compare the net change in cash on the statement of cash flows with the change in the Cash account reported on the balance sheet to make sure the amounts agree.

*5 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 balance sheet accounts. (2) Enter debits and credits in reconciling columns. (3) Enter the increase or decrease in cash in two places as a balancing amount.

*6 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 noncash accounts; (3) insert beginning and ending balances for all balance sheet accounts; and (4) follows the steps in Illustration 12C.1, entering debit and credit amounts as needed.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
How much cash did the company generate to either expand operations or pay dividends?	Net cash provided by operating activities, cash spent on plant assets, and cash dividends	Free cash flow = Net cash provided by operating activities − Capital expenditures − Cash dividends	Significant free cash flow indicates greater potential to finance new investment and pay additional dividends.

Glossary Review

*Direct method A method of preparing a statement of cash flows that shows operating cash receipts and payments. It is prepared by adjusting each item in the income statement from the accrual basis to the cash basis. (pp. 12-7, 12-24).

Financing activities Cash flow activities that include (a) obtaining cash from issuing debt and repaying the amounts borrowed and (b) obtaining cash from stockholders, repurchasing shares, and paying dividends. (p. 12-3).

Free cash flow Net cash provided by operating activities adjusted for capital expenditures and cash dividends paid. (p. 12-19).

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. 12-7).

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. 12-3).

Operating activities Cash flow activities that include the cash effects of transactions that generate revenues and expenses and thus enter into the determination of net income. (p. 12-3).

Product life cycle A series of phases in a product's sales and cash flows over time. These phases, in order of occurrence, are introductory, growth, maturity, and decline. (p. 12-17).

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. 12-3).

Practice Multiple-Choice Questions

1. **(LO 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.

2. **(LO 1)** Which of the following is **not** reported in the statement of cash flows?
   - **a.** The net change in stockholders' equity during the year.
   - **b.** Cash payments for plant assets during the year.
   - **c.** Cash receipts from sales of plant assets during the year.
   - **d.** How acquisitions of plant assets during the year were financed.

3. **(LO 1)** The statement of cash flows classifies cash receipts and cash payments into these activities:
   - **a.** operating and nonoperating.
   - **b.** investing, financing, and operating.
   - **c.** financing, operating, and nonoperating.
   - **d.** investing, financing, and nonoperating.

4. **(LO 1)** 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 sale of common stock.
   - **c.** Payment of cash dividends to the company's stockholders.
   - **d.** None of the answer choices is correct.

5. **(LO 1)** 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 common stock.
   - **c.** Receipt of cash from the sale of equipment.
   - **d.** Payment of cash to suppliers for inventory.

6. **(LO 1)** Cash dividends paid to stockholders are classified on the statement of cash flows as:
   - **a.** an operating activity.
   - **b.** an investing activity.
   - **c.** a combination of an operating activity and an investing activity.
   - **d.** a financing activity.

7. **(LO 1)** 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.** None of the answer choices is correct.

8. **(LO 1)** 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. **(LO 2)** 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?
   - **a.** $102,000.
   - **b.** $112,000.
   - **c.** $124,000.
   - **d.** $136,000.

10. **(LO 2)** Items that are added back to net income in determining net cash provided by operating activities under the indirect method do **not** include:
    - **a.** depreciation expense.
    - **b.** an increase in inventory.
    - **c.** amortization expense.
    - **d.** loss on disposal of plant assets.

11. **(LO 2)** The following data are available for Bill Mack Corporation.

Net income	$200,000
Depreciation expense	40,000
Dividends paid	60,000
Gain on sale of land	10,000
Decrease in accounts receivable	20,000
Decrease in accounts payable	30,000

Net cash provided by operating activities is:

a. $160,000. **c.** $240,000.
b. $220,000. **d.** $280,000.

12. **(LO 2)** The following data are available for Orange Peels Corporation.

Proceeds from sale of land	$100,000
Proceeds from sale of equipment	50,000
Issuance of common stock	70,000
Purchase of equipment	30,000
Payment of cash dividends	60,000

Net cash provided by investing activities is:

a. $120,000. **c.** $150,000.
b. $130,000. **d.** $190,000.

13. **(LO 2)** The following data are available for Retique!

Increase in accounts payable	$ 40,000
Increase in bonds payable	100,000
Sale of investment	50,000
Issuance of common stock	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. **(LO 3)** The statement of cash flows should **not** be used to evaluate an entity's ability to:

a. generate net income. **c.** pay dividends.
b. generate future cash flows. **d.** meet obligations.

15. **(LO 3)** Free cash flow provides an indication of a company's ability to:

a. manage inventory only.
b. generate cash to pay additional dividends only.
c. generate cash to invest in new capital expenditures.
d. both generate cash to pay additional dividends and invest in new capital expenditures.

16. **(LO 3)** During the introductory phase of a company's life cycle, one would normally expect to see:

a. negative cash from operations, negative cash from investing, and positive cash from financing.
b. negative cash from operations, positive cash from investing, and positive cash from financing.
c. positive cash from operations, negative cash from investing, and negative cash from financing.
d. positive cash from operations, negative cash from investing, and positive cash from financing.

Use the direct method to solve Questions 17 and 18.

*17. **(LO 4)** The beginning balance in accounts receivable is $44,000, the ending balance is $42,000, and sales revenue during the period is $129,000. What are cash receipts from customers?

a. $127,000.
b. $129,000.
c. $131,000.
d. $141,000.

*18. **(LO 4)** Which of the following items is reported on a statement of cash flows prepared by the direct method?

a. Loss on sale of building.
b. Increase in accounts receivable.
c. Depreciation expense.
d. Cash payments to suppliers.

*19. **(LO 5)** 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:

a. investing activities section.
b. operating activities section.
c. financing activities section.
d. None of the answer choices is correct.

*20. **(LO 5)** In a worksheet for the statement of cash flows, a worksheet entry that includes a credit to accumulated depreciation will also include a:

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 stockholders' equity 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 sale of common stock is a financing activity, (c) payment of cash dividends to the company's stockholders 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 common stock is a financing activity, and (d) payment of cash to suppliers for inventory is an operating activity.

6. **d.** Cash dividends paid to stockholders are classified as a financing activity, not (a) an operating activity, (b) an investing activity, or (c) a combination of an operating and an investing activity.

7. **b.** Issuance of debt for cash is a financing activity. The other choices are incorrect because (a) the receipt of cash from the sale of land is an investing activity, (c) the purchase of equipment for cash is an investing activity, and (d) there is a correct answer.

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 plant assets are all added back to net income in determining net cash provided by operating activities.

11. **b.** Net cash provided by operating activities is $220,000 (Net income $200,000 + Depreciation expense $40,000 − Gain on sale of land $10,000 + Decrease in accounts receivable $20,000 − Decrease in accounts payable $30,000), not (a) $160,000, (c) $240,000, or (d) $280,000.

12. **a.** Net cash provided by investing activities is $120,000 (Sale of land $100,000 + Sale of equipment $50,000 − Purchase of equipment $30,000), not (b) $130,000, (c) $150,000, or (d) $190,000. Issuance of common stock 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 common stock $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 generate 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 additional dividends and 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 manage inventory. Choices (b) and (c) are true statements, but (d) is the better answer.

16. **a.** During the introductory phase of a company's life cycle, the company will most likely finance its operations and investing activities through borrowing or the issuance of stock. This means negative cash from operations and investing, and positive cash from financing. The other choices are incorrect because during the introductory phase of a company's life cycle, the company will most likely (b) purchase long-term assets which requires a cash outflow, (c) finance its operations and investing activities through borrowing or the issuance of stock which generates cash inflows from financing, and (d) use cash to fund operations until it establishes a customer base.

*17. **c.** Cash receipts from customers amount to $131,000 ($129,000 + a decrease in accounts receivable of $2,000). The other choices are therefore incorrect.

*18. **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 sale 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.

*19. **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.

*20. **b.** A worksheet entry that includes a credit to accumulated depreciation will also include a debit for depreciation expense in the operating activities section of the statement of cash flows. It will be added to the net income to determine net cash provided by operating activities. The other choices are therefore incorrect.

Practice Brief Exercises

1. **(LO 1)** The following is a summary of the Cash account of Covey Company.

Identify investing activity transactions.

Cash (Summary Form)

Balance, Jan. 1	8,000		
Receipts from customers	364,000	Payments for goods	200,000
Dividends on stock investments	6,000	Payments for operating expenses	140,000
Proceeds from sale of land	96,000	Purchase of equipment	70,000
Proceeds from issuance of bonds		Taxes paid	8,000
payable	300,000	Dividends paid	50,000
Balance, Dec. 31	306,000		

What amount of net cash provided (used) by investing activities should be reported in the statement of cash flows?

Solution

1. Cash flows from investing activities

Proceeds from sale of land	$96,000
Purchase of equipment	(70,000)
Net cash provided by investing activities	$26,000

Note that dividends on stock investments is classified as an operating cash flow.

Compute net cash provided by operating activities—indirect method.

2. **(LO 2)** Engel, Inc. reported net income of $1.6 million in 2025. Depreciation for the year was $140,000, accounts receivable increased $250,000, and accounts payable increased $210,000. The company also had a gain on disposal of plant assets of $19,000. Compute net cash provided by operating activities using the indirect method.

Solution

2. Net income		$1,600,000
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense	$ 140,000	
Gain on disposal of plant assets	(19,000)	
Accounts receivable increase	(250,000)	
Accounts payable increase	210,000	81,000
Net cash provided by operating activities		$1,681,000

Calculate free cash flow.

3. **(LO 3)** Goldberg Corporation reported net cash provided by operating activities of $410,000, net cash used by investing activities of $200,000 (including cash spent for equipment of $160,000), and net cash provided by financing activities of $60,000. Dividends of $110,000 were paid. Calculate free cash flow.

Solution

3. Free cash flow = $410,000 − $160,000 − $110,000 = $140,000

Practice Exercises

Prepare journal entries to determine effect on statement of cash flows.

1. **(LO 2)** Furst Corporation had the following transactions.

1. Paid salaries of $14,000.
2. Issued 1,000 shares of $1 par value common stock for equipment worth $16,000.
3. Sold equipment (cost $10,000, accumulated depreciation $6,000) for $3,000.
4. Sold land (cost $12,000) for $16,000.
5. Issued another 1,000 shares of $1 par value common stock for $18,000.
6. Recorded depreciation of $20,000.

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	14,000	
Cash		14,000

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 therefore affects the net income amount on the statement of cash flows.

2. a. Equipment	16,000	
Common Stock		1,000
Paid-in Capital in Excess of Par—Common Stock		15,000

b. The issuance of common stock for equipment ($16,000) is reported as a noncash investing and financing activity at the bottom of the statement of cash flows.

3. a. Cash	3,000	
Loss on Disposal of Plant Assets	1,000	
Accumulated Depreciation—Equipment	6,000	
Equipment		10,000

b. The cash receipt ($3,000) is reported in the investing section. The loss ($1,000) is added to net income in the operating section.

4. a. Cash	16,000	
Land		12,000
Gain on Disposal of Plant Assets		4,000

b. The cash receipt ($16,000) is reported in the investing section. The gain ($4,000) is deducted from net income in the operating section.

5. a. Cash	18,000	
Common Stock		1,000
Paid-in Capital in Excess of Par—Common Stock		17,000

b. The cash receipt ($18,000) is reported in the financing section.

6. a. Depreciation Expense	20,000	
Accumulated Depreciation—Equipment		20,000

b. Depreciation expense ($20,000) is added to net income in the operating section.

2. **(LO 2, 3)** Strong Corporation's comparative balance sheets are as follows.

Prepare statement of cash flows and compute free cash flow.

Strong Corporation
Comparative Balance Sheets
December 31

	2025	2024
Cash	$ 28,200	$ 17,700
Accounts receivable	24,200	22,300
Investments	23,000	16,000
Equipment	60,000	70,000
Accumulated depreciation—equipment	(14,000)	(10,000)
Total	$121,400	$116,000
Accounts payable	$ 19,600	$ 11,100
Bonds payable	10,000	30,000
Common stock	60,000	45,000
Retained earnings	31,800	29,900
Total	$121,400	$116,000

Additional information:

1. Net income was $28,300. Dividends declared and paid were $26,400. Depreciation expense was $5,200.
2. Equipment which cost $10,000 and had accumulated depreciation of $1,200 was sold for $4,300.
3. All other changes in noncurrent accounts had a direct effect on cash flows, except the change in accumulated depreciation.

Instructions

a. Prepare a statement of cash flows for 2025 using the indirect method.

b. Compute free cash flow.

Solution

2. a.

Strong Corporation
Statement of Cash Flows
For the Year Ended December 31, 2025

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 disposal of plant assets	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 common stock	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

*[$4,300 – ($10,000 – $1,200)]

b. Free cash flow = $44,600 – $0 – $26,400 = $18,200

Practice Problem

Prepare statement of cash flows using indirect and direct methods.

(LO 2, 4) The income statement for the year ended December 31, 2025, for Kosinski Manufacturing Company contains the following condensed information.

Kosinski Manufacturing Company
Income Statement
For the Year Ended December 31, 2025

Sales revenue		$6,583,000
Cost of goods sold	$2,810,000	
Operating expenses (excluding depreciation)	2,086,000	
Depreciation expense	880,000	
Loss on disposal of plant assets	24,000	5,800,000
Income before income taxes		783,000
Income tax expense		353,000
Net income		$ 430,000

The $24,000 loss resulted from selling equipment for $270,000 cash. New equipment was purchased for $750,000 cash.

The following balances are reported on Kosinski's comparative balance sheets at December 31.

Kosinski Manufacturing Company
Comparative Balance Sheets (partial)

	2025	2024
Cash	$672,000	$130,000
Accounts receivable	775,000	610,000
Inventory	834,000	867,000
Accounts payable	521,000	501,000

Income tax expense of $353,000 represents the amount paid in 2025. Dividends declared and paid in 2025 totaled $200,000.

Instructions

a. Prepare the statement of cash flows using the indirect method.

*b. Prepare the statement of cash flows using the direct method.

Solution

a.

Kosinski Manufacturing Company
Statement of Cash Flows—Indirect Method
For the Year Ended December 31, 2025

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		
Sale of equipment	270,000	
Purchase of equipment	(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		$ 672,000

*b.

Kosinski Manufacturing Company
Statement of Cash Flows—Direct Method
For the Year Ended December 31, 2025

Cash flows from operating activities		
Cash collections from customers		$6,418,000*
Less: Cash payments:		
To suppliers	$2,757,000**	
For operating expenses	2,086,000	
For income taxes	353,000	5,196,000
Net cash provided by operating activities		1,222,000

Cash flows from investing activities		
Sale of equipment	270,000	
Purchase of equipment	(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		$ 672,000

Direct-Method Computations:

*Computation of cash collections from customers:	
Sales revenue	$6,583,000
Less: Increase in accounts receivable	165,000
Cash collections from customers	$6,418,000

**Computation of cash payments to suppliers:	
Cost of goods sold per income statement	$2,810,000
Less: Decrease in inventories	33,000
Less: Increase in accounts payable	20,000
Cash payments to suppliers	$2,757,000

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Note: All 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. Pat Marx maintains that the statement of cash flows is an optional financial statement. Is this true? Explain why or why not.

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?

   b. What are the major uses (outflows) of cash?

5. Why is it important to disclose certain noncash transactions? How should they be disclosed?

6. Helen Powell and Paul Tang were discussing the format of the statement of cash flows of Baumgarten Co. At the bottom of Baumgarten's statement of cash flows was a separate section entitled "Noncash investing and financing activities." Give three examples of significant noncash transactions that would be reported in this section.

7. Why is it necessary to use comparative balance sheets, a current income statement, and certain transaction data in preparing a statement of cash flows?

8. Describe the differences between the direct and indirect methods of preparing the statement of cash flows. Are both methods acceptable? Which method is preferred by the FASB? 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-basis net income to cash-basis income when preparing a statement of cash flows?

12. The president of Murquery Company 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 of cash flows prepared using the indirect method?

15. Why is the statement of cash flows useful?

16. During 2025, Slivowitz Doubleday Company converted $1,700,000 of its total $2,000,000 of bonds payable into common stock. Indicate how the transaction would be reported on a statement of cash flows, if at all.

17. In its 2019 statement of cash flows, what amount did **Apple** report for net cash (a) provided by operating activities, (b) used for investing activities, and (c) used for financing activities? (Apple's financial statements are available in Appendix A.)

18. **a.** What are the phases of the corporate life cycle?

b. What effect does each phase have on the amounts reported in a statement of cash flows?

19. Based on its statement of cash flows provided in Appendix A, in what stage of the corporate life cycle is **Apple**?

*20. Describe the direct method for determining net cash provided by operating activities.

*21. Give the equations under the direct method for computing (a) cash receipts from customers and (b) cash payments to suppliers.

*22. Harbinger Inc. reported sales of $2 million for 2025. Accounts receivable decreased $150,000, and accounts payable increased $300,000. Compute cash receipts from customers, assuming that the receivable and payable transactions are related to operations.

*23. In the direct method, why is depreciation expense not reported in the cash flows from operating activities section?

*24. 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

BE12.1 **(LO 1), C** Each of these items must be considered in preparing a statement of cash flows for Irvin Co. for the year ended December 31, 2025. For each item, state how it should be shown in the statement of cash flows for 2025.

Indicate statement presentation of selected transactions.

a. Issued bonds for $200,000 cash.

b. Purchased equipment for $180,000 cash.

c. Sold land costing $20,000 for $20,000 cash.

d. Declared and paid a $50,000 cash dividend.

BE12.2 **(LO 1), C** 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.

a. Purchase of equipment.

b. Proceeds from sale of building.

c. Redemption of bonds payable.

d. Cash received from sale of goods.

e. Payment of dividends.

f. Issuance of common stock.

BE12.3 **(LO 1), AP** The following T-account is a summary of the Cash account of Alixon Company.

Identify financing activity transactions.

Cash (Summary Form)

Balance, Jan. 1	8,000		
Receipts from customers	364,000	Payments for goods	200,000
Dividends on stock investments	6,000	Payments for operating expenses	140,000
Proceeds from sale of equipment	36,000	Interest paid	10,000
Proceeds from issuance of bonds payable	300,000	Taxes paid	8,000
		Dividends paid	40,000
Balance, Dec. 31	316,000		

What amount of net cash provided (used) by financing activities should be reported in the statement of cash flows?

BE12.4 **(LO 2), AP** Miguel, Inc. reported net income of $2.5 million in 2025. Depreciation for the year was $160,000, accounts receivable decreased $350,000, and accounts payable decreased $280,000. Compute net cash provided by operating activities using the indirect method.

Compute net cash provided by operating activities—indirect method.

BE12.5 **(LO 2), AP** The net income for Mongan Co. for 2025 was $280,000. For 2025, depreciation on plant assets was $70,000, and the company incurred a loss on disposal of plant assets of $28,000. Compute net cash provided by operating activities under the indirect method, assuming there were no other changes in the company's accounts.

Compute net cash provided by operating activities—indirect method.

BE12.6 **(LO 2), AP** The comparative balance sheets for Gale Company show these changes in noncash current asset accounts: accounts receivable decreased $80,000, prepaid expenses increased $28,000, and inventories increased $40,000. Compute net cash provided by operating activities using the indirect method, assuming that net income is $186,000.

Compute net cash provided by operating activities—indirect method.

Determine cash received from sale of equipment.

BE12.7 **(LO 2), AN** The T-accounts for Equipment and the related Accumulated Depreciation—Equipment for Goldstone Company at the end of 2025 are shown here.

Equipment			
Beg. bal.	80,000	Disposals	21,000
Acquisitions	41,000		
End. bal.	100,000		

Accum. Depr.—Equipment			
Disposals	5,100	Beg. bal.	44,500
		Depr. exp.	12,000
		End. bal.	51,400

In addition, Goldstone's income statement reported a loss on the disposal of plant assets of $3,500. What amount was reported on the statement of cash flows as "cash flow from sale of equipment"?

Answer questions related to the phases of corporate life cycle.

BE12.8 **(LO 3), C** Answer the following questions.

a. Why is net cash provided by operating activities likely to be lower than reported net income during the growth phase?

b. Why is net cash from investing activities often positive during the late maturity phase and during the decline phase?

Calculate free cash flow.

BE12.9 **(LO 3), AP** Suppose that during 2025 Cypress Semiconductor Corporation reported net cash provided by operating activities of $89,303,000, cash used in investing of $43,126,000, and cash used in financing of $7,368,000. In addition, cash spent for plant assets during the period was $25,823,000. No dividends were paid. Calculate free cash flow.

Calculate free cash flow.

BE12.10 **(LO 3), AP** Sprouts Corporation reported net cash provided by operating activities of $412,000, net cash used by investing activities of $250,000, and net cash provided by financing activities of $70,000. In addition, cash spent for capital assets during the period was $200,000. No dividends were paid. Calculate free cash flow.

Calculate free cash flow.

BE12.11 **(LO 3), AP** Suppose Shaw Communications reported net cash used by operating activities of $104,539,000 and sales revenue of $2,867,459,000 during 2025. Cash spent on plant asset additions during the year was $79,330,000. No dividends were paid. Calculate free cash flow.

Calculate and analyze free cash flow.

BE12.12 **(LO 3), AN** The management of Uhuru Inc. 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 $734,000, paid cash dividends of $92,000, and had capital expenditures of $310,000. 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.

* BE12.13 **(LO 4), AP** Suppose Columbia Sportswear Company had accounts receivable of $299,585,000 at January 1, 2025, and $226,548,000 at December 31, 2025. Assume sales revenue was $1,244,023,000 for the year 2025. What is the amount of cash receipts from customers in 2025?

Compute cash payments for income taxes—direct method.

* BE12.14 **(LO 4), AP** Hoffman Corporation reported income taxes of $370,000,000 on its 2025 income statement. Its balance sheet reported income taxes payable of $277,000,000 at December 31, 2024, and $528,000,000 at December 31, 2025. What amount of cash payments were made for income taxes during 2025?

Compute cash payments for operating expenses—direct method.

* BE12.15 **(LO 4), AP** Pietr Corporation reports operating expenses of $90,000, excluding depreciation expense of $15,000, for 2025. During the year, prepaid expenses decreased $7,200 and accrued expenses payable increased $4,400. Compute the cash payments for operating expenses in 2025.

DO IT! Exercises

Classify transactions by type of cash flow activity.

DO IT! 12.1 **(LO 1), C** Moss Corporation had the following transactions.

1. Issued $160,000 of bonds payable.
2. Paid utilities expense.
3. Issued 500 shares of preferred stock for $45,000.
4. Sold land and a building for $250,000.
5. Loaned $30,000 to Dead End Corporation, receiving Dead End's 1-year, 12% note.

Classify each of these transactions by type of cash flow activity (operating, investing, or financing). (*Hint:* Refer to Illustration 12.1.)

Calculate net cash from operating activities.

DO IT! 12.2a **(LO 2), AP** PK Photography reported net income of $100,000 for 2025. Included in the income statement were depreciation expense of $6,300, patent amortization expense of $4,000, and a gain on disposal of plant assets of $3,600. PK's comparative balance sheets show the following balances.

	12/31/25	12/31/24
Accounts receivable	$21,000	$27,000
Accounts payable	9,200	6,000

Calculate net cash provided by operating activities for PK Photography.

DO IT! 12.2b (LO 2), AP Alex Company reported the following information for 2025.

Prepare statement of cash flows—indirect method.

Alex Company
Comparative Balance Sheets
December 31

	2025	2024	Change Increase/Decrease	
Assets				
Cash	$ 59,000	$ 36,000	$ 23,000	Increase
Accounts receivable	62,000	22,000	40,000	Increase
Inventory	44,000	–0–	44,000	Increase
Prepaid expenses	6,000	4,000	2,000	Increase
Land	55,000	70,000	15,000	Decrease
Buildings	200,000	200,000	–0–	No change
Accumulated depreciation—buildings	(21,000)	(14,000)	7,000	Increase
Equipment	183,000	68,000	115,000	Increase
Accumulated depreciation—equipment	(28,000)	(10,000)	18,000	Increase
Totals	$560,000	$376,000		
Liabilities and Stockholders' Equity				
Accounts payable	$ 43,000	$ 40,000	$ 3,000	Increase
Accrued expenses payable	–0–	10,000	10,000	Decrease
Bonds payable	100,000	150,000	50,000	Decrease
Common stock ($1 par)	230,000	60,000	170,000	Increase
Retained earnings	187,000	116,000	71,000	Increase
Totals	$560,000	$376,000		

Alex Company
Income Statement
For the Year Ended December 31, 2025

Sales revenue		$941,000
Cost of goods sold	$475,000	
Operating expenses	231,000	
Interest expense	12,000	
Loss on disposal of plant assets	2,000	720,000
Income before income taxes		221,000
Income tax expense		65,000
Net income		$156,000

Additional information:

1. Operating expenses include depreciation expense of $40,000.
2. Land was sold at its book value for cash.
3. Cash dividends of $85,000 were declared and paid in 2025.
4. Equipment with a cost of $166,000 was purchased for cash. Equipment with a cost of $51,000 and a book value of $36,000 was sold for $34,000 cash.
5. Bonds of $50,000 were redeemed at their face value for cash.
6. Common stock ($1 par) was issued at par for $170,000 cash.

Use this information to prepare a statement of cash flows using the indirect method.

Compute and discuss free cash flow.

DO IT! 12.3 (LO 3), AP Moskow Corporation issued the following statement of cash flows for 2025.

Moskow Corporation
Statement of Cash Flows—Indirect Method
For the Year Ended December 31, 2025

Cash flows from operating activities		
Net income		$ 59,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	$ 9,100	
Decrease in accounts receivable	9,500	
Increase in inventory	(5,000)	
Decrease in accounts payable	(2,200)	
Loss on disposal of plant assets	3,300	14,700
Net cash provided by operating activities		73,700
Cash flows from investing activities		
Sale of investments	3,100	
Purchase of equipment	(24,200)	
Net cash used by investing activities		(21,100)
Cash flows from financing activities		
Issuance of common stock	20,000	
Payment on long-term note payable	(10,000)	
Payment of cash dividends	(13,000)	
Net cash used by financing activities		(3,000)
Net increase in cash		49,600
Cash at beginning of year		13,000
Cash at end of year		$ 62,600

a. Compute free cash flow for Moskow Corporation.

b. Explain why free cash flow often provides better information than "Net cash provided by operating activities."

Exercises

Classify transactions by type of activity.

E12.1 **(LO 1), C** Kiley Corporation had these transactions during 2025.

a. Purchased a machine for $30,000, giving a long-term note in exchange.

b. Issued $50,000 par value common stock for cash.

c. Issued $200,000 par value common stock upon conversion of bonds having a face value of $200,000.

d. Declared and paid a cash dividend of $13,000.

e. Sold a long-term investment with a cost of $15,000 for $15,000 cash.

f. Collected $16,000 from sale of goods.

g. Paid $18,000 to suppliers.

Instructions

Analyze the transactions and indicate whether each transaction is an operating activity, investing activity, financing activity, or noncash investing and financing activity.

Classify transactions by type of activity.

E12.2 **(LO 1), C** An analysis of comparative balance sheets, the current year's income statement, and the general ledger accounts of Hailey Corp. uncovered the following items. Assume all items involve cash unless there is information to the contrary.

a. Exchange of land for patent.

b. Sale of building at book value.

c. Payment of dividends.

d. Depreciation of plant assets.

e. Conversion of bonds into common stock.

f. Issuance of capital stock.

g. Amortization of patent.
h. Issuance of bonds for land.
i. Purchase of land.
j. Loss on disposal of plant assets.
k. Retirement of bonds.

Instructions

Indicate where each item should be presented in the statement of cash flows (indirect method) using these four major classifications: operating activity (that is, the item would be listed among the adjustments to net income to determine net cash provided by operating activities under the indirect method), investing activity, financing activity, or significant noncash investing and financing activity.

E12.3 **(LO 1), AP** Cushenberry Corporation had the following transactions.

Prepare journal entry and determine effect on cash flows.

1. Sold land (cost $12,000) for $15,000.
2. Issued common stock at par for $20,000.
3. Recorded depreciation on buildings for $17,000.
4. Paid salaries of $9,000.
5. Issued 1,000 shares of $1 par value common stock for equipment worth $8,000.
6. Sold equipment (cost $10,000, accumulated depreciation $7,000) for $1,200.

Instructions

For each transaction above, (a) prepare the journal entry, and (b) indicate how it would affect the statement of cash flows using the indirect method.

E12.4 **(LO 2), AP** Sosa Company reported net income of $190,000 for 2025. Sosa also reported depreciation expense of $35,000 and a loss of $5,000 on the disposal of plant assets. The comparative balance sheets show an increase in accounts receivable of $15,000 for the year, a $17,000 increase in accounts payable, and a $4,000 increase in prepaid expenses.

Prepare the operating activities section—indirect method.

Instructions

Prepare the operating activities section of the statement of cash flows for 2025. Use the indirect method.

E12.5 **(LO 2), AP** The current sections of Sunn Inc.'s balance sheets at December 31, 2024 and 2025, are presented here. Sunn's net income for 2025 was $153,000. Depreciation expense was $27,000.

Prepare the operating activities section—indirect method.

	2025	2024
Current assets		
Cash	$105,000	$ 99,000
Accounts receivable	80,000	89,000
Inventory	168,000	172,000
Prepaid expenses	27,000	22,000
Total current assets	$380,000	$382,000
Current liabilities		
Accrued expenses payable	$ 15,000	$ 5,000
Accounts payable	85,000	92,000
Total current liabilities	$100,000	$ 97,000

Instructions

Prepare the operating activities section of the company's statement of cash flows for the year ended December 31, 2025, using the indirect method.

E12.6 **(LO 2), AP** The following information is available for Stamos Corporation for the year ended December 31, 2025.

Prepare statement of cash flows—indirect method.

Beginning cash balance	$ 45,000
Accounts payable decrease	3,700
Depreciation expense	162,000
Accounts receivable increase	8,200
Inventory increase	11,000
Net income	284,100
Cash received for sale of land at book value	35,000
Cash dividends paid	12,000
Income taxes payable increase	4,700
Cash used to purchase building	289,000
Cash used to purchase treasury stock	26,000
Cash received from issuing bonds	200,000

Instructions

Prepare a statement of cash flows using the indirect method.

Prepare partial statement of cash flows—indirect method.

E12.7 **(LO 2), AN** The following three accounts appear in the general ledger of Beiber Corp. during 2025.

Equipment

Date		Debit	Credit	Balance
Jan. 1	Balance			160,000
July 31	Purchase of equipment	70,000		230,000
Sept. 2	Purchase of equipment	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	16,000		55,000
Dec. 31	Depreciation for year		28,000	83,000

Retained Earnings

Date		Debit	Credit	Balance
Jan. 1	Balance			105,000
Aug. 23	Dividends (cash)	14,000		91,000
Dec. 31	Net income		72,000	163,000

Instructions

From the postings in the accounts, indicate how the information is reported by preparing a partial statement of cash flows using the indirect method. The loss on disposal of plant assets was $8,000.

Prepare statement of cash flows and compute free cash flow.

E12.8 **(LO 2, 3), AP** Rojas Corporation's comparative balance sheets are presented below.

Rojas Corporation
Comparative Balance Sheets
December 31

	2025	2024
Cash	$ 14,300	$ 10,700
Accounts receivable	21,200	23,400
Land	20,000	26,000
Buildings	70,000	70,000
Accumulated depreciation—buildings	(15,000)	(10,000)
Total	$110,500	$120,100
Accounts payable	$ 12,370	$ 31,100
Common stock	75,000	69,000
Retained earnings	23,130	20,000
Total	$110,500	$120,100

Additional information:

1. Net income was $22,630. Dividends declared and paid were $19,500.
2. No noncash investing and financing activities occurred during 2025.
3. The land was sold for cash of $4,900.

Instructions

a. Prepare a statement of cash flows for 2025 using the indirect method.
b. Compute free cash flow.

E12.9 (LO 2), AP The following are comparative balance sheets for Mitch Company.

Prepare statement of cash flows—indirect method.

Mitch Company
Comparative Balance Sheets
December 31

	2025	2024
Assets		
Cash	$ 68,000	$ 22,000
Accounts receivable	88,000	76,000
Inventory	167,000	189,000
Land	80,000	100,000
Equipment	260,000	200,000
Accumulated depreciation—equipment	(66,000)	(32,000)
Total	$597,000	$555,000
Liabilities and Stockholders' Equity		
Accounts payable	$ 39,000	$ 43,000
Bonds payable	150,000	200,000
Common stock ($1 par)	216,000	174,000
Retained earnings	192,000	138,000
Total	$597,000	$555,000

Additional information:

1. Net income for 2025 was $93,000.
2. Depreciation expense was $34,000.
3. Cash dividends of $39,000 were declared and paid.
4. Bonds payable with a carrying value of $50,000 were redeemed for $50,000 cash.
5. Common stock was issued at par for $42,000 cash.
6. No equipment was sold during 2025.
7. Land was sold for its book value.

Instructions

Prepare a statement of cash flows for 2025 using the indirect method.

E12.10 (LO 2, 3), AP Rodriquez Corporation's comparative balance sheets are as follows.

Prepare statement of cash flows—indirect method and compute free cash flow.

Rodriquez Corporation
Comparative Balance Sheets
December 31

	2025	2024
Cash	$ 15,200	$ 17,700
Accounts receivable	25,200	22,300
Investments	20,000	16,000
Equipment	60,000	70,000
Accumulated depreciation—equipment	(14,000)	(10,000)
Total	$106,400	$116,000
Accounts payable	$ 14,600	$ 11,100
Bonds payable	10,000	30,000
Common stock	50,000	45,000
Retained earnings	31,800	29,900
Total	$106,400	$116,000

Additional information:

1. Net income was $18,300. Dividends declared and paid were $16,400.
2. Equipment which cost $10,000 and had accumulated depreciation of $1,200 was sold for $3,300.
3. No noncash investing and financing activities occurred during 2025.
4. Bonds were retired at their carrying value.

Instructions

a. Prepare a statement of cash flows for 2025 using the indirect method.

b. Compute free cash flow.

Identify phases of corporate life cycle.

E12.11 (LO 3), C The information in the table is from the statement of cash flows for a company at four different points in time (M, N, O, and P). Negative values are presented in parentheses.

	Point in Time			
	M	N	O	P
Net cash provided by operating activities	$ (60,000)	$ 30,000	$120,000	$(10,000)
Cash provided by investing activities	(100,000)	25,000	30,000	(40,000)
Cash provided by financing activities	70,000	(90,000)	(50,000)	120,000
Net income	(38,000)	10,000	100,000	(5,000)

Instructions

For each point in time, state whether the company is most likely in the introductory phase, growth phase, maturity phase, or decline phase. In each case, explain your choice.

Compute net cash provided by operating activities—direct method.

*E12.12 **(LO 4), AP** Zimmer Company completed its first year of operations on December 31, 2025. Its initial income statement showed that Zimmer had sales revenue of $198,000 and operating expenses of $83,000. Accounts receivable and accounts payable at year-end were $60,000 and $23,000, respectively. Assume that accounts payable related to operating expenses. Ignore income taxes.

Instructions

Compute net cash provided by operating activities using the direct method.

Compute cash payments—direct method.

*E12.13 **(LO 4), AP** Suppose the 2025 income statement for **McDonald's Corporation** shows cost of goods sold $5,178.0 million and operating expenses (including depreciation expense of $1,216.2 million) $10,725.7 million. The comparative balance sheets for the year show that inventory decreased $5.3 million, prepaid expenses increased $42.2 million, accounts payable (inventory suppliers) increased $15.6 million, and accrued expenses payable increased $199.8 million.

Instructions

Using the direct method, compute (a) cash payments to suppliers and (b) cash payments for operating expenses.

Compute cash flow from operating activities—direct method.

*E12.14 **(LO 4), AP** The 2025 accounting records of Megan Transport provide the following information.

Payment of interest	$ 10,000	Payment of salaries and wages	$ 53,000
Cash sales	48,000	Depreciation expense	16,000
Receipt of dividend revenue	18,000	Proceeds from sale of vehicles	812,000
Payment of income taxes	12,000	Purchase of equipment for cash	22,000
Net income	38,000	Loss on sale of vehicles	3,000
Payment for merchandise	97,000	Payment of dividends	14,000
Payment for land	74,000	Payment of operating expenses	28,000
Collection of accounts receivable	195,000		

Instructions

Prepare the cash flows from operating activities section using the direct method.

Calculate cash flows—direct method.

*E12.15 **(LO 4), AN** The following information is taken from the 2025 general ledger of Preminger Company.

Rent	Rent expense	$ 30,000
	Prepaid rent, January 1	5,900
	Prepaid rent, December 31	7,400
Salaries	Salaries and wages expense	$ 54,000
	Salaries and wages payable, January 1	2,000
	Salaries and wages payable, December 31	8,000
Sales	Sales revenue	$160,000
	Accounts receivable, January 1	16,000
	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.

Prepare a worksheet.

Excel

*E12.1[illegible] **(LO 5), AP** Comparative balance sheets for International Company are as follows.

International Company
Comparative Balance Sheets
December 31

	2025	**2024**
Assets		
Cash	$ 74,000	$ 22,000
Accounts receivable	85,000	76,000
Inventory	179,000	189,000
Land	75,000	100,000
Equipment	250,000	200,000
Accumulated depreciation—equipment	(66,000)	(42,000)
Total	$597,000	$545,000
Liabilities and Stockholders' Equity		
Accounts payable	$ 34,000	$ 47,000
Bonds payable	160,000	200,000
Common stock ($1 par)	224,000	164,000
Retained earnings	179,000	134,000
Total	$597,000	$545,000

Additional information:

1. Net income for 2025 was $100,000.
2. Cash dividends of $55,000 were declared and paid.
3. Bonds payable with a carrying value of $40,000 were redeemed for $40,000 cash.
4. Common stock was issued at par for $60,000 cash.
5. Depreciation expense was $24,000.
6. Sales revenue for the year was $978,000.
7. Land was sold at cost, and equipment was purchased for cash.

Instructions

Prepare a worksheet for a statement of cash flows for 2025 using the indirect method. Enter the reconciling items directly on the worksheet, using letters to cross-reference each entry.

Problems

Distinguish among operating, investing, and financing activities.

P12.1 **(LO 1, 2), C** You are provided with the following information regarding events that occurred at Moore Corporation during 2025 or changes in account balances as of December 31, 2025.

	(1) Statement of Cash Flow Section Affected	(2) If Operating, Should It Be Added (A) to or Subtracted (S) from Net Income
a. Depreciation expense was $80,000.		
b. Interest Payable account increased $5,000.		
c. Received $26,000 from sale of plant assets.		
d. Acquired land by issuing common stock to seller.		
e. Paid $17,000 cash dividend to preferred stockholders.		
f. Paid $4,000 cash dividend to common stockholders.		
g. Accounts Receivable account decreased $10,000.		
h. Inventory increased $2,000.		
i. Received $100,000 from issuing bonds payable.		
j. Acquired equipment for $16,000 cash.		

Instructions

Moore prepares its statement of cash flows using the indirect method. Complete the first column of the table, indicating whether each item affects the operating activities section (O) (that is, the item would be listed among the adjustments to net income to determine net cash provided by operating activities under the indirect method), investing activities section (I), financing activities section (F), or is a noncash (NC) transaction reported in a separate schedule. For those items classified as operating activities (O), indicate whether the item is added (A) or subtracted (S) from net income to determine net cash provided by operating activities.

Determine cash flow effects of changes in equity accounts.

P12.2 **(LO 2), AN** The following account balances relate to the stockholders' equity accounts of Molder Corp. at year-end.

	2025	2024
Common stock, 10,500 and 10,000 shares, issued and outstanding, respectively, for 2025 and 2024	$160,800	$140,000
Preferred stock, 5,000 shares, issued and outstanding	125,000	125,000
Retained earnings	300,000	270,000

A small stock dividend was declared and issued in 2025. The market price of the shares issued was $8,800. Cash dividends of $20,000 were declared and paid in both 2025 and 2024. The common stock and preferred stock have no par or stated value.

Instructions

a. Net income $5[illegible]

a. What was the amount of net income reported by Molder Corp. in 2025?

b. Determine the amounts of any cash inflows or outflows related to the common stock and dividend accounts in 2025.

c. Indicate where each of the cash inflows or outflows identified in (b) would be classified on the statement of cash flows.

Prepare the operating activities section—indirect method.

Excel

P12.3 **(LO 2), AP** The income statement of Munsun Company is presented here.

Munsun Company
Income Statement
For the Year Ended November 30, 2025

Sales revenue		$7,600,000
Cost of goods sold		
Beginning inventory	$1,900,000	
Purchases	4,400,000	
Goods available for sale	6,300,000	
Ending inventory	1,600,000	
Total cost of goods sold		4,700,000
Gross profit		2,900,000
Operating expenses		
Selling expenses	450,000	
Administrative expenses	700,000	1,150,000
Net income		$1,750,000

Additional information:

1. Accounts receivable decreased $380,000 during the year, and inventory decreased $300,000.
2. Prepaid expenses increased $150,000 during the year.
3. Accounts payable to suppliers of inventory decreased $350,000 during the year.
4. Accrued expenses payable decreased $100,000 during the year.
5. Administrative expenses include depreciation expense of $110,000.

Instructions

Net cash provided—oper. act. $1,[illegible]

Prepare the operating activities section of the statement of cash flows for the year ended November 30, 2025, for Munsun Company, using the indirect method.

Prepare the operating activities section—direct method.

*P12.4 **(LO 4), AP** Data for Munsun Company are presented in P12.3.

Instructions

Net cash provided—oper. act. $1,[illegible]

Prepare the operating activities section of the statement of cash flows using the direct method.

P12.5 **(LO 2), AP** Rewe Company's income statement contained the following condensed information.

Prepare the operating activities section—indirect method.

Excel

Rewe Company **Income Statement** **For the Year Ended December 31, 2025**		
Service revenue		$970,000
Operating expenses, excluding depreciation	$614,000	
Depreciation expense	55,000	
Loss on disposal of plant assets	16,000	685,000
Income before income taxes		285,000
Income tax expense		56,000
Net income		$229,000

Rewe's balance sheets contained the following comparative data at December 31.

	2025	2024
Accounts receivable	$70,000	$60,000
Accounts payable	41,000	32,000
Income taxes payable	13,000	7,000

Accounts payable pertain to operating expenses.

Instructions

Prepare the operating activities section of the statement of cash flows using the indirect method.

Net cash provided $305,000

*P12.6 **(LO 4), AP** Data for Rewe Company are presented in P12.5.

Prepare the operating activities section—direct method.

Excel

Instructions

Prepare the operating activities section of the statement of cash flows using the direct method.

Net cash provided $305,000

P12.7 **(LO 2, 3), AP** Presented here are the financial statements of Warner Company.

Prepare a statement of cash flows—indirect method, and compute free cash flow.

Excel

Warner Company **Comparative Balance Sheets** **December 31**		
	2025	**2024**
Assets		
Cash	$ 35,000	$ 20,000
Accounts receivable	20,000	14,000
Inventory	28,000	20,000
Property, plant, and equipment	60,000	78,000
Accumulated depreciation	(32,000)	(24,000)
Total	$111,000	$108,000
Liabilities and Stockholders' Equity		
Accounts payable	$ 19,000	$ 15,000
Income taxes payable	7,000	8,000
Bonds payable	17,000	33,000
Common stock	18,000	14,000
Retained earnings	50,000	38,000
Total	$111,000	$108,000

Warner Company **Income Statement** **For the Year Ended December 31, 2025**		
Sales revenue		$242,000
Cost of goods sold		175,000
Gross profit		67,000
Selling expenses	$18,000	
Administrative expenses	6,000	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 was $17,500.
2. Dividends declared and paid were $20,000.
3. During the year, equipment was sold for $8,500 cash. This equipment originally cost $18,000 and had accumulated depreciation of $9,500 at the time of sale.
4. Bonds were redeemed at their carrying value.
5. Common stock was issued at par for cash.

Instructions

a. Net cash provided—oper. act. $3[illegible],500

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.

Excel

***P12.8 (LO 3, 4), AP** Data for Warner Company are presented in P12.7. Further analysis reveals the following.

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 selling expense category.
4. All sales and inventory purchases are on account.

Instructions

a. Net cash provided—oper. act. $3[illegible],500

a. Prepare a statement of cash flows for Warner Company using the direct method.

b. Compute free cash flow.

Prepare a statement of cash flows—indirect method.

P12.9 (LO 2), AP Condensed financial data of Granger Inc. follow.

Granger Inc.
Comparative Balance Sheets
December 31

	2025	2024
Assets		
Cash	$ 80,800	$ 48,400
Accounts receivable	87,800	38,000
Inventory	112,500	102,850
Prepaid expenses	28,400	26,000
Long-term investments	138,000	109,000
Plant assets	285,000	242,500
Accumulated depreciation	(50,000)	(52,000)
Total	$682,500	$514,750
Liabilities and Stockholders' Equity		
Accounts payable	$102,000	$ 67,300
Accrued expenses payable	16,500	21,000
Bonds payable	110,000	146,000
Common stock	220,000	175,000
Retained earnings	234,000	105,450
Total	$682,500	$514,750

Granger Inc.
Income Statement Data
For the Year Ended December 31, 2025

Sales revenue		$388,460
Less:		
Cost of goods sold	$135,460	
Operating expenses, excluding depreciation	12,410	
Depreciation expense	46,500	
Income tax expense	27,280	
Interest expense	4,730	
Loss on disposal of plant assets	7,500	233,880
Net income		$154,580

Additional information:

1. New plant assets costing $100,000 were purchased for cash during the year.
2. Old plant assets having an original cost of $57,500 and accumulated depreciation of $48,500 were sold for $1,500 cash.
3. Bonds payable matured and were paid off at face value for cash.
4. A cash dividend of $26,030 was declared and paid during the year.
5. Common stock was issued at par for cash.
6. There were no significant noncash transactions.

Instructions

Prepare a statement of cash flows using the indirect method.

Net cash provided oper. act. $176,930

*P12.10 **(LO 4), AP** Data for Granger Inc. are presented in P12.9. Further analysis reveals that accounts payable pertain to merchandise creditors.

Prepare a statement of cash flows—direct method.

Instructions

Prepare a statement of cash flows for Granger Inc. using the direct method.

Net cash provided—oper. act. $176,930

P12.11 **(LO 2), AP** The comparative balance sheets for Spicer Company as of December 31 are as follows.

Prepare a statement of cash flows—indirect method.

Spicer Company
Comparative Balance Sheets
December 31

	2025	2024
Assets		
Cash	$ 68,000	$ 45,000
Accounts receivable	50,000	58,000
Inventory	151,450	142,000
Prepaid expenses	15,280	21,000
Land	145,000	130,000
Buildings	200,000	200,000
Accumulated depreciation—buildings	(60,000)	(40,000)
Equipment	225,000	155,000
Accumulated depreciation—equipment	(45,000)	(35,000)
Total	$749,730	$676,000
Liabilities and Stockholders' Equity		
Accounts payable	$ 44,730	$ 36,000
Bonds payable	300,000	300,000
Common stock, $1 par	200,000	160,000
Retained earnings	205,000	180,000
Total	$749,730	$676,000

Additional information:

1. Operating expenses include depreciation expense of $42,000 ($20,000 of depreciation expense for buildings and $22,000 for equipment).
2. Land was sold for cash at book value.
3. Cash dividends of $12,000 were declared and paid.
4. Net income for 2025 was $37,000.
5. Equipment was purchased for $92,000 cash. In addition, equipment costing $22,000 with a book value of $10,000 was sold for $8,000 cash.
6. 40,000 shares of $1 par value common stock were issued in exchange for land with a fair value of $40,000.

Instructions

Prepare a statement of cash flows for the year ended December 31, 2025, using the indirect method.

Net cash provided—oper. act. $94,000

Prepare a worksheet—indirect method.

Excel

*P12.12 **(LO 5), AP** Condensed financial data of Oakley Company are as follows.

Oakley Company
Comparative Balance Sheets
December 31

	2025	**2024**
Assets		
Cash	$ 82,700	$ 47,250
Accounts receivable	90,800	57,000
Inventory	126,900	102,650
Investments	84,500	87,000
Equipment	255,000	205,000
Accumulated depreciation—equipment	(49,500)	(40,000)
	$590,400	$458,900
Liabilities and Stockholders' Equity		
Accounts payable	$ 57,700	$ 48,280
Accrued expenses payable	12,100	18,830
Bonds payable	100,000	70,000
Common stock	250,000	200,000
Retained earnings	170,600	121,790
	$590,400	$458,900

Oakley Company
Income Statement
For the Year Ended December 31, 2025

Sales revenue		$297,500
Gain on disposal of plant assets		8,750
		306,250
Less:		
Cost of goods sold	$99,460	
Operating expenses (excluding depreciation expense)	14,670	
Depreciation expense	49,700	
Income tax expense	7,270	
Interest expense	2,940	174,040
Net income		$132,210

Additional information:

1. Equipment costing $97,000 was purchased for cash during the year.
2. Investments were sold at their carrying value.
3. Equipment costing $47,000 was sold for $15,550, resulting in a gain of $8,750.
4. A cash dividend of $83,400 was declared and paid during the year.

Instructions

Reconciling items total $610,210

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.

Continuing Case

leungchopan/
Shutterstock.com

Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1–11.)

CC12 Natalie has prepared the balance sheet and income statement of Cookie & Coffee Creations Inc. and would like you to prepare the statement of cash flows.

Go to Wiley Course Resources for complete case details and instructions.

Data Analytics in Action

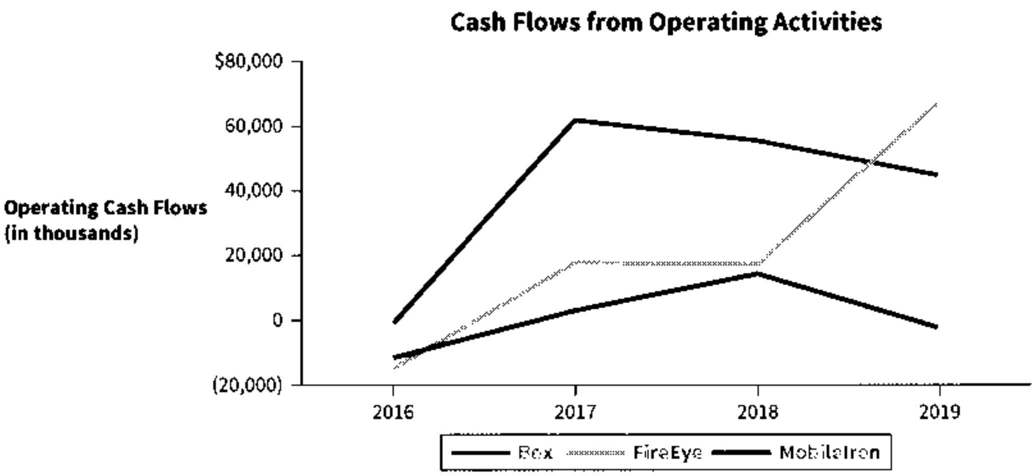
Using Data Visualization to Analyze Cash Flows

DA 12.1 Data visualization can be used to illustrate cash flows.

Excel

Example: Consider the *Accounting Across the Organization* box "Burning Through Our Cash" presented in the chapter. The three tech companies listed, Box, FireEye, and MobileIron, have all issued stock to the public. As mentioned, prior to making investments in these companies, the investors most likely closely examined each respective company's cash flows. The investors want to be sure that these companies are able to generate enough cash to satisfy liabilities, pay dividends, and grow the company.

We can use data visualization to understand the pattern of cash flows for companies such as these. For example, consider the following chart.



Source: Adapted from Verizon Media/https://finance.yahoo.com/last accessed date 07 July 2021.

FireEye has an upward sloping trajectory, making its operating cash flows appear more promising than the others. Box's operating cash flows have the steepest downward trend beginning in 2017, making it the company with the biggest concerns. MobileIron had a steady increase for the first two years but has taken a recent downturn, making it a second company that investors should monitor closely.

For this case, you will look more closely at the statement of cash flow data for these three companies. You will then create and analyze clustered column charts to determine what helpful information these visualizations might provide to investors.

Go to Wiley Course Resources for complete case details and instructions.

Using Data Analytics to Evaluate Industry Cash Flows

DA 12.2 By evaluating the cash flows of top competitors within an industry, financial statement users can make certain generalizations about that industry overall. This will help them to better analyze the cash flows of another company within that industry. For this case, you will use cash flow information from four leading pharmaceutical companies to create and analyze waterfall charts, and then make generalizations about this industry's cash flows.

Excel

Go to Wiley Course Resources for complete case details and instructions.

Using Data Visualization to Understand Financing Cash Flows

DA 12.3 Financing activities include issuing or paying off debt, and buying or selling stock. Users can find this information in the statement of cash flows. For this case, you will use data about Nike's financing activities for the past 6 fiscal years to create and evaluate a waterfall chart showing the company's sources and uses of cash.

Go to Wiley Course Resources for complete case details and instructions.

Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT12.1 The financial statements of **Apple Inc.** are presented in Appendix A.

Instructions

Answer the following questions.

a. What was the amount of net cash provided by operating activities for the year ended, September 26, 2020? For the year ended September 28, 2019?

b. What was the amount of increase or decrease in cash and cash equivalents for the year ended September 26, 2020?

c. Which method of computing net cash provided by operating activities does Apple use?

d. From your analysis of the September 26, 2020, 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 the year ended September 26, 2020?

f. What was the amount of interest paid in the year ended September 26, 2020? What was the amount of income taxes paid for the same period?

Comparative Analysis Problem: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT12.2 **Columbia Sportswear Company**'s financial statements are presented in Appendix B. Financial statements of **Under Armour, Inc.** 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 year presented.

b. What conclusions concerning the management of cash can be drawn from these data?

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT12.3 **Amazon.com, Inc.**'s financial statements are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

a. Based on the information contained in these financial statements, compute free cash flow for each company for the most recent year provided.

b. What conclusions concerning the management of cash can be drawn from these data?

Real-World Focus

CT12.4 Purpose: Learn about the **Securities and Exchange Commission (SEC)**.

Instructions

Go to the SEC website, choose **About**, and then answer the following questions.

a. Approximately 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?

CT12.5 You can use the Internet to view SEC filings.

Instructions

Choose a company, go to the **Yahoo! Finance** website, and then answer the following questions.

a. What company did you select?

b. What is its stock symbol? What is its selling price?

c. What recent SEC filings are available for your viewing? (*Hint:* Use the Profile link.)

d. Which filing is the most recent? What is its date?

Decision-Making Across the Organization

CT12.6 Pete Kent and Maria Robles are examining the following summary of cash flows for Sullivan Company for the year ended January 31, 2025.

Inflows	
Sales revenue	$385,000
Capital stock sales	405,000
Sale of investment (purchased below)	80,000
Proceeds from note (to purchase truck below)	20,000
Interest received on investments	6,000
Total	896,000
Outflows	
Purchase of fixtures and equipment	$320,000
Cost of merchandise purchased for resale	258,000
Payment of operating expenses	170,000
Purchase of investment	75,000
Purchase of truck with note proceeds (shown above)	20,000
Purchase of treasury stock	10,000
Payment of interest on note payable	3,000
Total	856,000
Net increase in cash	$ 40,000

Pete claims that this summary shows that Sullivan had a superb first year, with cash increasing $40,000. Maria replies that it was not a superb first year. Rather, she says, the year was an operating failure and that $40,000 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, determine the net income/(loss) for the year ended January 31, 2025. Depreciation expense was $55,000.

b. Prepare a statement of cash flows in proper form using the indirect method. The only noncash items in the income statement are depreciation and the gain from the sale of the investment.

c. With whom do you agree, Pete or Maria? Explain your position.

Communication Activity

CT12.7 Walt Jax, 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 12.14.

Ethics Case

CT12.8 Pendleton Automotive Corp. is a medium-sized wholesaler of automotive parts. It has 10 stockholders 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 Pendleton Automotive's current year's statement of cash flows must exceed $1 million. President and CEO Hans Pfizer's 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 Kurt Nolte presents president Hans Pfizer 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 Kurt, "We must get that amount above $1 million. Isn't there some way to increase operating cash flow by another $30,000?" Kurt 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, Kurt."

Upon close scrutiny of the statement of cash flows, Kurt concludes that he can get the operating cash flows above $1 million by reclassifying the proceeds from the $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 to 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, Kurt! 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?

All About You

CT12.9 In this chapter, you learned that companies prepare a statement of cash flows in order to keep track of their sources and uses of cash and to help them plan for their future cash needs. Planning for short- and long-term cash needs is every bit as important for you as it is for a company.

Instructions

Read the online article "Financial Uh-Oh? No Problem" and then complete the following. To access this article, it may be necessary to register at no cost.

a. Describe the three factors that determine how much money you should set aside for short-term needs.

b. How many months of living expenses does the article suggest to set aside?

c. Estimate how much you should set aside based on your current situation. Are you closer to Cliff's scenario or to Prudence's?

FASB Codification Activity

CT12.10 If your school has a subscription to the FASB Codification, log in and prepare responses to the following. Use the Master Glossary to determine the proper definitions.

a. What are cash equivalents?

b. What are financing activities?

c. What are investing activities?

d. What are operating activities?

e. What is the primary objective for the statement of cash flows? Is working capital the basis for meeting this objective?

f. Do companies need to disclose information about investing and financing activities that do not affect cash receipts or cash payments? If so, how should such information be disclosed?

Answers to Insight and Accounting Across the Organization Questions

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 the cash basis. Under accrual accounting, companies report revenues when the performance obligation is satisfied, even if cash hasn't been received; they report expenses when incurred, even if cash hasn't been paid.

Burning Through Our Cash **Q:** What implications does a company's cash burn rate have for its survival? **A:** The cash burn rate is measured by the amount that cash disbursements exceed cash receipts during a year. If a company doesn't have a sufficient cash cushion to weather such bad times, it will be unable to pay its liabilities as they come due and will cease to exist.

Operating with Negative Cash **Q:** Why do companies have negative net cash provided by operating activities during the introductory phase? **A:** During the introductory phase, companies usually spend more on inventory than the amount expensed for cost of goods sold because they are building up inventory and their cash collections frequently lag the amount reported for sales. Therefore, even if companies are reporting positive net income, they frequently report negative net cash provided by operating activities.

CHAPTER 13

Bloomberg/Getty Images

Financial Analysis: The Big Picture

Chapter Preview

We can all learn an important lesson from Warren Buffett: 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 text, 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 stock 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 we unleash you on the world of high finance, we present a few more important concepts and techniques as well as one more comprehensive review of corporate financial statements. We use all of the decision tools presented in this text to analyze a single company, with comparisons to a competitor and industry averages.

Feature Story

It Pays to Be Patient

A recent issue of *Forbes* magazine listed Warren Buffett as the second richest person in the world. His estimated wealth was $69 billion, give or take a few million. How much is $69 billion? If you invested $69 billion in an investment earning just 4%, you could spend $7.6 million per day—every day—forever.

So, how does Buffett spend his money? Basically, he doesn't! He still lives in the same house that he purchased in Omaha, Nebraska, in 1958 for $31,500. He still drives his own car (a Cadillac DTS). And, in case you were thinking that his kids are riding the road to Easy Street, think again. Buffett has committed to donate virtually all of his money to charity before he dies.

How did Buffett amass this wealth? Through careful investing. Buffett epitomizes a "value investor." He applies the basic techniques he learned in the 1950s from the great value investor Benjamin Graham. He looks for companies that have good long-term potential but are currently underpriced. He invests in companies that have low exposure to debt and that reinvest their earnings for future growth. He does not get caught up in fads or the latest trends.

For example, Buffett sat out on the dot-com mania in the 1990s. When other investors put lots of money into fledgling high-tech firms, Buffett didn't bite because he did not find dot-com companies that met his criteria. He didn't get to enjoy the stock price boom on the way up, but on the other hand, he didn't have to ride the price back down to Earth. When the dot-com bubble burst, everyone else was suffering from investment shock. Buffett swooped in and scooped up deals on companies that he had been following for years.

More recently, the stock market had again reached near record highs. Buffett's returns had been significantly lagging the market. Only 26% of his investments at that time were in stock, and he was sitting on $38 billion in cash. One commentator noted that "if the past is any guide, just when Buffett seems to look most like a loser, the party is about to end."

If you think you want to follow Buffett's example and transform your humble nest egg into a mountain of cash, be warned. His techniques have been widely circulated and emulated, but never practiced with the same degree of success. You should probably start by honing your financial analysis skills. 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.

Source: Based on Jason Zweig, "Buffett Is Out of Step," *Wall Street Journal* (May 7, 2012).

Chapter Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
LO 1 Apply the concepts of sustainable income and quality of earnings.	• Sustainable income • Quality of earnings	**DO IT! 1** Unusual Items
LO 2 Apply horizontal analysis and vertical analysis.	• Horizontal analysis • Vertical analysis	**DO IT! 2** Horizontal Analysis
LO 3 Analyze a company's performance using ratio analysis.	• Liquidity ratios • Solvency ratios • Profitability ratios • Financial analysis and data analytics • Comprehensive example	**DO IT! 3** Ratio Analysis

Go to the Review and Practice section at the end of the chapter for a targeted summary and practice applications with solutions.

Visit Wiley Course Resources for additional tutorials and practice opportunities.

13.1 Sustainable Income and Quality of Earnings

LEARNING OBJECTIVE 1

Apply the concepts of sustainable income and quality of earnings.

Sustainable Income

The value of a company like Google is a function of the amount, timing, and uncertainty of its future cash flows. Google's current and past income statements are particularly useful in helping analysts predict these future cash flows. In using this approach, analysts must make sure that Google's past income numbers reflect its **sustainable income**, that is, they do not include unusual (out-of-the-ordinary) revenues, expenses, gains, and losses.

- Sustainable income is, therefore, the most likely level of income to be obtained by a company in the future.
- Sustainable income differs from actual net income by the amount of unusual revenues, expenses, gains, and losses included in the current year's income. Determining sustainable income requires an understanding of discontinued operations, comprehensive income, and changes in accounting principle.
- Analysts are interested in sustainable income because it helps them derive an estimate of future earnings without the "noise" of unusual items.

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 (see Decision Tools). For example, to downsize its operations, General Dynamics Corp. sold its missile business to Hughes Aircraft Co. for $450 million. In its income statement, General Dynamics reported the sale in a separate section entitled "Discontinued operations."

A company reports the disposal of a significant component as follows.

- When a company has discontinued operations, 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 the operations component and the gain (loss) on disposal of the component.**
- The income from continuing operations as well as the discontinued component are reported net of tax.

> **Decision Tools**
> The discontinued operations section alerts users to the sale of any major components of a company's business.

To illustrate, assume that during 2025 Acro Energy Inc. has income before income taxes of $800,000. During 2025, Acro discontinued and sold its unprofitable chemical division. The loss in 2025 from the chemical division's operations (net of $40,000 income tax savings) was $160,000. The loss on disposal of the chemical division (net of $20,000 income tax savings) was $80,000. Assuming a 20% tax rate on income, Illustration 13.1 shows Acro's income statement (see Helpful Hint).

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.

ILLUSTRATION 13.1

Income statement presentation of discontinued operations

HELPFUL HINT

Observe the dual disclosures: (1) the results of operation of the discontinued division must be separated from the results of continuing operations, and (2) the company must also report the gain or loss on disposal of the division.

Acro Energy Inc.
Income Statement (partial)
For the Year Ended December 31, 2025

Income before income taxes		$800,000
Income tax expense		160,000
Income from continuing operations		640,000
Discontinued operations		
Loss from operation of chemical division, net of $40,000 income tax savings	$160,000	
Loss from disposal of chemical division, net of $20,000 income tax savings	80,000	(240,000)
Net income		$400,000

Investor Insight

Andrey Armyagov/Adobe Stock

What Does "Non-Recurring" Really Mean?

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, 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, then 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, Procter & Gamble reported a restructuring charge in 12 consecutive quarters, and Motorola had "special" charges in 14 consecutive quarters. On the other hand, other companies have a restructuring charge only once in a 5- or 10-year period. There appears to be no substitute for careful analysis of the numbers that comprise net income.

If a company takes a large restructuring charge, what is the effect on the company's current income statement versus future ones? (Answer is available at the end of the chapter.)

Comprehensive Income

Most revenues, expenses, gains, and losses are included in net income.

- However, certain gains and losses that bypass net income are reported as part of a more inclusive earnings measure called comprehensive income.
- **Comprehensive income** is the sum of net income and other comprehensive income items.[1]

Illustration of Comprehensive Income Accounting standards require that companies adjust most investments in stocks and bonds up or down to their market price at the end of each accounting period. For example, assume that during 2025, its first year of operations, Stassi Corporation purchased IBM bonds for $10,500 as an investment, which it intends to sell sometime in the future. At the end of 2025, Stassi was still holding the investment, but the bonds' market price was now $8,000. In this case, Stassi is required to reduce the recorded value of its IBM investment by $2,500. The $2,500 difference is an "unrealized" loss. A gain or loss is referred to as unrealized when an asset has experienced a change in value but the owner has not sold the asset. The sale of the asset results in "realization" of the gain or loss.

Should Stassi include this $2,500 unrealized loss in net income? It depends on whether Stassi classifies the IBM bonds as a trading security or an available-for-sale security.

[1]The FASB's Conceptual Framework describes comprehensive income as including all changes in stockholders' equity during a period except those changes resulting from investments by stockholders and distributions to stockholders.

- A **trading security** is bought and held primarily for sale in the near term to generate income on short-term price differences.
- Companies report unrealized losses on trading securities in the "Other expenses and losses" section of the income statement.
- The rationale: It is likely that the company will realize the unrealized loss (or an unrealized gain), so the company should report the loss (gain) as part of net income.

If Stassi did not purchase the investment for trading purposes, it is classified as available-for-sale.

- **Available-for-sale securities** are held with the intent of selling them sometime in the future.
- Companies do not include unrealized gains or losses on available-for-sale securities in net income.
- Instead, they report them as part of "Other comprehensive income," which is not included in net income.

Format Companies report other comprehensive income in a separate statement of comprehensive income. For example, assuming that Stassi Corporation has a net income of $300,000 and a 20% tax rate, the unrealized loss would be reported below net income, net of tax, as shown in **Illustration 13.2**.

ILLUSTRATION 13.2
Statement of comprehensive income

Stassi Corporation
Statement of Comprehensive Income
For the Year Ended December 31, 2025

Net income	$300,000
Other comprehensive income	
Unrealized loss on available-for-sale securities, net of $500 income tax savings	2,000
Comprehensive income	$298,000

Companies report the cumulative amount of other comprehensive income from all years as a separate component of stockholders' equity. To illustrate, assume Stassi has common stock of $3,000,000, retained earnings of $300,000, and accumulated other comprehensive loss of $2,000. (To simplify, we are assuming that this is Stassi's first year of operations. Since it has only operated for one year, the cumulative amount of other comprehensive income is this year's loss of $2,000.) **Illustration 13.3** shows the balance sheet presentation of the accumulated other comprehensive loss.

ILLUSTRATION 13.3
Accumulated other comprehensive loss in stockholders' equity section

Stassi Corporation
Balance Sheet (partial)

Stockholders' equity	
Common stock	$3,000,000
Retained earnings	300,000
Total paid-in capital and retained earnings	3,300,000
Accumulated other comprehensive loss	(2,000)
Total stockholders' equity	$3,298,000

Note that the presentation of the accumulated other comprehensive loss is similar to the presentation of the cost of treasury stock in the stockholders' equity section. (Accumulated unrealized gains would be added in this section of the balance sheet.)

Income Statement and Statement of Comprehensive Income As discussed, many companies report net income and other comprehensive income in separate statements, such as those shown for Pace Corporation in Illustration 13.4.

ILLUSTRATION 13.4
Income statement and statement of comprehensive income

Pace Corporation
Income Statement
For the Year Ended December 31, 2025

Net sales		$440,000
Cost of goods sold		260,000
Gross profit		180,000
Operating expenses		118,250
Income from operations		61,750
Other revenues and gains		5,600
Other expenses and losses		9,600
Income before income taxes		57,750
Income tax expense ($57,750 × 20%)		11,550
Income from continuing operations		46,200
Discontinued operations		
Loss from operation of plastics division, net of income tax savings $12,000 ($60,000 × 20%)	$48,000	
Gain on disposal of plastics division, net of $10,000 income taxes ($50,000 × 20%)	40,000	(8,000)
Net income		$38,200

Pace Corporation
Statement of Comprehensive Income
For the Year Ended December 31, 2025

Net income	$38,200
Other comprehensive income	
Unrealized gain on available-for-sale securities, net of $3,000 income taxes ($15,000 × 20%)	12,000
Comprehensive income	$50,200

- The income statement presents the types of items usually found on this statement, such as net sales, cost of goods sold, operating expenses, and income taxes.
- The income statement and statement of comprehensive income show how companies report discontinued operations and other comprehensive income (highlighted in red).

Changes in Accounting Principle

For ease of comparison, users of financial statements expect companies to prepare their 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 (see **Decision Tools**).
- An example is a change in inventory costing methods (such as FIFO to average-cost).
- Accounting rules permit a change when management can show that the new principle is preferable to the old principle.

Decision Tools

Informing users of a change in accounting principle helps them determine the effects of this change on current and prior periods.

Companies report most changes in accounting principle retroactively.[2] That is, they report the results from both the current period and previous periods using the new principle. Thus, the same principle is used in all periods. This treatment improves the ability to compare financial performance across years.

Investor Insight United Parcel Service (UPS)

Larry MacDougal/
Canadian Press Images

More Frequent Ups and Downs

In the past, U.S. companies used a method to account for their pension plans that smoothed out the gains and losses on their pension portfolios by spreading gains and losses over multiple years. Many felt that this approach was beneficial because it reduced the volatility of reported net income. However, some companies have opted to adopt a method that comes closer to recognizing gains and losses in the period in which they occur. Some of the companies that have adopted this approach are United Parcel Service (UPS), Honeywell International, IBM, AT&T, and Verizon Communications. The CFO at UPS said he favored the new approach because "events that occurred in prior years will no longer distort current-year results. It will result in better transparency by eliminating the noise of past plan performance." When UPS switched, it resulted in a charge of $827 million due to the change in accounting principle.

Source: Based on Bob Sechler and Doug Cameron, "UPS Alters Pension-Plan Accounting," *Wall Street Journal* (January 30, 2012).

When predicting future earnings, how should analysts treat the one-time charge that results from a switch to the different approach for accounting for pension plans? (Answer is available at the end of the chapter.)

Quality of Earnings

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.
- 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 the quality of earnings.

Alternative Accounting Methods

Variations among companies in the application of generally accepted accounting principles (GAAP) may hamper comparability and reduce quality of earnings. For example, suppose one company uses the FIFO method of inventory costing, while another company in the same industry uses LIFO. If inventory is a significant asset to both companies, it is unlikely that their current ratios are comparable. For example, if General Motors Corporation used FIFO instead of LIFO for inventory valuation, its inventories in a recent year would have been 26% higher, which significantly affects the current ratio (and other ratios as well).

In addition to differences in inventory costing methods, differences also exist in reporting such items as depreciation 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 stock is publicly traded are required to present their income statement following GAAP.

- In recent years, many companies have been also reporting a second measure of income, called pro forma income.

[2]An exception to the general rule is a change in depreciation methods. The effects of this change are reported prospectively in current and future periods. Discussion of this approach is left for more advanced courses.

- **Pro forma income** usually excludes items that the company considers unusual or non-recurring.
- For example, in a recent year, **Cisco Systems** (a high-tech company) reported a quarterly net loss under GAAP of $2.7 billion. Cisco reported pro forma income for the same quarter as a profit of $230 million.

This large difference in profits between GAAP income numbers and pro forma income is not unusual. For example, during one nine-month period, the 100 largest companies on the Nasdaq stock exchange reported a total pro forma income of $19.1 billion but a total loss as measured by GAAP of $82.3 billion—a difference of about $100 billion!

To compute pro forma income, companies generally 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 "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. "Cisco's technique gives readers of financial statements a clear picture of Cisco's normal business activities," the company said in a statement issued in response to questions about its pro forma income accounting.

Recently, the SEC provided some 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 more favorable light.

Improper Recognition

Because some managers feel pressure from Wall Street to continually increase earnings, they manipulate earnings numbers to meet these expectations. The most common abuse is the improper recognition of revenue. One practice that some companies use is called **channel stuffing**.

- Offering deep discounts, companies encourage customers to buy early (stuff the channel) rather than later.
- This boosts the seller's 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** at one time indicated that it used sales incentives to encourage wholesalers to buy more drugs than they needed. 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 as assets. **WorldCom** capitalized over $7 billion of operating expenses in order to report positive net income. In other situations, companies fail to report all their liabilities. **Enron** 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.

ACTION PLAN

- **Show discontinued operations and other comprehensive income net of tax.**

DO IT! 1 Unusual Items

During 2025, AIR Corporation had the following amounts, all before calculating tax effects: income before income taxes $400,000, unrealized gain on available-for-sale securities $100,000, loss from operation of discontinued flower division $50,000, and loss on disposal of discontinued flower division $90,000. The income tax rate is 20%. Prepare a partial income statement, beginning with "Income before income taxes," and a statement of comprehensive income.

Solution

AIR Corporation
Income Statement (partial)
For the Year Ended December 31, 2025

Income before income taxes		$400,000
Income tax expense		80,000
Income from continuing operations		320,000
Discontinued operations		
Loss from operation of flower division, net of $10,000 income tax savings	$40,000	
Loss on disposal of flower division, net of $18,000 income tax savings	72,000	(112,000)
Net income		$208,000

AIR Corporation
Statement of Comprehensive Income
For the Year Ended December 31, 2025

Net income	$208,000
Other comprehensive income	
Unrealized gain on available-for-sale securities, net of $20,000 income taxes	80,000
Comprehensive income	$288,000

Related exercise material: BE13.1, BE13.2, DO IT! 13.1, E13.1, and E13.2.

13.2 Horizontal Analysis and Vertical Analysis

LEARNING OBJECTIVE 2

Apply horizontal analysis and vertical analysis.

In assessing the financial performance of a company, investors are interested in its core or sustainable earnings. In addition, investors are interested in making comparisons from period to period. Throughout this text, we have relied on three types of comparisons to improve the decision-usefulness of financial information:

1. **Intracompany basis.** Comparisons within a company are often useful to detect changes in financial relationships and significant trends. For example, a comparison of Kellogg's current year's cash amount with the prior year's cash amount shows either an increase or a decrease. Likewise, a comparison of Kellogg'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. **Intercompany basis.** Comparisons with other companies provide insight into a company's competitive position. For example, investors can compare Kellogg's total sales for the year with the total sales of its competitors in the breakfast cereal area, such as General Mills.

3. **Industry averages.** Comparisons with industry averages provide information about a company's relative position within the industry. For example, financial statement readers can compare Kellogg's financial data with the averages for its industry compiled by financial rating organizations such as **Dun & Bradstreet, Moody's**, and **Standard & Poor's**, or with information provided on the Internet by organizations such as **Yahoo!** on its financial site.

We use three basic tools in financial statement analysis to highlight the significance of financial statement data:

1. Horizontal analysis.
2. Vertical analysis.
3. Ratio analysis.

In the remainder of this section, we introduce formal forms of horizontal and vertical analysis. In the next section, we review ratio analysis in some detail.

Horizontal Analysis

Decision Tools

Horizontal analysis helps users compare a company's financial position and operating results with those of the previous period.

Horizontal analysis, also known as trend analysis, is a technique for evaluating a series of financial statement data over a period of time (see **Decision Tools**). Its purpose is to determine the increase or decrease that has taken place, expressed as either an amount or a percentage. For example, here are recent net sales figures (in thousands) of Chicago Cereal Company:

2025	2024	2023	2022	2021
$11,776	$10,907	$10,177	$9,614	$8,812

If we assume that 2021 is the base year, we can measure all percentage increases or decreases relative to this base-period amount with the formula shown in **Illustration 13.5**.

ILLUSTRATION 13.5
Horizontal analysis—computation of changes since base period

$$\text{Change Since Base Period} = \frac{\text{Current-Year Amount} - \text{Base-Year Amount}}{\text{Base-Year Amount}}$$

Using horizontal analysis, we can determine the following.

- Net sales for Chicago Cereal increased approximately 9.1% [($9,614 − $8,812) ÷ $8,812] from 2021 to 2022.
- Net sales increased by 33.6% [($11,776 − $8,812) ÷ $8,812] from 2021 to 2025.

Alternatively, we can express current-year net sales as a percentage of the base period. To do so, we would divide the current-year amount by the base-year amount, as shown in **Illustration 13.6**.

ILLUSTRATION 13.6
Horizontal analysis—computation of current year in relation to base year

$$\text{Current Results in Relation to Base Period} = \frac{\text{Current-Year Amount}}{\text{Base-Year Amount}}$$

Current-period net sales expressed as a percentage of the base period for each of the five years, using 2018 as the base period, are shown in **Illustration 13.7**.

ILLUSTRATION 13.7
Horizontal analysis of net sales

Chicago Cereal Company
Net Sales (in thousands)
Base Period 2021

2025	2024	2023	2022	2021
$11,776	$10,907	$10,177	$9,614	$8,812
133.6%	123.8%	115.5%	109.1%	100%

The large increase in net sales during 2022 would raise questions regarding possible reasons for such a significant change. Chicago Cereal's 2022 notes to the financial statements explain that the company completed an acquisition of Elf Foods Company during 2022. This major acquisition would help explain the increase in net sales highlighted by horizontal analysis.

To further illustrate horizontal analysis, we use the financial statements of Chicago Cereal Company. Its two-year condensed balance sheets for 2025 and 2024, showing dollar and percentage changes, are presented in **Illustration 13.8** (see **Helpful Hint**).

ILLUSTRATION 13.8
Horizontal analysis of balance sheets

Chicago Cereal Company
Condensed Balance Sheets
December 31 (in thousands)

			Increase (Decrease) During 2025	
	2025	**2024**	**Amount**	**Percent**
Assets				
Current assets	$ 2,717	$ 2,427	$290	11.9
Property, plant, and equipment (net)	2,990	2,816	174	6.2
Other assets	5,690	5,471	219	4.0
Total assets	$11,397	$10,714	$683	6.4
Liabilities and Stockholders' Equity				
Current liabilities	$ 4,044	$ 4,020	$ 24	0.6
Long-term liabilities	4,827	4,625	202	4.4
Total liabilities	8,871	8,645	226	2.6
Stockholders' equity				
Common stock	493	397	96	24.2
Retained earnings	3,390	2,584	806	31.2
Treasury stock (cost)	(1,357)	(912)	445	48.8
Total stockholders' equity	2,526	2,069	457	22.1
Total liabilities and stockholders' equity	$11,397	$10,714	$683	6.4

HELPFUL HINT

When using horizontal analysis, be sure to examine both dollar amount changes and percentage changes.

The comparative balance sheets show that a number of changes occurred in Chicago Cereal's financial position from 2024 to 2025.

- In the assets section, current assets increased $290,000, or 11.9% ($290 ÷ $2,427, in thousands), and property, plant, and equipment (net) increased $174,000, or 6.2%. Other assets increased $219,000, or 4.0%.
- In the liabilities section, current liabilities increased $24,000, or 0.6%, while long-term liabilities increased $202,000, or 4.4%.
- In the stockholders' equity section, we find that retained earnings increased $806,000, or 31.2%.

Illustration 13.9 presents two-year comparative income statements of Chicago Cereal Company for 2025 and 2024, showing dollar and percentage changes (see **Helpful Hint**).

ILLUSTRATION 13.9
Horizontal analysis of income statements

HELPFUL HINT
The increase in the Amount column of $99 results from adding and subtracting the amounts shown. In the Percent column, the 9.9% cannot be determined by adding and subtracting the percentages shown.

Chicago Cereal Company
Condensed Income Statements
For the Years Ended December 31 (in thousands)

			Increase (Decrease) During 2025	
	2025	2024	Amount	Percent
Net sales	$11,776	$10,907	$869	8.0
Cost of goods sold	6,597	6,082	515	8.5
Gross profit	5,179	4,825	354	7.3
Selling and administrative expenses	3,311	3,059	252	8.2
Income from operations	1,868	1,766	102	5.8
Interest expense	321	294	27	9.2
Income before income taxes	1,547	1,472	75	5.1
Income tax expense	444	468	(24)	(5.1)
Net income	$ 1,103	$ 1,004	$ 99	9.9

Horizontal analysis of the income statements shows the following changes.

- Net sales increased $869,000, or 8.0% ($869 ÷ $10,907, in thousands).
- Cost of goods sold increased $515,000, or 8.5% ($515 ÷ $6,082).
- Selling and administrative expenses increased $252,000, or 8.2% ($252 ÷ $3,059).
- Overall, gross profit increased 7.3% and net income increased 9.9%. The increase in net income can be attributed to the increase in net sales and a decrease in income tax expense.

The measurement of changes from period to period in percentages is relatively straightforward and quite useful. However, complications can result in making the computations. If an item has no value in a base year or preceding year and a value in the next year, no percentage change can be computed.

Vertical Analysis

Decision Tools
Vertical analysis helps users compare relationships between financial statement items with those of last year or of competitors.

Vertical analysis, also called common-size analysis, is a technique for evaluating financial statement data that expresses each item in a financial statement as a **percentage of a base amount** (see Decision Tools). For example, on a balance sheet we might express current assets as 22% of total assets (total assets being the base amount). Or, on an income statement we might express selling expenses as 16% of net sales (net sales being the base amount).

Presented in **Illustration 13.10** are the comparative balance sheets of Chicago Cereal for 2025 and 2024, analyzed vertically. The base for the asset items is **total assets**, and the base for the liability and stockholders' equity items is **total liabilities and stockholders' equity**.

ILLUSTRATION 13.10
Vertical analysis of balance sheets

Chicago Cereal Company
Condensed Balance Sheets
December 31 (in thousands)

	2025		2024	
	Amount	Percent*	Amount	Percent*
Assets				
Current assets	$ 2,717	23.8	$ 2,427	22.6
Property, plant, and equipment (net)	2,990	26.2	2,816	26.3
Other assets	5,690	50.0	5,471	51.1
Total assets	$11,397	100.0	$10,714	100.0

ILLUSTRATION 13.10
(continued)

	2025		2024	
	Amount	**Percent***	**Amount**	**Percent***
Liabilities and Stockholders' Equity				
Current liabilities	$ 4,044	35.5	$ 4,020	37.5
Long-term liabilities	4,827	42.4	4,625	43.2
Total liabilities	8,871	77.9	8,645	80.7
Stockholders' equity				
Common stock	493	4.3	397	3.7
Retained earnings	3,390	29.7	2,584	24.1
Treasury stock (cost)	(1,357)	(11.9)	(912)	(8.5)
Total stockholders' equity	2,526	22.1	2,069	19.3
Total liabilities and stockholders' equity	$11,397	100.0	$10,714	100.0

*Numbers have been rounded to total 100%.

In addition to showing the relative size of each item on the balance sheets, vertical analysis can show the percentage change in the individual asset, liability, and stockholders' equity items.

- Current assets increased $290,000 from 2024 to 2025, and they increased from 22.6% to 23.8% of total assets.
- Property, plant, and equipment (net) decreased from 26.3% to 26.2% of total assets.
- Other assets decreased from 51.1% to 50.0% of total assets.
- Total stockholders' equity increased by $457,000 from 19.3% to 22.1% of total liabilities and stockholders' equity.

This switch to a higher percentage of equity financing has two causes.

1. While total liabilities increased by $226,000, the percentage of liabilities declined from 80.7% to 77.9% of total liabilities and stockholders' equity.
2. Retained earnings increased by $806,000, from 24.1% to 29.7% of total liabilities and stockholders' equity.

Thus, the company shifted toward equity financing by relying less on debt and by increasing the amount of retained earnings.

Vertical analysis of the comparative income statements of Chicago Cereal, shown in **Illustration 13.11**, reveals the following.

ILLUSTRATION 13.11
Vertical analysis of income statements

Chicago Cereal Company
Condensed Income Statements
For the Years Ended December 31 (in thousands)

	2025		2024	
	Amount	**Percent***	**Amount**	**Percent***
Net sales	$11,776	100.0	$10,907	100.0
Cost of goods sold	6,597	56.0	6,082	55.8
Gross profit	5,179	44.0	4,825	44.2
Selling and administrative expenses	3,311	28.1	3,059	28.0
Income from operations	1,868	15.9	1,766	16.2
Interest expense	321	2.7	294	2.7
Income before income taxes	1,547	13.2	1,472	13.5
Income tax expense	444	3.8	468	4.3
Net income	$ 1,103	9.4	$ 1,004	9.2

*Numbers have been rounded to total 100%.

- Cost of goods sold **as a percentage of net sales** increased from 55.8% to 56.0%, and selling and administrative expenses increased from 28.0% to 28.1%.
- Net income as a percentage of net sales increased from 9.2% to 9.4%. Chicago Cereal's increase in net income as a percentage of sales is due primarily to the decrease in income tax expense as a percentage of sales.

Vertical analysis also enables you to compare companies of different sizes. For example, one of Chicago Cereal's competitors is Giant Mills. Giant Mills' sales are 1,000 times larger than those of Chicago Cereal. Vertical analysis enables us to meaningfully compare the condensed income statements of Chicago Cereal and Giant Mills, as shown in **Illustration 13.12**.

ILLUSTRATION 13.12
Intercompany comparison by vertical analysis

Condensed Income Statements
For the Year Ended December 31, 2025

	Chicago Cereal (in thousands)		Giant Mills, Inc. (in millions)	
	Amount	**Percent***	**Amount**	**Percent***
Net sales	$11,776	100.0	$17,910	100.0
Cost of goods sold	6,597	56.0	11,540	64.4
Gross profit	5,179	44.0	6,370	35.6
Selling and administrative expenses	3,311	28.1	3,474	19.4
Income from operations	1,868	15.9	2,896	16.2
Interest expense	321	2.7	196	1.1
Income before income taxes	1,547	13.2	2,700	15.1
Income tax expense	144	3.8	876	4.9
Net income	$ 1,103	9.4	$ 1,824	10.2

*Numbers have been rounded to total 100%.

Chicago Cereal's results are presented in thousands while those of Giant Mills are presented in millions. Vertical analysis eliminates the impact of this size difference for our analysis.

- Chicago Cereal has a higher gross profit percentage of 44.0%, compared to 35.6% for Giant Mills.
- But, Chicago Cereal's selling and administrative expenses are 28.1% of net sales, while those of Giant Mills are 19.4% of net sales.
- Looking at net income, we see that Chicago Cereal's net income as a percentage of net sales is 9.4%, compared to 10.2% for Giant Mills.

Anatomy of a Fraud

Sometimes relationships between numbers can be used to detect fraud. Financial ratios that appear abnormal or statistical abnormalities in the numbers themselves can reveal fraud. For example, the fact that WorldCom's line costs, as a percentage of either total expenses or revenues, differed significantly from those of 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 that of 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: Based on Mark J. Nigrini, "I've Got Your Number," *Journal of Accountancy Online* (May 1999).

DO IT! 2 Horizontal Analysis

Summary financial information for Rosepatch Company is as follows.

	December 31, 2025	December 31, 2024
Current assets	$234,000	$180,000
Plant assets (net)	756,000	420,000
Total assets	$990,000	$600,000

Compute the amount and percentage changes in 2025 using horizontal analysis, assuming 2024 is the base year.

ACTION PLAN

- **Find the percentage change by dividing the amount of the increase by the 2024 amount (base year).**

Solution

	Increase in 2025	
	Amount	**Percent**
Current assets	$ 54,000	30% [($234,000 – $180,000) ÷ $180,000]
Plant assets (net)	336,000	80% [($756,000 – $420,000) ÷ $420,000]
Total assets	$390,000	65% [($990,000 – $600,000) ÷ $600,000]

Related exercise material: BE13.4, BE13.6, BE13.7, BE13.9, DO IT! 13.2, E13.3, E13.5, and E13.6.

13.3 Ratio Analysis

LEARNING OBJECTIVE 3

Analyze a company's performance using ratio analysis.

Ratio analysis expresses the relationship among selected items of financial statement data (see Decision Tools).

- 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 a recent year, **Nike, Inc.** had current assets of $13,626 million and current liabilities of $3,926 million. We can find the relationship between these two measures by dividing current assets by current liabilities. The alternative means of expression are as follows.

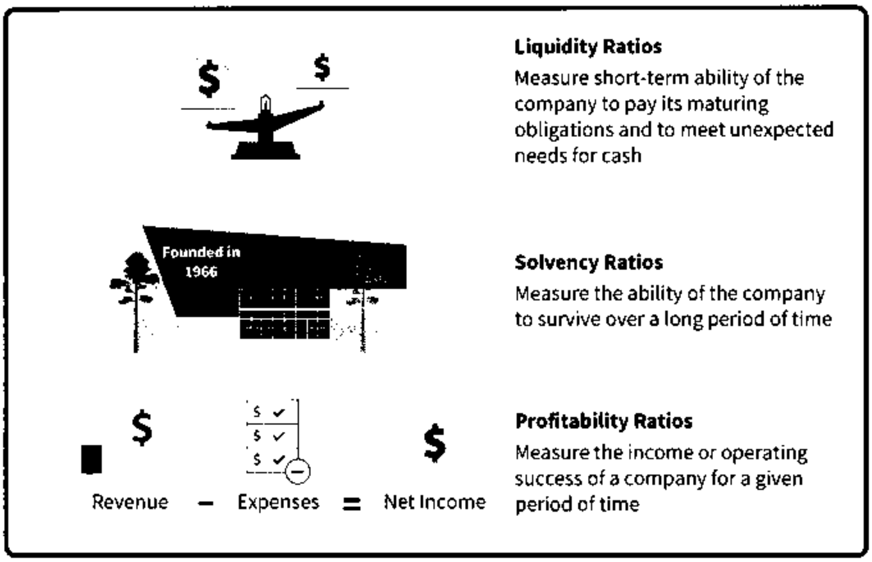
Decision Tools

Ratio analysis helps users evaluate mathematical relationships between financial statement items and compare across years, competitors, and industry.

Percentage: Current assets are 347% of current liabilities.
Rate: Current assets are 3.47 times current liabilities.
Proportion: The relationship of current assets to liabilities is 3.47:1.

To analyze the primary financial statements, we can use ratios to evaluate liquidity, solvency, and profitability. Illustration 13.13 describes these classifications.

ILLUSTRATION 13.13
Financial ratio 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 Chicago Cereal.
2. **Industry average comparisons** based on median ratios for the industry.
3. **Intercompany comparisons** based on Giant Mills as Chicago Cereal's principal competitor.

Liquidity Ratios

Liquidity ratios (Illustration 13.14) 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.

ILLUSTRATION 13.14
Summary of liquidity ratios

Liquidity Ratios

1. Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$
2. Inventory turnover	$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$
3. Days in inventory	$\frac{\text{365 days}}{\text{Inventory turnover}}$
4. Accounts receivable turnover	$\frac{\text{Net credit sales}}{\text{Average net accounts receivable}}$
5. Average collection period	$\frac{\text{365 days}}{\text{Accounts receivable turnover}}$

Investor Insight

Nova Stock/SuperStock

How to Manage the Current Ratio

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.

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.

How might management influence a company's current ratio? (Answer is available at the end of the chapter.)

Solvency Ratios

Solvency ratios (Illustration 13.15) measure the ability of the company to survive over a long period of time. Long-term creditors and stockholders are interested in a company's long-run solvency, particularly its ability to pay interest as it comes due and to repay the balance of debt at its maturity.

ILLUSTRATION 13.15

Summary of solvency ratios

Solvency Ratios

6. Debt to assets ratio

$$\frac{\text{Total liabilities}}{\text{Total assets}}$$

7. Times interest earned

$$\frac{\text{Net income} + \text{Interest expense} + \text{Income tax expense}}{\text{Interest expense}}$$

8. Free cash flow

$$\begin{array}{c}\text{Net cash provided}\\ \text{by operating activities}\end{array} - \begin{array}{c}\text{Capital}\\ \text{expenditures}\end{array} - \begin{array}{c}\text{Cash}\\ \text{dividends}\end{array}$$

Profitability Ratios

Profitability ratios (Illustration 13.16) measure the income or operating success of a company for a given period of time. A company's income, or lack of it, affects its ability to obtain debt and equity financing, its liquidity position, and its ability to grow. As a consequence, creditors and investors alike are interested in evaluating profitability. Profitability is frequently used as the ultimate test of management's operating effectiveness.

ILLUSTRATION 13.16

Summary of profitability ratios

Profitability Ratios

9. Return on common stockholders' equity

$$\frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$$

10. Return on assets

$$\frac{\text{Net income}}{\text{Average total assets}}$$

11. Profit margin

$$\frac{\text{Net income}}{\text{Net sales}}$$

12. Asset turnover

$$\frac{\text{Net sales}}{\text{Average total assets}}$$

13. Gross profit rate

$$\frac{\text{Gross profit}}{\text{Net sales}}$$

14. Earnings per share

$$\frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted-average common shares outstanding}}$$

15. Price-earnings ratio

$$\frac{\text{Market price per share}}{\text{Earnings per share}}$$

16. Payout ratio

$$\frac{\text{Cash dividends paid on common stock}}{\text{Net income}}$$

Investor Insight

iStock.com/Ferran Traite Soler

High Ratings Can Bring Low Returns

Moody's, Standard & Poor's, and Fitch are three big firms that perform financial analysis on publicly traded companies and then publish ratings of the companies' creditworthiness. Investors and lenders rely heavily on these ratings in making investment and lending decisions. Some people feel that the collapse of the financial markets in 2008 was worsened by inadequate research reports and ratings provided by the financial rating agencies. Critics contend that the rating agencies were reluctant to give large companies low ratings because they feared that by offending them they would lose out on business opportunities. For example, the rating agencies gave many so-called mortgage-backed securities ratings that suggested that they were low risk. Later, many of these very securities became completely worthless. Steps have been taken to reduce the conflicts of interest that lead to these faulty ratings.

Sources: Aaron Lucchetti and Judith Burns, "Moody's CEO Warned Profit Push Posed a Risk to Quality of Ratings," *Wall Street Journal Online* (October 23, 2008); and Alan S. Binder, "A Better Way to Run Rating Agencies," *Wall Street Journal* (April 17, 2014).

Why are credit rating agencies important to the financial markets? (Answer is available at the end of the chapter.)

Financial Analysis and Data Analytics

In the age of "Big Data," opportunities for investors to apply data analytics to financial data are boundless. Immense quantities and types of data are available to investors. Free financial data about corporations, for example, can be obtained from the SEC's Edgar database and other sources. Alternatively, database services such as Compustat and WorldScope sell financial and other information regarding a wide range of company and industry characteristics. In addition, each day massive amounts of trading data are collected from financial exchanges.

Professional analysts employ sophisticated computerized valuation models that use financial, nonfinancial, and trading data to identify investment opportunities.

- Since these valuation models frequently rely heavily on accounting data, it is important to have a sound understanding of the financial accounting standards on which the numbers used in the models are based.
- If you desire to someday use data analytics to evaluate companies, the accounting skills and financial analysis tools acquired in this course are a good start.

Comprehensive Example of Ratio Analysis

In this section, we provide a comprehensive review of ratios used for evaluating the financial health and performance of a company. We use the financial information in **Illustrations 13.17** through **13.20** to calculate Chicago Cereal Company's 2025 ratios. You can use these data to review the computations.

ILLUSTRATION 13.17
Chicago Cereal Company's balance sheets

Chicago Cereal Company
Balance Sheets
December 31 (in thousands)

	2025	2024
Assets		
Current assets		
Cash	$ 524	$ 411
Accounts receivable (net)	1,026	945
Inventory	924	824
Prepaid expenses and other current assets	243	247
Total current assets	2,717	2,427
Property, plant, and equipment (net)	2,990	2,816
Other assets	5,690	5,471
Total assets	$11,397	$10,714

ILLUSTRATION 13.17
(continued)

	2025	2024
Liabilities and Stockholders' Equity		
Current liabilities	$ 4,044	$ 4,020
Long-term liabilities	4,827	4,625
Stockholders' equity—common	2,526	2,069
Total liabilities and stockholders' equity	$11,397	$10,714

ILLUSTRATION 13.18
Chicago Cereal Company's income statements

Chicago Cereal Company
Condensed Income Statements
For the Years Ended December 31 (in thousands)

	2025	2024
Net sales	$11,776	$10,907
Cost of goods sold	6,597	6,082
Gross profit	5,179	4,825
Selling and administrative expenses	3,311	3,059
Income from operations	1,868	1,766
Interest expense	321	294
Income before income taxes	1,547	1,472
Income tax expense	444	468
Net income	$ 1,103	$ 1,004

ILLUSTRATION 13.19
Chicago Cereal Company's statements of cash flows

Chicago Cereal Company
Condensed Statements of Cash Flows
For the Years Ended December 31 (in thousands)

	2025	2024
Cash flows from operating activities		
Cash receipts from operating activities	$11,695	$10,841
Cash payments for operating activities	(10,192)	(9,431)
Net cash provided by operating activities	1,503	1,410
Cash flows from investing activities		
Purchases of property, plant, and equipment	(472)	(453)
Other investing activities	(129)	8
Net cash used in investing activities	(601)	(445)
Cash flows from financing activities		
Issuance of common stock	163	218
Issuance of debt	2,179	721
Reductions of debt	(2,011)	(650)
Payment of cash dividends	(475)	(450)
Repurchase of common stock and other items	(645)	(612)
Net cash provided (used) by financing activities	(789)	(773)
Increase (decrease) in cash and cash equivalents	113	192
Cash and cash equivalents at beginning of year	411	219
Cash and cash equivalents at end of year	$ 524	$ 411

ILLUSTRATION 13.20
Additional information for Chicago Cereal Company

Additional information:

	2025	2024
Weighted-average common shares outstanding (thousands)	418.7	418.5
Stock price at year-end	$52.92	$50.06

As indicated in the chapter, we can classify ratios into three types for analysis of the primary financial statements:

1. **Liquidity ratios.** Measures of the short-term ability of the company to pay its maturing obligations and to meet unexpected needs for cash.
2. **Solvency ratios.** Measures of the ability of the company to survive over a long period of time.
3. **Profitability ratios.** Measures of the income or operating success of a company for a given period of time.

As a tool of analysis, ratios can provide clues to underlying conditions that may not be apparent from an inspection of the individual components of a particular ratio. But, a single ratio by itself is not very meaningful. Accordingly, in this discussion we use the following three comparisons.

1. **Intracompany comparisons** covering two years for Chicago Cereal (using comparative financial information from Illustrations 13.17 through 13.20). The ratios for 2024 are given and not calculated because the beginning balances are not provided for this year.
2. **Intercompany comparisons** using Giant Mills as one of Chicago Cereal's competitors.
3. **Industry average comparisons** based on MSN.com median ratios for manufacturers of flour and other grain mill products and comparisons with other sources. For some of the ratios that we use, industry comparisons are not available (denoted "na").

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 measures used to determine the company's short-term debt-paying ability are the current ratio, the accounts receivable turnover, the average collection period, the inventory turnover, and days in inventory. In addition, another measure used to assess liquidity is working capital. **Working capital** is current assets minus current liabilities.

1. **Current ratio.** The current ratio expresses the relationship of current assets to current liabilities, computed by dividing current assets by current liabilities. It is widely used for evaluating a company's liquidity and short-term debt-paying ability. The 2025 and 2024 current ratios for Chicago Cereal and comparative data are shown in **Illustration 13.21**.

ILLUSTRATION 13.21 **Current ratio**

		Chicago Cereal		Giant Mills	Industry
Ratio	Formula	2025	2024	2025	Average
Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	$\frac{\$2,717}{\$4,044} = .67$	.60	.67	1.06

What do the measures tell us?

- Chicago Cereal's 2025 current ratio of .67 means that for every dollar of current liabilities, it has \$0.67 of current assets. (We sometimes state such ratios as .67:1 to reinforce this interpretation.)
- Its current ratio—and therefore its liquidity—increased significantly in 2025.
- It is well below the industry average but the same as that of Giant Mills.

2. **Accounts receivable turnover.** Analysts can measure liquidity by how quickly a company converts certain assets to cash. A low value for the current ratio can sometimes be compensated for if some of the company's current assets are highly liquid.

How liquid, for example, are the receivables? The ratio used to assess the liquidity of the receivables is the **accounts receivable turnover**, which measures the number of times, on average, a company collects receivables during the period. The accounts receivable turnover is computed by dividing net credit sales (net sales less cash sales) by average net accounts receivable during the year. The accounts receivable turnover for Chicago Cereal is shown in **Illustration 13.22**.

ILLUSTRATION 13.22 **Accounts receivable turnover**

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Accounts receivable turnover	$\frac{\text{Net credit sales}}{\text{Average net accounts receivable}}$	$\frac{\$11{,}776}{(\$1{,}026 + \$945) \div 2} = 11.9$	12.0	12.2	11.2

In computing the rate, we assumed that all Chicago Cereal's sales are credit sales.

- Its accounts receivable turnover declined slightly in 2025.
- The turnover of 11.9 times is higher than the industry average of 11.2 times, and slightly lower than Giant Mills' turnover of 12.2 times.
- A higher value suggests better liquidity because the receivables are being collected more quickly.

3. **Average collection period.** A popular variant of the accounts receivable turnover converts it into an **average collection period** in days. This is done by dividing the accounts receivable turnover into 365 days. The average collection period for Chicago Cereal is shown in **Illustration 13.23**.

ILLUSTRATION 13.23 **Average collection period**

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Average collection period	$\frac{\text{365 days}}{\text{Accounts receivable turnover}}$	$\frac{365}{11.5} = 30.7$	30.4	29.9	32.6

Chicago Cereal's 2025 accounts receivable turnover of 11.9 times is divided into 365 days to obtain approximately 31 days.

- This means that the average collection period for receivables is about 31 days.
- Its average collection period is slightly longer than that of Giant Mills and shorter than that of the industry.
- A shorter collection period means receivables are being collected more quickly and thus are more liquid.

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 (i.e., the time allowed for payment, which is 30 days for many companies).

4. **Inventory turnover.** The **inventory turnover** measures the number of times average inventory was sold during the period. Its purpose is to measure the liquidity of the inventory. A high measure indicates that inventory is being sold and replenished frequently. The inventory turnover is computed by dividing the cost of goods sold by the average inventory during the period. Unless seasonal factors are significant, average inventory can be computed using the beginning and ending inventory balances. Chicago Cereal's inventory turnover is shown in **Illustration 13.24**.

ILLUSTRATION 13.24 Inventory turnover

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Inventory turnover	$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$	$\frac{\$6,597}{(\$924 + \$824) \div 2} = 7.5$	7.9	7.4	6.7

Chicago Cereal's inventory turnover decreased slightly in 2025.

- The turnover of 7.5 times is higher than the industry average of 6.7 times and similar to that of Giant Mills.
- Generally, the faster the inventory turnover, the less cash is tied up in inventory and the less the chance of inventory becoming obsolete.
- A downside of high inventory turnover is that it sometimes results in lost sales because if a company keeps less inventory on hand, it is more likely to run out of inventory when it is needed.

5. **Days in inventory.** A variant of the inventory turnover is the **days in inventory**, which measures the average number of days inventory is held. The days in inventory for Chicago Cereal is shown in **Illustration 13.25**.

ILLUSTRATION 13.25 Days in inventory

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Days in inventory	$\frac{\text{365 days}}{\text{Inventory turnover}}$	$\frac{365}{7.5} = 48.7$	46.2	49.3	54.5

Chicago Cereal's 2025 inventory turnover of 7.5 divided into 365 is approximately 49 days.

- An average selling time of 49 days is faster than the industry average and similar to that of Giant Mills.
- However, inventory turnover varies considerably among industries. For example, grocery store chains have a turnover of 10 times and an average selling period of 37 days. In contrast, jewelry stores have an average turnover of 1.3 times and an average selling period of 281 days.
- Within a company, there may even be significant differences in inventory turnover among different types of products. Thus, in a grocery store the turnover of perishable items such as produce, meats, and dairy products is faster than the turnover of soaps and detergents.

To conclude, nearly all of these liquidity measures suggest that Chicago Cereal's liquidity changed little during 2025. Its liquidity appears acceptable when compared to the industry as a whole and when compared to Giant Mills.

Solvency Ratios

Solvency ratios measure the ability of the company to survive over a long period of time.

- Long-term creditors and stockholders are interested in a company's long-run solvency, particularly its ability to pay interest as it comes due and to repay the face value of debt at maturity.
- The debt to assets ratio and times interest earned provide information about debt-paying ability.
- In addition, free cash flow provides information about the company's solvency and its ability to pay additional dividends or invest in new projects.

6. **Debt to assets ratio.** The **debt to assets ratio** measures the percentage of total financing provided by creditors. It is computed by dividing total liabilities (both current and long-term debt) by total assets. This ratio indicates the degree of financial leveraging. It also provides some indication of the company's ability to withstand losses without impairing the interests of its creditors. The higher the percentage of debt to assets, the greater the risk that the company may be unable to meet its maturing obligations. Thus, from the creditors' point of view, a low ratio of debt to assets is desirable. Chicago Cereal's debt to assets ratio is shown in **Illustration 13.26**.

ILLUSTRATION 13.26 **Debt to assets ratio**

		Chicago Cereal		Giant Mills	Industry
Ratio	**Formula**	**2025**	**2024**	**2025**	**Average**
Debt to assets ratio	$\dfrac{\text{Total liabilities}}{\text{Total assets}}$	$\dfrac{\$8,871}{\$11,397} = 78\%$	81%	55%	55%

Chicago Cereal's 2025 ratio means that creditors have provided financing sufficient for 78% of the company's total assets.

- Alternatively, the ratio indicates that the company would have to liquidate 78% of its assets at their book value in order to pay off all of its debts.
- Chicago Cereal's ratio is above the industry average of 55%, as well as that of Giant Mills.
- This suggests that it is less solvent than the industry average and Giant Mills. Chicago Cereal's solvency improved slightly from that in 2024.

The adequacy of this ratio is often judged in 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.

Another ratio with a similar meaning is the **debt to equity ratio**.

- It shows the relative use of borrowed funds (total liabilities) compared with resources invested by the owners.
- If debt and assets are defined as above (all liabilities and all assets), then when the debt to assets ratio equals 50%, the debt to equity ratio is 1:1.

7. **Times interest earned.** The **times interest earned** (also called interest coverage) 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. Note that this ratio uses income before interest expense and income taxes because this amount represents what is available to cover interest. Chicago Cereal's times interest earned is shown in **Illustration 13.27**.

ILLUSTRATION 13.27 **Times interest earned**

		Chicago Cereal		Giant Mills	Industry
Ratio	**Formula**	**2025**	**2024**	**2025**	**Average**
Times interest earned	$\dfrac{\text{Net Income} + \text{Interest expense} + \text{Income tax expense}}{\text{Interest expense}}$	$\dfrac{\$1,103 + \$321 + \$444}{\$321} = 5.8$	6.0	9.9	5.5

For Chicago Cereal, the 2025 interest coverage was 5.8 times, which indicates that income before interest and taxes was 5.8 times the amount needed for interest expense.

- This is less than the rate for Giant Mills, but it slightly exceeds the rate for the industry.
- The debt to assets ratio decreased for Chicago Cereal during 2025, and its times interest earned held relatively constant.
- A low debt to assets ratio and high times interest earned suggest better solvency.

8. **Free cash flow.** One indication of a company's solvency, as well as of its ability to pay dividends or expand operations, is the amount of excess cash it generated after investing in capital expenditures and paying dividends. This amount is referred to as **free cash flow**. For example, if you generate $100,000 of net cash provided by operating activities but you spend $30,000 on capital expenditures and pay $10,000 in dividends, you have $60,000 ($100,000 − $30,000 − $10,000) to use either to expand operations, pay additional dividends, or pay down debt. Chicago Cereal's free cash flow is shown in **Illustration 13.28**.

ILLUSTRATION 13.28 **Free cash flow**

		Chicago Cereal		Giant Mills	
Ratio	Formula	2025	2024	2025	Industry Average
		(in thousands)	(in thousands)	(in millions)	
Free cash flow	Net cash provided by operating activities − Capital expenditures − Cash dividends	$1,503 − $472 − $475 = $556	$507	$895	na

Chicago Cereal's free cash flow increased slightly from 2024 to 2025.

- During both years, the net cash provided by operating activities was more than enough to allow it to acquire additional productive assets and maintain dividend payments.
- It could have used the remaining cash to reduce debt if necessary.
- Given that Chicago Cereal is much smaller than Giant Mills, we would expect Chicago Cereal's free cash flow to be substantially smaller, which it is.

Profitability Ratios

Profitability ratios measure the income or operating success of a company for a given period of time.

- A company's income, or the lack of it, affects its ability to obtain debt and equity financing, its liquidity position, and its ability to grow.
- As a consequence, creditors and investors alike are interested in evaluating profitability.
- Analysts frequently use profitability as the ultimate test of management's operating effectiveness.

The relationships among measures of profitability are very important. Understanding them can help management determine where to focus its efforts to improve profitability. Illustration 13.29 diagrams these relationships. Our discussion of Chicago Cereal's profitability is structured around this diagram.

9. **Return on common stockholders' equity (ROE).** A widely used measure of profitability from the common stockholders' viewpoint is the **return on common stockholders' equity** (ROE). This ratio shows how many dollars of net income the company earned for each dollar invested by the owners. It is computed by dividing net income minus any

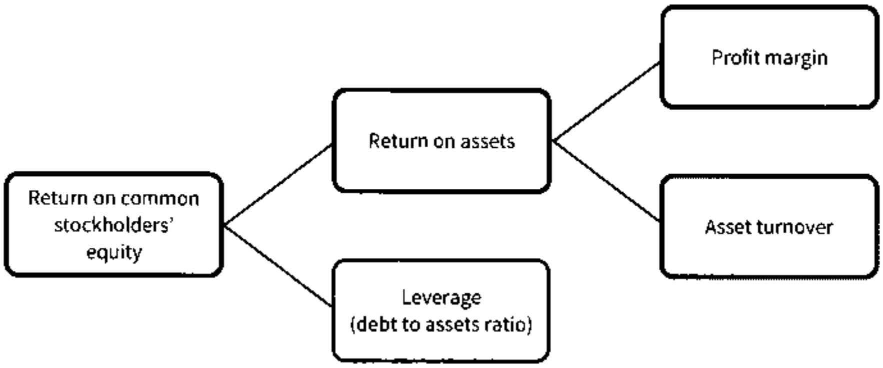


ILLUSTRATION 13.29 **Relationships among profitability measures**

preferred dividends—that is, income available to common stockholders—by average common stockholders' equity. The return on common stockholders' equity for Chicago Cereal is shown in **Illustration 13.30**.

ILLUSTRATION 13.30 **Return on common stockholders' equity**

		Chicago Cereal		Giant Mills	Industry
Ratio	Formula	2025	2024	2025	Average
Return on common stockholders' equity	$\dfrac{\text{Net Income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$	$\dfrac{\$1{,}103 - \$0}{(\$2{,}526 + \$2{,}069) \div 2} = 48\%$	46%	25%	19%

Chicago Cereal's 2025 return on common stockholders' equity is unusually high at 48%. The industry average is 19% and Giant Mills' return is 25%. In the subsequent sections, we investigate the causes of this high return.

10. **Return on assets.** The return on common stockholders' equity is affected by two factors: the **return on assets** and the degree of leverage. The return on assets measures the overall profitability of assets in terms of the income earned on each dollar invested in assets. It is computed by dividing net income by average total assets. Chicago Cereal's return on assets is shown in **Illustration 13.31**.

ILLUSTRATION 13.31 **Return on assets**

		Chicago Cereal		Giant Mills	Industry
Ratio	Formula	2025	2024	2025	Average
Return on assets	$\dfrac{\text{Net income}}{\text{Average total assets}}$	$\dfrac{\$1{,}103}{(\$11{,}397 + \$10{,}714) \div 2} = 10.0\%$	9.4%	6.2%	5.3%

Chicago Cereal had a 10.0% return on assets in 2025. This rate is significantly higher than that of Giant Mills and the industry average.

Note that its rate of return on common stockholders' equity (48%) is substantially higher than its rate of return on assets (10%). The reason is that it 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 the rate of return it earns on the assets it purchased with the borrowed funds.

- Leverage enables management to use money supplied by nonowners to increase the return to owners.
- A comparison of the rate of return on assets with the rate of interest paid for borrowed money indicates the profitability of trading on the equity.

For example, if you borrow money at 8% and your rate of return on assets is 11%, you are trading on the equity at a gain. Note, however, that trading on the equity is a two-way street. For example, if you borrow money at 11% and earn only 8% on it, you are trading on the equity at a loss.

Chicago Cereal earns more on its borrowed funds than it has to pay in interest. Thus, the return to stockholders exceeds the return on assets because of the positive benefit of leverage. Recall from our earlier discussion that Chicago Cereal's percentage of debt financing, as measured by the ratio of debt to assets (or debt to equity), is higher than Giant Mills' and the industry average. It appears that Chicago Cereal's high return on common stockholders' equity is due in part to its use of leverage.

11. **Profit margin.** The return on assets is affected by two factors, the first of which is the profit margin. The **profit margin**, or rate of return on sales, is a measure of the percentage of each dollar of sales that results in net income. It is computed by dividing net income by net sales for the period. Chicago Cereal's profit margin is shown in **Illustration 13.32**.

ILLUSTRATION 13.32
Profit margin

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Profit margin	$\frac{\text{Net income}}{\text{Net sales}}$	$\frac{\$1,103}{\$11,776} = 9.4\%$	9.2%	8.2%	6.1%

Chicago Cereal experienced a slight increase in its profit margin from 2024 to 2025 of 9.2% to 9.4%.

- Its profit margin was higher, indicating the company earned more profit out of each dollar of net sales, than the industry average and that of Giant Mills.
- High-volume (high inventory turnover) businesses such as grocery stores and pharmacy chains generally have low profit margins.
- Low-volume businesses such as jewelry stores and airplane manufacturers typically have high profit margins.

12. **Asset turnover.** The other factor that affects the return on assets is the asset turnover. The **asset turnover** measures how efficiently a company uses its assets to generate sales. It is determined by dividing net sales by average total assets for the period. The resulting number shows the dollars of net sales produced by each dollar invested in assets. **Illustration 13.33** shows the asset turnover for Chicago Cereal.

ILLUSTRATION 13.33
Asset turnover

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Asset turnover	$\frac{\text{Net sales}}{\text{Average total assets}}$	$\frac{\$11,776}{(\$11,397 + \$10,714) \div 2} = 1.07$	1.02	.76	.87

The asset turnover shows that in 2025, Chicago Cereal generated sales of $1.07 for each dollar it had invested in assets.

- The ratio rose from 2024 to 2025.
- Its asset turnover is above the industry average and that of Giant Mills.
- Asset turnovers vary considerably among industries. The average asset turnover for utility companies is .45, for example, while the grocery store industry has an average asset turnover of 3.49.

In summary, Chicago Cereal's return on assets increased from 9.4% in 2024 to 10.0% in 2025. Underlying this increase was an increased profitability on each dollar of net sales (as measured by the profit margin) and a rise in the sales-generating efficiency of its assets (as measured by the asset turnover). The combined effect of the profit margin and asset turnover yields the return on assets for Chicago Cereal shown in **Illustration 13.34**.

ILLUSTRATION 13.34
Composition of return on assets

Ratios:	Profit Margin	×	Asset Turnover	=	Return on Assets
	Net Income / Net Sales	×	Net Sales / Average Total Assets	=	Net Income / Average Total Assets
Chicago Cereal					
2025	9.4%	×	1.07 times	=	10.1%*
2024	9.2%	×	1.02 times	=	9.4%

*Difference from value in Illustration 13.31 due to rounding.

13. Gross profit rate. One factor that strongly influences the profit margin is the gross profit rate. The **gross profit rate** is determined by dividing gross profit (net sales less cost of goods sold) by net sales. This rate indicates a company's ability to maintain an adequate unit selling price above its unit cost of goods sold.

As an industry becomes more competitive, this ratio typically declines.

- For example, in the early years of the personal computer industry, gross profit rates were quite high.
- Today, because of increased competition and a belief that most brands of personal computers are similar in quality, gross profit rates have become thin.
- Analysts should closely monitor gross profit rates over time.

Illustration 13.35 shows Chicago Cereal's gross profit rate.

ILLUSTRATION 13.35
Gross profit rate

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Gross profit rate	Gross profit / Net sales	$5,179 / $11,776 = 44%	44%	34%	30%

Chicago Cereal's gross profit rate remained constant from 2024 to 2025, and exceeded that of Giant Mills and of the industry average.

14. Earnings per share (EPS). Stockholders usually think in terms of the number of shares they own or plan to buy or sell. Expressing net income earned on a per share basis provides a useful perspective for evaluating profitability. **Earnings per share** is a measure of the net income earned on each share of common stock. It is computed by dividing net income by the average number of common shares outstanding during the year.

The terms "net income per share" and "earnings per share" refer to the amount of net income applicable to each share of **common stock**. Therefore, when we compute earnings per share, if there are preferred dividends declared for the period, we must deduct them from net income to arrive at income available to the common stockholders. Chicago Cereal's earnings per share is shown in **Illustration 13.36**. There were no shares of preferred stock outstanding and no preferred stock dividends.

ILLUSTRATION 13.36
Earnings per share

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Earnings per share (EPS)	$\frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted-average common shares outstanding}}$	$\frac{\$1,103 - \$0}{418.7} = \$2.63$	\$2.40	\$2.90	na

Note that no industry average is presented in Illustration 13.36.

- Industry data for earnings per share are not reported, and in fact the Chicago Cereal and Giant Mills ratios should not be compared.
- Such comparisons are not meaningful because of the wide variations in the number of shares of outstanding stock among companies.
- Chicago Cereal's earnings per share increased 23 cents per share in 2025. This represents a 9.6% increase from the 2024 EPS of \$2.40.

15. **Price-earnings ratio.** The **price-earnings (P-E) ratio** is an oft-quoted statistic that measures the ratio of the market price of each share of common stock to the earnings per share of common stock. The P-E ratio reflects investors' assessments of a company's future earnings. It is computed by dividing the market price per share of the stock by earnings per share. Chicago Cereal's price-earnings ratio is shown in **Illustration 13.37**.

ILLUSTRATION 13.37
Price-earnings ratio

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Price-earnings ratio	$\frac{\text{Market price per share}}{\text{Earnings per share}}$	$\frac{\$52.92}{\$2.63} = 20.1$	20.9	24.3	35.8

At the end of 2025 and 2024, the market price of Chicago Cereal's stock was \$52.92 and \$50.06, respectively.

- In 2025, each share of Chicago Cereal's stock sold for 20.1 times the amount that was earned on each share.
- Chicago Cereal's price-earnings ratio is lower than Giant Mills' ratio of 24.3 and lower than the industry average of 35.8 times.
- Its lower P-E ratio suggests that the market is less optimistic about Chicago Cereal than about Giant Mills, but it might also signal that Chicago Cereal's stock is underpriced.

16. **Payout ratio.** The **payout ratio** measures the percentage of earnings distributed in the form of cash dividends on common stock (see **Helpful Hint**). It is computed by dividing cash dividends paid on common stock by net income. Companies that have high growth rates are characterized by low payout ratios because they reinvest most of their net income in the business. The payout ratio for Chicago Cereal is shown in **Illustration 13.38**.

HELPFUL HINT

Some formulations of the payout ratio also include preferred stock dividends. Note that our definition is focused on dividends paid on common stock.

ILLUSTRATION 13.38
Payout ratio

Ratio	Formula	Chicago Cereal 2025	Chicago Cereal 2024	Giant Mills 2025	Industry Average
Payout ratio	$\frac{\text{Cash dividends paid on common stock}}{\text{Net income}}$	$\frac{\$475}{\$1,103} = 20.1$	45%	54%	37%

The 2025 and 2024 payout ratios for Chicago Cereal are lower than that of Giant Mills (54%) but higher than the industry average (37%).

- A lower payout ratio means a company has chosen to pay out a lower percentage of its net income as dividends.
- Management has some control over the amount of dividends paid each year, and companies are generally reluctant to reduce a dividend below the amount paid in a previous year.
- The payout ratio will actually increase if a company's net income declines but the company keeps its total dividend payment the same. (Of course, unless the company returns to its previous level of profitability, maintaining this higher dividend payout ratio is probably not possible over the long run.)

Before drawing any conclusions regarding Chicago Cereal's dividend payout ratio, we should calculate this ratio over a longer period of time to evaluate any trends and also try to find out whether management's philosophy regarding dividends has changed recently. The "Selected Financial Data" section of Chicago Cereal's Management Discussion and Analysis shows that over a 5-year period, earnings per share rose 45%, while dividends per share grew only 19%.

In terms of the types of financial information available and the ratios used by various industries, what can be practically covered in this text gives you the "Titanic approach." That is, you are only seeing the tip of the iceberg compared to the vast databases and types of ratio analysis that are available electronically. The availability of information is not a problem. The real trick is to be discriminating enough to perform relevant analysis and select pertinent comparative data.

DO IT! 3 Ratio Analysis

The condensed financial statements of John Cully Company, for the years ended June 30, 2025 and 2024, are presented as follows.

John Cully Company
Balance Sheets
June 30

	(in thousands)	
	2025	**2024**
Assets		
Current assets		
Cash and cash equivalents	$ 553.3	$ 611.6
Accounts receivable (net)	776.6	664.9
Inventory	768.3	653.5
Prepaid expenses and other current assets	204.4	269.2
Total current assets	2,302.6	2,199.2
Investments	12.3	12.6
Property, plant, and equipment (net)	694.2	647.0
Other assets	876.7	849.3
Total assets	$3,885.8	$3,708.1
Liabilities and Stockholders' Equity		
Current liabilities	$1,497.7	$1,322.0
Long-term liabilities	679.5	637.1
Stockholders' equity—common	1,708.6	1,749.0
Total liabilities and stockholders' equity	$3,885.8	$3,708.1

ACTION PLAN

- **Remember that the current ratio includes all current assets.**
- **Use average balances for turnover ratios like inventory, accounts receivable, and return on assets.**

John Cully Company
Income Statements
For the Years Ended June 30

	(in thousands)	
	2025	2024
Net sales	$6,336.3	$5,790.4
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 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 2025 and 2024.

a. Current ratio.

b. Inventory turnover. (Inventory on 6/30/23 was $599.0.)

c. Profit margin.

d. Return on assets. (Assets on 6/30/23 were $3,349.9.)

e. Return on common stockholders' equity. (Stockholders' equity on 6/30/23 was $1,795.9.)

f. Debt to assets ratio.

g. Times interest earned.

Solution

	2025	2024
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 common stockholders' 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 + $13.9 + $291.3) ÷ $13.9 =	51.2 times	
($375.4 + $27.1 + $232.6) ÷ $27.1 =		23.4 times

Related exercise material: BE13.10, BE13.11, BE13.12, BE13.13, BE13.14, BE13.15, DO IT! 13.3, E13.7, E13.8, E13.9, E13.10, E13.11, E13.12, and E13.13.

USING THE DECISION TOOLS | Kellogg Company

In analyzing a company, you should always investigate an extended period of time in order to determine whether the condition and performance of the company are changing. The condensed financial statements of Kellogg Company for two recent years (labeled current year and previous year) are presented here.

Kellogg Company, Inc.
Balance Sheets
(in millions)

	Current Year	Previous Year
Assets		
Current assets		
Cash	$ 281	$ 280
Accounts receivable (net)	1,389	1,231
Inventories	1,217	1,238
Other current assets	149	191
Total current assets	3,036	2,940
Property (net)	3,716	5,166
Other assets	9,598	7,005
Total assets	$16,350	$15,111
Liabilities and Stockholders' Equity		
Current liabilities	$ 4,479	$ 4,474
Long-term liabilities	9,643	8,711
Stockholders' equity—common	2,228	1,926
Total liabilities and stockholders' equity	$16,350	$15,111

Kellogg Company, Inc.
Condensed Income Statements
(in millions)

	Current Year	Previous Year
Net sales	$12,923	$ 13,014
Cost of goods sold	7,901	8,259
Gross profit	5,022	4,755
Selling and administrative expenses	3,076	3,360
Income from operations	1,946	1,395
Interest expense	256	406
Other income (expense), net	(16)	(62)
Income before income taxes	1,674	927
Income tax expense	412	233
Other earnings (loss)	7	0
Net income	$ 1,269	$ 694

Instructions

Compute the following ratios for Kellogg for the current year and discuss your findings (previous-year values are provided for comparison).

1. Liquidity:
   a. Current ratio (previous year: .66:1).
   b. Inventory turnover (previous year: 6.6 times).
2. Solvency:
   a. Debt to assets ratio (previous year: 87%).
   b. Times interest earned (previous year: 3.3 times).

3. Profitability:
   a. Return on assets (previous year: 4.6%).
   b. Profit margin (previous year: 5.3%).
   c. Return on common stockholders' equity (previous year: 33%).

Solution

1. Liquidity
   a. Current ratio:

   Current year: $\frac{\$3{,}036}{\$4{,}479} = .68{:}1$ Previous year: .66:1

   b. Inventory turnover:

   Current year: $\frac{\$7{,}901}{(\$1{,}217 + \$1{,}238) \div 2} = 6.4$ times Previous year: 6.6 times

   We see that between the previous year and the current year, the current ratio increased, which suggests an increase in liquidity. The inventory turnover decreased, which suggests a decline in liquidity.

2. Solvency
   a. Debt to assets ratio:

   Current year: $\frac{\$4{,}479 + \$9{,}643}{\$16{,}350} = 86\%$ Previous year: 87%

   b. Times interest earned:

   Current year: $\frac{\$1{,}269 + \$256 + \$412}{\$256} = 7.6$ times Previous year: 3.3 times

   Kellogg's debt to assets ratio decreased in the current year, and its times interest earned increased. Both changes suggest improved solvency.

3. Profitability
   a. Return on assets:

   Current year: $\frac{\$1{,}269}{(\$16{,}350 + \$15{,}111) \div 2} = 8.1\%$ Previous year: 4.6%

   b. Profit margin:

   Current year: $\frac{\$1{,}269}{\$12{,}923} = 9.8\%$ Previous year: 5.3%

   c. Return on common stockholders' equity:

   Current year: $\frac{\$1{,}269}{(\$2{,}228 + \$1{,}926) \div 2} = 61\%$ Previous year: 33%

   Kellogg's return on assets, profit margin, and return on stockholders' equity increased. The company experienced a sharp increase in net income, while its total assets, sales, and equity were relatively constant.

Review and Practice

Learning Objectives Review

1 Apply the concepts of sustainable income and quality of earnings.

Sustainable income analysis is useful in evaluating a company's performance. Sustainable income is the most likely level of income to be obtained by the company in the future and omits unusual items. Discontinued operations and other comprehensive income items are presented separately to highlight their unusual nature. Items below income from continuing operations must be presented net of tax.

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.

2 Apply horizontal analysis and vertical 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 a dollar amount or a percentage.

Vertical analysis is a technique that expresses each item in a financial statement as a percentage of a relevant total or a base amount.

3 Analyze a company's performance using ratio analysis.

Financial ratios are provided in Illustration 13.14 (liquidity), Illustration 13.15 (solvency), and Illustration 13.16 (profitability). Analysis is enhanced by intracompany, intercompany, and industry comparisons of these three classes of ratios.

Decision Tools Review

Decision Checkpoints	Info Needed for Decision	Tool to Use for Decision	How to Evaluate Results
Has the company sold any major components of its business?	Discontinued operations section of income statement	Information reported in this section indicates that the company has discontinued a major component of its business.	If a major component has been discontinued, its results during the current period should not be included in estimates of future net income.
Has the company changed any of its accounting principles?	Effect of change in accounting principle on current and prior periods	Management indicates that the new principle is preferable to the old principle. Discussed in notes to financial statements.	Examine current and prior years' reported income, using new-principle basis to assess trends for estimating future income.
How do the company's financial position and operating results compare with those of the previous period?	Income statement and balance sheet	Comparative financial statements should be prepared over at least two years, with the first year reported being the base year. Changes in each line item relative to the base year should be presented both by amount and by percentage. This is called **horizontal analysis**.	Significant changes should be investigated to determine the reason for the change.
How do the relationships between items in this year's financial statements compare with those of last year or those of competitors?	Income statement and balance sheet	Each line item on the income statement should be presented as a percentage of net sales, and each line item on the balance sheet should be presented as a percentage of total assets or total liabilities and stockholders' equity. These percentages should be investigated for differences either across years in the same company or in the same year across different companies. This is called **vertical analysis**.	Any significant differences either across years or between companies should be investigated to determine the cause.
How do mathematical relationships between financial statement items compare to prior years, competitors, and industry?	Financial statements	Various ratios that measure liquidity, solvency, and profitability.	Significant differences from prior-year values, or from competitor or industry values, should be investigated to determine the cause.

Glossary Review

Accounts receivable turnover A measure of the liquidity of receivables; computed as net credit sales divided by average net accounts receivable. (p. 13-21).

Asset turnover A measure of how efficiently a company uses its assets to generate net sales; computed as net sales divided by average total assets. (p. 13-26).

Available-for-sale securities Securities that are held with the intent of selling them sometime in the future. (p. 13-5).

Average collection period The average number of days that receivables are outstanding; calculated as accounts receivable turnover divided into 365 days. (p. 13-21).

Change in accounting principle Use of an accounting principle in the current year that is different from the one used in the preceding year. (p. 13-6).

Comprehensive income The sum of net income and other comprehensive income items. (p. 13-4).

Current ratio A measure used to evaluate a company's liquidity and short-term debt-paying ability; calculated as current assets divided by current liabilities. (p. 13-20).

Days in inventory A measure of the average number of days that inventory is held; computed as inventory turnover divided into 365 days. (p. 13-22).

Debt to assets ratio A measure of the percentage of total financing provided by creditors; computed as total liabilities divided by total assets. (p. 13-23).

Discontinued operations The disposal of a significant component of a business. (p. 13-3).

Earnings per share The net income earned by each share of outstanding common stock; computed as net income less preferred dividends divided by the weighted-average common shares outstanding. (p. 13-27).

Free cash flow A measure of solvency. Cash remaining from operating activities after adjusting for capital expenditures and dividends paid. (p. 13-24).

Gross profit rate Gross profit expressed as a percentage of net sales; computed as gross profit divided by net sales. (p. 13-27).

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 a dollar amount or a percentage. (p. 13-10).

Inventory turnover A measure of the liquidity of inventory. Measures the number of times average inventory was sold during the period; computed as cost of goods sold divided by average inventory. (p. 13-21).

Leveraging Borrowing money at a lower rate of interest than can be earned by using the borrowed money; also referred to as *trading on the equity*. (p. 13-25).

Liquidity ratios Measures of the short-term ability of the company to pay its maturing current obligations and to meet unexpected needs for cash. (p. 13-16).

Payout ratio A measure of the percentage of earnings distributed in the form of cash dividends; calculated as cash dividends paid on common stock divided by net income. (p. 13-28).

Price-earnings (P-E) ratio A comparison of the market price of each share of common stock to the earnings per share; computed as the market price of the stock divided by earnings per share. (p. 13-28).

Profitability ratios Measures of the income or operating success of a company for a given period of time. (p. 13-17).

Profit margin A measure of the net income generated by each dollar of net sales; computed as net income divided by net sales. (p. 13-26).

Pro forma income A measure of income that usually excludes items that a company considers unusual or non-recurring. (p. 13-8).

Quality of earnings Indicates the level of full and transparent information that is provided to users of the financial statements. (p. 13-7).

Ratio The mathematical relationship between one quantity and another. The relationship may be expressed either as a percentage, a rate, or a simple proportion. (p. 13-15).

Ratio analysis A technique for evaluating financial statements that expresses the relationship between selected financial statement data. (p. 13-15).

Return on assets A profitability measure that indicates the amount of net income generated by each dollar of assets; calculated as net income divided by average total assets. (p. 13-25).

Return on common stockholders' equity (ROE) A measure of the dollars of net income earned for each dollar invested by the owners; computed as income available to common stockholders divided by average common stockholders' equity. (p. 13-24).

Solvency ratios Measures of the ability of a company to survive over a long period of time, particularly to pay interest as it comes due and to repay the balance of debt at its maturity. (p. 13-17).

Sustainable income The most likely level of income to be obtained by a company in the future. (p. 13-3).

Times interest earned A measure of a company's solvency and ability to meet interest payments as they come due; calculated as the sum of net income, interest expense, and income tax expense divided by interest expense. (p. 13-23).

Trading on the equity *See leveraging*. (p. 13-25).

Trading securities Securities bought and held primarily for sale in the near term to generate income on short-term price differences. (p. 13-5).

Vertical analysis A technique for evaluating financial statement data that expresses each item in a financial statement as a percentage of a base amount. (p. 13-12).

Practice Multiple-Choice Questions

1. **(LO 1)** In reporting discontinued operations, the income statement should show in a special section:
   a. gains on the disposal of the discontinued component.
   b. losses on the disposal of the discontinued component.
   c. neither gains nor losses on the disposal of the discontinued component.
   d. both gains and losses on the disposal of the discontinued component.

2. **(LO 1)** Cool Stools Corporation has income before taxes of $400,000 and a loss on discontinued operations of $100,000. If the income tax rate is 25% on all items, the income statement should

report income from continuing operations and discontinued operations, respectively, of

a. \$325,000 and \$100,000.

b. \$325,000 and \$75,000.

c. \$300,000 and \$100,000.

d. \$300,000 and \$75,000.

3. **(LO 1)** Which of the following would be considered an "Other comprehensive income" item?

a. Gain on disposal of discontinued operations.

b. Unrealized loss on available-for-sale securities.

c. Loss related to flood.

d. Net income.

4. **(LO 1)** Which situation below might indicate a company has a low quality of earnings?

a. The same accounting principles are used each year.

b. Revenue is recognized when the performance obligation is satisfied.

c. Maintenance costs are capitalized and then depreciated.

d. The company's P-E ratio is high relative to competitors.

5. **(LO 2)** In horizontal analysis, each item is expressed as a percentage of the:

a. net income amount.

b. stockholders' equity amount.

c. total assets amount.

d. base-year amount.

6. **(LO 2)** Adams Corporation reported net sales of \$300,000, \$330,000, and \$360,000 in the years 2023, 2024, and 2025, respectively. If 2023 is the base year, what percentage do 2025 net sales represent of the base?

a. 77%. **c.** 120%.

b. 108%. **d.** 130%.

7. **(LO 2)** The following schedule is a display of what type of analysis?

	Amount	Percent
Current assets	\$200,000	25%
Property, plant, and equipment	600,000	75%
Total assets	\$800,000	

a. Horizontal analysis. **c.** Vertical analysis.

b. Differential analysis. **d.** Ratio analysis.

8. **(LO 2)** In vertical analysis, the base amount for depreciation expense is generally:

a. net sales.

b. depreciation expense in a previous year.

c. gross profit.

d. fixed assets.

9. **(LO 3)** Which measure is an evaluation of a company's ability to pay current liabilities?

a. Accounts receivable turnover.

b. Current ratio.

c. Both accounts receivable turnover and current ratio.

d. None of the answer choices is correct.

10. **(LO 3)** Which measure is useful in evaluating the efficiency in managing inventories?

a. Inventory turnover.

b. Days in inventory.

c. Both inventory turnover and days in inventory.

d. None of the answer choices is correct.

11. **(LO 3)** Which of these is **not** a liquidity ratio?

a. Current ratio.

b. Asset turnover.

c. Inventory turnover.

d. Accounts receivable turnover.

12. **(LO 3)** Plano Corporation reported net income \$24,000, net sales \$400,000, and average assets \$600,000 for 2025. What is the 2025 profit margin?

a. 6%. **c.** 40%.

b. 12%. **d.** 200%.

Use the following financial statement information as of the end of each year to answer Questions 13–17.

	2025	2024
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
Common stockholders' 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 preferred stockholders	4,000	4,000
Dividends paid to common stockholders	15,000	10,000

13. **(LO 3)** Compute the days in inventory for 2025.

a. 64.4 days. **c.** 6 days.

b. 60.8 days. **d.** 24 days.

14. **(LO 3)** Compute the current ratio for 2025.

a. 1.26:1. **c.** 0.80:1.

b. 3.0:1. **d.** 3.75:1.

15. **(LO 3)** Compute the profit margin for 2025.

a. 17.1%. **c.** 37.9%.

b. 18.1%. **d.** 5.9%.

16. **(LO 3)** Compute the return on common stockholders' equity for 2025.

a. 54.2%. **c.** 61.2%.

b. 52.5%. **d.** 59.4%.

17. **(LO 3)** Compute the times interest earned for 2025.

a. 11.2 times. **c.** 14.0 times.

b. 65.3 times. **d.** 13.0 times.

Solutions

1. **d.** Gains and losses from the operations of a discontinued component and gains and losses on the disposal of the discontinued component are shown in a separate section immediately after continuing operations in the income statement. Choices (a) and (b) are correct, but (d) is the better answer. Choice (c) is wrong as both gains and losses on the disposal of the discontinued segment are shown in a separate section of the income statement.

2. **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 reported net of tax, $100,000 × 75% = $75,000. The other choices are therefore incorrect.

3. **b.** Unrealized gains and losses on available-for-sale securities are reported as other comprehensive income. The other choices are incorrect because they are reported on the income statement as follows: (a) a gain on the disposal of discontinued operations is reported as an unusual item, (c) loss related to a flood is reported among other expenses and losses, and (d) net income is a separate line item.

4. **c.** Capitalizing and then depreciating maintenance costs suggests that a company is trying to avoid expensing certain costs by deferring them to future accounting periods to increase current-period income. The other choices are incorrect because (a) using the same accounting principles each year and (b) recognizing revenue when the performance obligation is satisfied is in accordance with GAAP. Choice (d) is incorrect because a high P-E ratio does not suggest that a firm has low quality of earnings.

5. **d.** Horizontal analysis converts each succeeding year's balance to a percentage of the base-year amount, not (a) net income amount, (b) stockholders' equity amount, or (c) total assets amount.

6. **c.** The trend percentage for 2025 is 120% ($360,000 ÷ $300,000), not (a) 77%, (b) 108%, or (d) 130%.

7. **c.** The data in the schedule are 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.

8. **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.

9. **c.** Both the accounts receivable turnover 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.

10. **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.

11. **b.** Asset turnover is a measure of profitability. The other choices are incorrect because the (a) current ratio, (c) inventory turnover, and (d) accounts receivable turnover are all measures of a firm's liquidity.

12. **a.** Profit margin = Net income ($24,000) ÷ Net sales ($400,000) = 6%, not (b) 12%, (c) 40%, or (d) 200%.

13. **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.

14. **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.

15. **a.** Profit margin = Net income ÷ Net sales ($134,000 ÷ $784,000) = 17.1%, not (b) 18.1%, (c) 37.9%, or (d) 5.9%.

16. **d.** Return on common stockholders' equity = Net income ($134,000) − Dividends to preferred stockholders ($4,000) ÷ Average common stockholders' equity [($240,000 + $198,000) ÷ 2] = 59.4%, not (a) 54.2%, (b) 52.5%, or (c) 61.2%.

17. **c.** Times interest earned = (Net income + Interest expense + Income tax expense) ÷ 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.

Practice Brief Exercises

Prepare a discontinued operations section.

1. **(LO 1)** On September 30, Reynaldo Corporation discontinued its operations in Africa. During the year, the operating income was $100,000 before taxes. On September 1, Reynaldo disposed of its African facilities at a pretax loss of $350,000. The applicable tax rate is 20%. Show the discontinued operations section of the income statement.

Solution

1.

Reynaldo Corporation
Income Statement (partial)

Income from operations of discontinued division,		
net of $20,000 income taxes ($100,000 × 20%)	$ 80,000	
Loss from disposal of discontinued division,		
net of $70,000 income tax savings ($350,000 × 20%)	280,000	$(200,000)

Prepare horizontal analysis.

2. **(LO 2)** Using the following data from the comparative balance sheets of Alfredo Company, perform a horizontal analysis.

	December 31, 2025	December 31, 2024
Accounts payable	$ 300,000	$ 200,000
Common stock	700,000	600,000
Total liabilities and equity	2,000,000	1,800,000

Solution

2.

	December 31, 2025	December 31, 2024	Increase or (Decrease) Amount	Percent*
Accounts payable	$ 300,000	$ 200,000	$100,000	50%
Common stock	700,000	600,000	100,000	17
Total liabilities and stockholders' equity	2,000,000	1,800,000	200,000	11

*$100 ÷ $200 = 50%; $100 ÷ $600 = 16.7%; $200 ÷ $1,800 = 11.1%

3. **(LO 3)** Gonzalez Company has beginning inventory of $400,000, cost of goods sold of $2,200,000, and days in inventory of 73. What is Gonzalez' inventory turnover and ending inventory?

Calculate ratios.

Solution

3. Days in inventory = 365 ÷ Inventory turnover
73 = 365 ÷ Inventory turnover.
Inventory turnover = 5 (365 ÷ 73)

Inventory turnover = Cost of goods sold ÷ Average inventory
5 = $2,200,000 ÷ Average inventory
Average inventory = $2,200,000 ÷ 5 = $440,000.

Since beginning inventory is $400,000, ending inventory must be $480,000:
($400,000 + $480,000) ÷ 2 = $440,000.

Practice Exercises

1. **(LO 2)** The comparative condensed balance sheets of Roadway Corporation are as follows.

Prepare horizontal and vertical analyses.

Roadway Corporation
Condensed Balance Sheets
December 31

	2025	2024
Assets		
Current assets	$ 76,000	$ 80,000
Property, plant, and equipment (net)	99,000	90,000
Intangible assets	25,000	40,000
Total assets	$200,000	$210,000
Liabilities and Stockholders' Equity		
Current liabilities	$ 40,800	$ 48,000
Long-term liabilities	143,000	150,000
Stockholders' equity	16,200	12,000
Total liabilities and stockholders' equity	$200,000	$210,000

Instructions

a. Prepare a horizontal analysis of the balance sheet data for Roadway Corporation using 2024 as a base.

b. Prepare a vertical analysis of the balance sheet data for Roadway Corporation in columnar form for 2025.

Solution

1. a.

Roadway Corporation
Condensed Balance Sheets
December 31

	2025	2024	Increase (Decrease)	Percent Change from 2024
Assets				
Current assets	$ 76,000	$ 80,000	$ (4,000)	(5.0%)
Property, plant, and equipment (net)	99,000	90,000	9,000	10.0%
Intangible assets	25,000	40,000	(15,000)	(37.5%)
Total assets	$200,000	$210,000	$(10,000)	(4.8%)
Liabilities and Stockholders' Equity				
Current liabilities	$ 40,800	$ 48,000	$ (7,200)	(15.0%)
Long-term liabilities	143,000	150,000	(7,000)	(4.7%)
Stockholders' equity	16,200	12,000	4,200	35.0%
Total liabilities and stockholders' equity	$200,000	$210,000	$(10,000)	(4.8%)

b.

Roadway Corporation
Condensed Balance Sheet
December 31, 2025

	Amount	Percent
Assets		
Current assets	$ 76,000	38.0%
Property, plant, and equipment (net)	99,000	49.5%
Intangible assets	25,000	12.5%
Total assets	$200,000	100.0%
Liabilities and Stockholders' Equity		
Current liabilities	$ 40,800	20.4%
Long-term liabilities	143,000	71.5%
Stockholders' equity	16,200	8.1%
Total liabilities and stockholders' equity	$200,000	100.0%

Compute ratios.

2. **(LO 3)** Rondo Corporation's comparative balance sheets are presented here.

Rondo Corporation
Balance Sheets
December 31

	2025	2024
Cash	$ 5,300	$ 3,700
Accounts receivable (net)	21,200	23,400
Inventory	9,000	7,000
Land	20,000	26,000
Buildings	70,000	70,000
Accumulated depreciation—buildings	(15,000)	(10,000)
Total	$110,500	$120,100
Accounts payable	$ 10,370	$ 31,100
Common stock	75,000	69,000
Retained earnings	25,130	20,000
Total	$110,500	$120,100

Rondo's 2025 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 2025.

a. Current ratio.
b. Accounts receivable turnover.
c. Inventory turnover.
d. Profit margin.
e. Asset turnover.
f. Return on assets.
g. Return on common stockholders' equity.
h. Debt to assets ratio.

Solution

2. **a.** ($5,300 + $21,200 + $9,000) ÷ $10,370 = 3.42:1
b. $120,000 ÷ [($21,200 + $23,400) ÷ 2] = 5.38 times
c. $70,000 ÷ [($9,000 + $7,000) ÷ 2] = 8.75 times
d. $14,000 ÷ $120,000 = 11.7%
e. $120,000 ÷ [($110,500 + $120,100) ÷ 2] = 1.04 times
f. $14,000 ÷ [($110,500 + $120,100) ÷ 2] = 12.1%
g. $14,000 ÷ [($100,130 + $89,000) ÷ 2] = 14.8%
h. $10,370 ÷ $110,500 = 9.4%

Practice Problem

Prepare an income statement and a statement of comprehensive income.

(LO 1) The events and transactions of Dever Corporation for the year ended December 31, 2025, resulted in the following data.

Cost of goods sold	$2,600,000
Net sales	4,400,000
Other expenses and losses	9,600
Other revenues and gains	5,600
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 available-for-sale securities	60,000

Analysis reveals the following.

1. All items recorded are before the applicable income tax rate of 20%.
2. The plastics division was sold on July 1.
3. All operating data for the plastics division have been segregated.

Instructions

Prepare an income statement and a statement of comprehensive income for the year.

Solution

Dever Corporation
Income Statement
For the Year Ended December 31, 2025

Net sales	$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 revenues and gains		5,600
Other expenses and losses		9,600
Income before income taxes		696,000
Income tax expense ($696,000 × 20%)		139,200
Income from continuing operations		556,800
Discontinued operations		
Income from operation of plastics division, net of $14,000 income taxes ($70,000 × 20%)	$ 56,000	
Gain from disposal of plastics division, net of $100,000 income taxes ($500,000 × 20%)	400,000	456,000
Net income		$1,012,800

Dever Corporation
Statement of Comprehensive Income
For the Year Ended December 31, 2025

Net income	$1,012,800
Unrealized loss on available-for-sale securities, net of $12,000 income tax savings ($60,000 × 20%)	48,000
Comprehensive income	$ 964,800

Brief Exercises, DO IT! Exercises, Exercises, Problems, Data Analytics Activities, A Look at IFRS, and many additional resources are available for practice in Wiley Course Resources.

Questions

1. Explain sustainable income. What relationship does this concept have to the treatment of discontinued operations on the income statement?

2. Hogan Inc. reported 2024 earnings per share of $3.26 and had no discontinued operations. In 2025, earnings per share on income from continuing operations was $2.99, and earnings per share on net income was $3.49. Do you consider this trend to be favorable? Why or why not?

3. Moosier Inc. has been in operation for 3 years and uses the FIFO method of inventory costing. During the fourth year, Moosier changes to the average-cost method for all its inventory. How will Moosier report this change?

4. What amount did Apple report as "Other comprehensive earnings" in its consolidated statement of comprehensive income ending September 26, 2020? By what percentage did Apple's "Comprehensive income" differ from its "Net income"?

5. Identify and explain factors that affect quality of earnings.

6. Explain how the choice of one of the following accounting methods over the other raises or lowers a company's net income during a period of continuing inflation.

a. Use of FIFO instead of LIFO for inventory costing.

b. Use of a 6-year life for machinery instead of a 9-year life.

c. Use of straight-line depreciation instead of declining-balance depreciation.

7. Two popular methods of financial statement analysis are horizontal analysis and vertical analysis. Explain the difference between these two methods.

8. **a.** If Erin Company had net income of $300,000 in 2024 and it experienced a 24.5% increase in net income for 2025, what is its net income for 2025?

b. If 6 cents of every dollar of Erin's revenue results in net income in 2024, what is the dollar amount of 2024 revenue?

9. **a.** Gina Jaimes believes that the analysis of financial statements is directed at two characteristics of a company: liquidity and profitability. Is Gina correct? Explain.

b. Are short-term creditors, long-term creditors, and stockholders interested in primarily the same characteristics of a company? Explain.

10. **a.** Distinguish among the following bases of comparison: intracompany, intercompany, and industry averages.

b. Give the principal value of using each of the three bases of comparison.

11. Name the major ratios useful in assessing (a) liquidity and (b) solvency.

12. Vern Thoms is puzzled. His company had a profit margin of 10% in 2025. He feels that this is an indication that the company is doing well. Tina Amos, his accountant, says that more information is needed to determine the company's financial well-being. Who is correct? Why?

13. What does each type of ratio measure?

  a. Liquidity ratios.

  b. Solvency ratios.

  c. Profitability ratios.

14. What is the difference between the current ratio and working capital?

15. Handi Mart, a retail store, has an accounts receivable turnover of 4.5 times. The industry average is 12.5 times. Does Handi Mart have a collection problem with its receivables?

16. Which ratios should be used to help answer each of these questions?

  a. How efficient is a company in using its assets to produce net 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 become due?

17. At year-end, the price-earnings ratio of **General Motors** was 11.3, and the price-earnings ratio of **Microsoft** was 28.14. Which company did the stock market favor? Explain.

18. What is the equation for computing the payout ratio? Do you expect this ratio to be high or low for a growth company?

19. 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 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.

20. The return on assets for Ayala Corporation is 7.6%. During the same year, Ayala's return on common stockholders' equity is 12.8%. What is the explanation for the difference in the two rates?

21. Which two ratios do you think should be of greatest interest in each of the following cases?

  a. A pension fund considering the purchase of 20-year bonds.

  b. A bank contemplating a short-term loan.

  c. A common stockholder.

22. Keanu Inc. has net income of $200,000, average shares of common stock outstanding of 40,000, and preferred dividends of $20,000 that were declared and paid during the period. What is Keanu's earnings per share of common stock? Fred Tyme, the president of Keanu, believes that the computed EPS of the company is high. Comment.

Brief Exercises

BE13.1 **(LO 1), AP** On June 30, Flores Corporation discontinued its operations in Mexico. During the year, the operating income was $200,000 before taxes. On September 1, Flores disposed of the Mexico facility at a pretax loss of $640,000. The applicable tax rate is 25%. Show the discontinued operations section of Flores's income statement.

Prepare a discontinued operations section of an income statement.

BE13.2 **(LO 1), AP** An inexperienced accountant for Silva Corporation showed the following in the income statement: net income $337,500 and unrealized gain on available-for-sale securities (before taxes) $70,000. The unrealized gain on available-for-sale securities is subject to a 25% tax rate. Prepare a correct statement of comprehensive income.

Prepare a statement of comprehensive income including unusual items.

BE13.3 **(LO 1), C** On January 1, 2025, Bryce Inc. changed from the LIFO method of inventory costing to the FIFO method. Explain how this change in accounting principle should be treated in the company's financial statements.

Indicate how a change in accounting principle is reported.

BE13.4 **(LO 2), AP** Using these data from the comparative balance sheets of Rollaird Company, perform a horizontal analysis.

Prepare horizontal analysis.

	December 31, 2025	December 31, 2024
Accounts receivable (net)	$ 460,000	$ 400,000
Inventory	780,000	650,000
Total assets	3,164,000	2,800,000

BE13.5 **(LO 2), AP** Using these data from the comparative balance sheets of Rollaird Company, perform a vertical analysis.

Prepare vertical analysis.

	December 31, 2025	December 31, 2024
Accounts receivable (net)	$ 460,000	$ 400,000
Inventory	780,000	650,000
Total assets	3,164,000	2,800,000

Calculate percentage of change.

BE13.6 (LO 2), AP Net income was $500,000 in 2023, $485,000 in 2024, and $518,400 in 2025. What is the percentage of change (a) from 2023 to 2024, and (b) from 2024 to 2025? Is the change an increase or a decrease?

Calculate net income.

BE13.7 (LO 2), AP If Coho Company had net income of $382,800 in 2025 and it experienced a 16% increase in net income over 2024, what was its 2024 net income?

Analyze change in net income.

BE13.8 (LO 2), AP Vertical analysis (common-size) percentages for Palau Company's net sales, cost of goods sold, and expenses are listed here.

Vertical Analysis	2025	2024	2023
Net sales	100.0%	100.0%	100.0%
Cost of goods sold	60.5	62.9	64.8
Expenses	26.0	26.6	27.5

Did Palau's net income as a percent of net sales increase, decrease, or remain unchanged over the 3-year period? Provide numerical support for your answer.

Analyze change in net income.

BE13.9 (LO 2), AP Writing Horizontal analysis (trend analysis) percentages for Phoenix Company's sales revenue, cost of goods sold, and expenses are listed here.

Horizontal Analysis	2025	2024	2023
Net sales	96.2%	104.8%	100.0%
Cost of goods sold	101.0	98.0	100.0
Expenses	105.6	95.4	100.0

Explain whether Phoenix's net income increased, decreased, or remained unchanged over the 3-year period.

Calculate current ratio.

BE13.10 (LO 3), AP Suppose these selected condensed data are taken from recent balance sheets of **Bob Evans Farms** (in thousands).

	2025	2024
Cash	$ 13,606	$ 7,669
Accounts receivable (net)	23,045	19,951
Inventory	31,087	31,345
Other current assets	12,522	11,909
Total current assets	$ 80,260	$ 70,874
Total current liabilities	$245,805	$326,203

Compute the current ratio for each year and comment on your results.

Evaluate collection of accounts receivable.

BE13.11 (LO 3), AN Writing The following data are taken from the financial statements of Colby Company.

	2025	2024
Accounts receivable (net), end of year	$ 550,000	$ 540,000
Net sales on account	4,300,000	4,000,000
Terms for all sales are 1/10, n/45		

Compute for each year (a) the accounts receivable turnover and (b) the average collection period. What conclusions about the management of accounts receivable can be drawn from these data? At the end of 2023, accounts receivable (net) was $520,000.

Evaluate management of inventory.

BE13.12 (LO 3), AN Writing The following data were taken from the financial records of Mydorf Company.

	2025	2024
Net sales	$6,420,000	$6,240,000
Beginning inventory	960,000	840,000
Purchases	4,840,000	4,661,000
Ending inventory	1,020,000	960,000

Compute for each year (a) the inventory turnover and (b) days in inventory. What conclusions concerning the management of the inventory can be drawn from these data?

Calculate profitability ratios.

BE13.13 (LO 3), AN **Staples, Inc.** is one of the largest suppliers of office products in the United States. Suppose it had net income of $738.7 million and net sales of $24,275.5 million in 2025. Its total assets were $13,073.1 million at the beginning of the year and $13,717.3 million at the end of the year. What is Staples, Inc.'s (a) asset turnover and (b) profit margin? (Round to two decimals.) Provide a brief interpretation of your results.

Calculate profitability ratios.

BE13.14 (LO 3), AN Hollie Company has stockholders' equity of $400,000 and net income of $72,000. It has a payout ratio of 18% and a return on assets of 20%. How much did Hollie pay in cash dividends, and what were its average total assets?

Calculate and analyze free cash flow.

BE13.15 (LO 3), AN Selected data taken from a recent year's financial statements of trading card company Topps Company, Inc. are as follows (in millions).

Net sales	$326.7
Current liabilities, beginning of year	41.1
Current liabilities, end of year	62.4
Net cash provided by operating activities	10.4
Total liabilities, beginning of year	65.2
Total liabilities, end of year	73.2
Capital expenditures	3.7
Cash dividends	6.2

Compute the free cash flow. Provide a brief interpretation of your results.

DO IT! Exercises

Prepare a partial income statement and a statement of comprehensive income.

DO IT! 13.1 (LO 1), AP During 2025, Hrabik Corporation had the following amounts, all before calculating tax effects: income before income taxes $500,000, loss on operation of discontinued music division $60,000, gain on disposal of discontinued music division $40,000, and unrealized loss on available-for-sale securities $150,000. The income tax rate is 20%. Prepare a partial income statement, beginning with income before income taxes, and a statement of comprehensive income for the year ended December 31, 2025.

Prepare horizontal analysis.

DO IT! 13.2 (LO 2), AP Summary financial information for Gandaulf Company is as follows.

	Dec. 31, 2025	Dec. 31, 2024
Current assets	$ 200,000	$ 220,000
Plant assets	1,040,000	780,000
Total assets	$1,240,000	$1,000,000

Compute the amount and percentage changes in 2025 using horizontal analysis, assuming 2024 is the base year.

Compute ratios.

DO IT! 13.3 (LO 3), AP The condensed financial statements of Murawski Company for the years 2024 and 2025 are presented as follows. (Amounts in thousands.)

Murawski Company
Balance Sheets
December 31

	2025	2024
Current assets		
Cash and cash equivalents	$ 330	$ 360
Accounts receivable (net)	470	400
Inventory	460	390
Prepaid expenses	120	160
Total current assets	1,380	1,310
Investments	10	10
Property, plant, and equipment (net)	420	380
Intangibles and other assets	530	510
Total assets	$2,340	$2,210
Current liabilities	$ 900	$ 790
Long-term liabilities	410	380
Stockholders' equity—common	1,030	1,040
Total liabilities and stockholders' equity	$2,340	$2,210

Murawski Company
Income Statements
For the Years Ended December 31

	2025	2024
Net sales	$3,800	$3,460
Expenses		
Cost of goods sold	955	890
Selling and administrative expenses	2,400	2,330
Interest expense	25	20
Total expenses	3,380	3,240
Income before income taxes	420	220
Income tax expense	126	66
Net income	$ 294	$ 154

Compute the following ratios for 2025 and 2024.

a. Current ratio.
b. Inventory turnover. (Inventory on 12/31/23 was $340.)
c. Profit margin.
d. Return on assets. (Assets on 12/31/23 were $1,900.)
e. Return on common stockholders' equity. (Stockholders' equity—common on 12/31/23 was $900.)
f. Debt to assets ratio.
g. Times interest earned.

Exercises

Prepare a correct partial income statement.

E13.1 **(LO 1), AN** **Writing** For its fiscal year ending October 31, 2025, Haas Corporation reports the following partial data.

Income before income taxes	$540,000
Income tax expense (20% × $420,000)	84,000
Income from continuing operations	456,000
Loss on discontinued operations	120,000
Net income	$336,000

The loss on discontinued operations was comprised of a $50,000 loss from operations and a $70,000 loss from disposal. The income tax rate is 20% on all items.

Instructions

a. Prepare a correct partial income statement, beginning with income before income taxes.
b. Explain in memo form why the original income statement data are misleading.

Prepare a partial income statement and a statement of comprehensive income.

E13.2 **(LO 1), AP** Trayer Corporation has income from continuing operations of $290,000 for the year ended December 31, 2025. It also has the following items (before considering income taxes).

1. An unrealized loss of $80,000 on available-for-sale 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).

Assume all items are subject to income taxes at a 20% tax rate.

Instructions

Prepare a partial income statement, beginning with income from continuing operations, and a statement of comprehensive income.

E13.3 (LO 2), AP Here is financial information for Glitter Inc.

Prepare horizontal analysis.

Excel

	December 31, 2025	December 31, 2024
Current assets	$106,000	$ 90,000
Plant assets (net)	400,000	350,000
Current liabilities	99,000	65,000
Long-term liabilities	122,000	90,000
Common stock, $1 par	130,000	115,000
Retained earnings	155,000	170,000

Instructions

Prepare a schedule showing a horizontal analysis for 2025, using 2024 as the base year.

E13.4 (LO 2), AP Operating data for Joshua Corporation are presented as follows.

Prepare vertical analysis.

Excel

	2025	2024
Net sales	$800,000	$600,000
Cost of goods sold	520,000	408,000
Selling expenses	120,000	72,000
Administrative expenses	60,000	48,000
Income tax expense	30,000	24,000
Net income	70,000	48,000

Instructions

Prepare a schedule showing a vertical analysis for 2025 and 2024.

E13.5 (LO 2), AP Hypothetical comparative condensed balance sheets of Nike, Inc. are presented here.

Prepare horizontal and vertical analyses.

Nike, Inc.
Condensed Balance Sheets
May 31
($ in millions)

	2025	2024
Assets		
Current assets	$ 9,734	$ 8,839
Property, plant, and equipment (net)	1,958	1,891
Other assets	1,558	1,713
Total assets	$13,250	$12,443
Liabilities and Stockholders' Equity		
Current liabilities	$ 3,277	$ 3,322
Long-term liabilities	1,280	1,296
Stockholders' equity	8,693	7,825
Total liabilities and stockholders' equity	$13,250	$12,443

Instructions

a. Prepare a horizontal analysis of the balance sheet data for Nike, using 2024 as a base. (Show the amount of increase or decrease as well.)

b. Prepare a vertical analysis of the balance sheet data for Nike for 2025.

E13.6 (LO 2), AP Here are the comparative condensed income statements of Delaney Corporation.

Prepare horizontal and vertical analyses.

Delaney Corporation
Condensed Income Statements
For the Years Ended December 31

	2025	2024
Net sales	$598,000	$500,000
Cost of goods sold	477,000	420,000
Gross profit	121,000	80,000
Operating expenses	80,000	44,000
Net income	$ 41,000	$ 36,000

Instructions

a. Prepare a horizontal analysis of the income statement data for Delaney Corporation, using 2024 as a base. (Show the amounts of increase or decrease.)

b. Prepare a vertical analysis of the income statement data for Delaney Corporation for both years.

Compute liquidity ratios.

E13.7 **(LO 3), AP** **Nordstrom, Inc.** operates department stores in numerous states. Selected hypothetical financial statement data (in millions) for 2025 are presented below.

	End of Year	Beginning of Year
Cash and cash equivalents	$ 795	$ 72
Accounts receivable (net)	2,035	1,942
Inventory	898	900
Other current assets	326	303
Total current assets	$4,054	$3,217
Total current liabilities	$2,014	$1,601

For the year, net credit sales were $8,258 million, cost of goods sold was $5,328 million, and net cash provided by operating activities was $1,251 million.

Instructions

Compute the current ratio, accounts receivable turnover, average collection period, inventory turnover, and days in inventory for the current year.

Perform current ratio analysis.

E13.8 **(LO 3), AP** Gwynn Incorporated had the following transactions involving current assets and current liabilities during February 2025.

Feb. 3	Collected accounts receivable of $15,000.
7	Purchased equipment for $23,000 cash.
11	Paid $3,000 for a 1-year insurance policy.
14	Paid accounts payable of $12,000.
18	Declared cash dividends of $4,000.

Additional information:
As of February 1, 2025, current assets were $120,000 and current liabilities were $40,000.

Instructions

Compute the current ratio as of the beginning of the month and after each transaction.

Compute selected ratios.

E13.9 **(LO 3), AP** Lendell Company has these comparative balance sheet data:

Lendell Company
Balance Sheets
December 31

	2025	2024
Cash	$ 15,000	$ 30,000
Accounts receivable (net)	70,000	60,000
Inventory	60,000	50,000
Plant assets (net)	200,000	180,000
	$345,000	$320,000
Accounts payable	$ 50,000	$ 60,000
Bonds payable (15%)	100,000	100,000
Common stock, $10 par	140,000	120,000
Retained earnings	55,000	40,000
	$345,000	$320,000

Additional information for 2025:

1. Net income was $25,000.
2. Sales on account were $375,000. Sales returns and allowances amounted to $25,000.
3. Cost of goods sold was $198,000.
4. Net cash provided by operating activities was $48,000.
5. Capital expenditures were $25,000, and cash dividends paid were $10,000.
6. The bonds payable are due in 2038.

Instructions

Compute the following ratios at December 31, 2025.

a. Current ratio.
b. Accounts receivable turnover.
c. Average collection period.
d. Inventory turnover.
e. Days in inventory.
f. Free cash flow.

E13.10 **(LO 3), AP** Selected hypothetical comparative statement data for the giant bookseller Barnes & Noble are presented here. All balance sheet data are as of the end of the fiscal year (in millions).

Compute selected ratios.

	2025	2024
Net sales	$5,121.8	$5,286.7
Cost of goods sold	3,540.6	3,679.8
Net income	75.9	135.8
Accounts receivable (net)	81.0	107.1
Inventory	1,203.5	1,358.2
Total assets	2,993.9	3,249.8
Total common stockholders' equity	921.6	1,074.7

Instructions

Compute the following ratios for 2025.

a. Profit margin.
b. Asset turnover.
c. Return on assets.
d. Return on common stockholders' equity.
e. Gross profit rate.

E13.11 **(LO 3), AP** Here is the income statement for Myers, Inc.

Compute selected ratios.

Myers, Inc.
Income Statement
For the Year Ended December 31, 2025

Net sales	$400,000
Cost of goods sold	230,000
Gross profit	170,000
Expenses (including $16,000 interest and $24,000 income taxes)	98,000
Net income	$ 72,000

Additional information:

1. Common stock outstanding January 1, 2025, was 32,000 shares, and 40,000 shares were outstanding at December 31, 2025. (Use a simple average for weighted-average.)
2. The market price of Myers stock was $14 on December 31, 2025.
3. Cash dividends of $21,000 were declared and paid.

Instructions

Compute the following measures for 2025.

a. Earnings per share.
b. Price-earnings ratio.
c. Payout ratio.
d. Times interest earned.

E13.12 **(LO 3), AN** Panza Corporation experienced a fire on December 31, 2025, 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.

	December 31, 2025	December 31, 2024
Cash	$ 30,000	$ 10,000
Accounts receivable (net)	72,500	126,000
Inventory	200,000	180,000
Accounts payable	50,000	90,000
Notes payable	30,000	60,000
Common stock, $100 par	400,000	400,000
Retained earnings	113,500	101,000

Additional information:

1. The inventory turnover is 3.8 times.
2. The return on common stockholders' equity is 22%. The company had no additional equity accounts.
3. The accounts receivable turnover is 11.2 times.
4. The return on assets is 18%.
5. Total assets at December 31, 2024, were $605,000.

Instructions

Compute the following for Panza Corporation.

a. Cost of goods sold for 2025.
b. Net credit sales for 2025.
c. Net income for 2025.
d. Total assets at December 31, 2025.

Compute ratios.

E13.13 **(LO 3), AP** The condensed financial statements of Ness Company for the years 2024 and 2025 are as follows.

Ness Company
Balance Sheets
December 31 (in thousands)

	2025	2024
Current assets		
Cash and cash equivalents	$ 330	$ 360
Accounts receivable (net)	470	400
Inventory	460	390
Prepaid expenses	130	160
Total current assets	1,390	1,310
Investments	10	10
Property, plant, and equipment (net)	410	380
Other assets	530	510
Total assets	$2,340	$2,210
Current liabilities	$ 820	$ 790
Long-term liabilities	480	380
Stockholders' equity—common	1,040	1,040
Total liabilities and stockholders' equity	$2,340	$2,210

Ness Company
Income Statements
For the Year Ended December 31 (in thousands)

	2025	2024
Net sales	$3,800	$3,460
Expenses		
Cost of goods sold	970	890
Selling and administrative expenses	2,400	2,330
Interest expense	10	20
Total expenses	3,380	3,240
Income before income taxes	420	220
Income tax expense	168	88
Net income	$ 252	$ 132

Compute the following ratios for 2025 and 2024.

a. Current ratio.
b. Inventory turnover. (Inventory on December 31, 2023, was $340.)
c. Profit margin.
d. Return on assets. (Assets on December 31, 2023, were $1,900.)
e. Return on common stockholders' equity. (Stockholders' equity—common on December 31, 2023, was $900.)
f. Debt to assets ratio.
g. Times interest earned.

Problems

P13.1 **(LO 2, 3), AN** **Writing** Here are comparative financial statement data for Duke Company and Lord Company, two competitors. All data are as of December 31, 2025, and December 31, 2024.

Prepare vertical analysis and comment on profitability.

	Duke Company		Lord Company	
	2025	**2024**	**2025**	**2024**
Net sales	$1,849,000		$546,000	
Cost of goods sold	1,063,200		289,000	
Operating expenses	240,000		82,000	
Interest expense	6,800		3,600	
Income tax expense	62,000		28,000	
Current assets	325,975	$312,410	83,336	$ 79,467
Plant assets (net)	526,800	500,000	139,728	125,812
Current liabilities	66,325	75,815	35,348	30,281
Long-term liabilities	113,990	90,000	29,620	25,000
Common stock, $10 par	500,000	500,000	120,000	120,000
Retained earnings	172,460	146,595	38,096	29,998

Instructions

a. Prepare 2025 income statements for both companies, then prepare a vertical analysis for each.

b. Comment on the relative profitability of the companies by computing the 2025 return on assets and the return on common stockholders' equity for both companies.

P13.2 **(LO 3), AP** The comparative statements of Wahlberg Company are presented here.

Compute ratios from balance sheets and income statements.

Wahlberg Company
Income Statements
For the Years Ended December 31

	2025	**2024**
Net sales	$1,890,540	$1,750,500
Cost of goods sold	1,058,540	1,006,000
Gross profit	832,000	744,500
Selling and administrative expenses	500,000	479,000
Income from operations	332,000	265,500
Other expenses and losses		
Interest expense	22,000	20,000
Income before income taxes	310,000	245,500
Income tax expense	92,000	73,000
Net income	$ 218,000	$ 172,500

Wahlberg Company
Balance Sheets
December 31

	2025	**2024**
Assets		
Current assets		
Cash	$ 60,100	$ 64,200
Debt investments (short-term)	74,000	50,000
Accounts receivable (net)	117,800	102,800
Inventory	126,000	115,500
Total current assets	377,900	332,500
Plant assets (net)	649,000	520,300
Total assets	$1,026,900	$852,800

	2025	2024
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 160,000	$145,400
Income taxes payable	43,500	42,000
Total current liabilities	203,500	187,400
Bonds payable	220,000	200,000
Total liabilities	423,500	387,400
Stockholders' equity		
Common stock ($5 par)	290,000	300,000
Retained earnings	313,400	165,400
Total stockholders' equity	603,400	465,400
Total liabilities and stockholders' equity	$1,026,900	$852,800

All sales were on credit. Net cash provided by operating activities for 2025 was $220,000. Capital expenditures were $136,000, and cash dividends paid were $70,000.

Instructions

Compute the following ratios for 2025.

a. Earnings per share.
b. Return on common stockholders' equity.
c. Return on assets.
d. Current ratio.
e. Accounts receivable turnover.
f. Average collection period.
g. Inventory turnover.
h. Days in inventory.
i. Times interest earned.
j. Asset turnover.
k. Debt to assets ratio.
l. Free cash flow.

Perform ratio analysis, and discuss changes in financial position and operating results.

Excel

E13.3 (LO 3), AN Writing Condensed balance sheet and income statement data for Jergan Corporation are presented here.

Jergan Corporation
Balance Sheets
December 31

	2025	2024	2023
Cash	$ 30,000	$ 20,000	$ 18,000
Accounts receivable (net)	50,000	45,000	48,000
Other current assets	90,000	95,000	64,000
Investments	55,000	70,000	45,000
Property, plant, and equipment (net)	500,000	370,000	358,000
	$725,000	$600,000	$533,000
Current liabilities	$ 85,000	$ 80,000	$ 70,000
Long-term debt	145,000	85,000	50,000
Common stock, $10 par	320,000	310,000	300,000
Retained earnings	175,000	125,000	113,000
	$725,000	$600,000	$533,000

Jergan Corporation
Income Statements
For the Years Ended December 31

	2025	2024
Sales revenue	$740,000	$600,000
Less: Sales returns and allowances	40,000	30,000
Net sales	700,000	570,000
Cost of goods sold	425,000	350,000
Gross profit	275,000	220,000
Operating expenses (including income taxes)	180,000	150,000
Net income	$ 95,000	$ 70,000

Additional information:

1. The market price of Jergan's common stock was $7.00, $7.50, and $8.50 for 2023, 2024, and 2025, respectively.
2. You must compute dividends declared. All declared dividends were paid in cash in the year of declaration.

Instructions

a. Compute the following ratios for 2024 and 2025.

1. Profit margin.
2. Gross profit rate.
3. Asset turnover.
4. Earnings per share.
5. Price-earnings ratio.
6. Payout ratio.
7. Debt to assets ratio.

b. Based on the ratios calculated, discuss briefly the improvement or lack thereof in the financial position and operating results from 2024 to 2025 of Jergan Corporation.

P13.4 (LO 3), AN The following financial information is for Priscoll Company.

Compute ratios; comment on overall liquidity and profitability.

Priscoll Company
Balance Sheets
December 31

	2025	2024
Assets		
Cash	$ 70,000	$ 65,000
Debt investments (short-term)	55,000	40,000
Accounts receivable (net)	104,000	90,000
Inventory	230,000	165,000
Prepaid expenses	25,000	23,000
Land	130,000	130,000
Building and equipment (net)	260,000	185,000
Total assets	$874,000	$698,000
Liabilities and Stockholders' Equity		
Notes payable (current)	$170,000	$120,000
Accounts payable	65,000	52,000
Accrued liabilities	40,000	40,000
Bonds payable, due 2028	250,000	170,000
Common stock, $10 par	200,000	200,000
Retained earnings	149,000	116,000
Total liabilities and stockholders' equity	$874,000	$698,000

Priscoll Company
Income Statements
For the Years Ended December 31

	2025	2024
Net sales	$882,000	$790,000
Cost of goods sold	640,000	575,000
Gross profit	242,000	215,000
Operating expenses	190,000	167,000
Net income	$ 52,000	$ 48,000

Additional information:

1. Inventory at the beginning of 2024 was $115,000.
2. Accounts receivable (net) at the beginning of 2024 were $86,000.
3. Total assets at the beginning of 2024 were $660,000.
4. No common stock transactions occurred during 2024 or 2025.

Instructions

a. Compute liquidity and profitability ratios, and indicate the percentage change (to the nearest whole percentage) in liquidity and profitability ratios of Priscoll Company from 2024 to 2025. (*Note:* Not all profitability ratios can be computed, nor can cash-basis ratios be computed.)

b. The following are three **independent** situations and a ratio that may be affected. For each situation, compute the affected ratio (1) as of December 31, 2025, and (2) as of December 31, 2026, and percentage change in each ratio after giving effect to the situation.

Situation	Ratio
1. 18,000 shares of common stock were sold at par on July 1, 2026. Net income for 2026 was $54,000, and there were no dividends.	Return on common stockholders' equity
2. All of the notes payable were paid in 2026. All other liabilities remained at their December 31, 2025, levels. Total assets on December 31, 2026, were $900,000.	Debt to assets ratio
3. The market price of common stock was $9 and $12 on December 31, 2025 and 2026, respectively. Net income for 2026 was $54,000. (Use a simple average calculation for EPS.)	Price-earnings ratio

Compute selected ratios, and compare liquidity, profitability, and solvency for two companies.

P13.5 **(LO 3), AN** Selected hypothetical financial data of **Target** and **Walmart** for 2025 are presented here (in millions).

	Target Corporation	Walmart Inc.
	Income Statement Data for Year	
Net sales	$65,357	$408,214
Cost of goods sold	45,583	304,657
Selling and administrative expenses	15,101	79,607
Interest expense	707	2,065
Other income (expense)	(94)	(411)
Income tax expense	1,384	7,139
Net income	$ 2,488	$ 14,335
	Balance Sheet Data (End of Year)	
Current assets	$18,424	$ 48,331
Noncurrent assets	26,109	122,375
Total assets	$44,533	$170,706
Current liabilities	$11,327	$ 55,561
Long-term debt	17,859	44,089
Total stockholders' equity	15,347	71,056
Total liabilities and stockholders' equity	$44,533	$170,706
	Beginning-of-Year Balances	
Total assets	$44,106	$163,429
Total stockholders' equity	13,712	65,682
Current liabilities	10,512	55,390
Total liabilities	30,394	97,747
	Other Data	
Average net accounts receivable	$7,525	$ 4,025
Average inventory	6,942	33,836
Net cash provided by operating activities	5,881	26,249
Capital expenditures	1,729	12,184
Cash dividends paid	496	4,217

Instructions

a. For each company, compute the following ratios. Assume all sales were on credit.

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 common stockholders' equity.
10. Debt to assets ratio.
11. Times interest earned.
12. Free cash flow.

b. Compare the liquidity, solvency, and profitability of the two companies.

Continuing Case

Cookie Creations

(*Note:* This is a continuation of the Cookie Creations case from Chapters 1 through 12.)

CC13 Natalie and Curtis have comparative balance sheets and income statements for Cookie & Coffee Creations Inc. 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 Wiley Course Resources for complete case details and instructions.

leungchopan/
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Expand Your Critical Thinking

Financial Reporting Problem: **Apple Inc.**

CT13.1 Your parents are considering investing in **Apple Inc.** common stock. They ask you, as an accounting expert, to make an analysis of the company for them. Financial statements of Apple are presented in Appendix A. The complete annual report, including the notes to its financial statements, is available at the company's website.

Instructions

a. Make a 5-year trend analysis, using 2016 as the base year, of (1) net sales and (2) net income. Comment on the significance of the trend results. (To satisfy this requirement you must access information regarding performance in prior years. This information is provided in the complete annual report available on the company's website.)

b. Compute for 2020 and 2019 the (1) debt to assets ratio and (2) times interest earned. (See Note 3 for interest expense.) How would you evaluate Apple's long-term solvency?

c. Compute for 2020 and 2019 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 29, 2018, were $365,725 million. Total stockholders' equity at September 29, 2018, was $107,147 million.

d. What information outside the annual report may also be useful to your parents in making a decision about Apple?

Comparative Analysis Problem: **Columbia Sportswear Company vs. Under Armour, Inc.**

CT13.2 The financial statements of **Columbia Sportswear Company** are presented in Appendix B. Financial statements of **Under Armour, Inc.** are presented in Appendix C.

Instructions

a. Based on the information in the financial statements, determine each of the following for each company:

1. The percentage increase (i) in net sales and (ii) in net income from 2019 to 2020.
2. The percentage increase (i) in total assets and (ii) in total stockholders' equity from 2019 to 2020.
3. The basic earnings per share for 2020.

b. What conclusions concerning the two companies can be drawn from these data?

Comparative Analysis Problem: **Amazon.com, Inc. vs. Walmart Inc.**

CT13.3 The financial statements of **Amazon.com, Inc.** are presented in Appendix D. Financial statements of **Walmart Inc.** are presented in Appendix E.

Instructions

a. Based on the information in the financial statements, determine each of the following for each company:

1. The percentage increase (i) in net sales and (ii) in net income between the two most recent years provided.
2. The percentage increase (i) in total assets and (ii) in total stockholders' equity between the two most recent years provided.
3. The basic earnings per share for the most recent year provided.

b. What conclusions concerning the two companies can be drawn from these data?

Interpreting Financial Statements

CT13.4 **The Coca-Cola Company** and **PepsiCo, Inc.** provide refreshments to every corner of the world. Selected data from hypothetical consolidated financial statements for The Coca-Cola Company and for PepsiCo, Inc. are presented here (in millions).

	Coca-Cola	PepsiCo
Total current assets	$17,551	$12,571
Total current liabilities	13,721	8,756
Net sales	30,990	43,232
Cost of goods sold	11,088	20,099
Net income	6,824	5,946
Average (net) accounts receivable for the year	3,424	4,654

	Coca-Cola	PepsiCo
Average inventories for the year	$ 2,271	$ 2,570
Average total assets	44,595	37,921
Average common stockholders' equity	22,636	14,556
Average current liabilities	13,355	8,772
Average total liabilities	21,960	23,466
Total assets	48,671	39,848
Total liabilities	23,872	23,044
Income taxes	2,040	2,100
Interest expense	355	397
Net cash provided by operating activities	8,186	6,796
Capital expenditures	1,993	2,128
Cash dividends	3,800	2,732

Instructions

a. Compute the following liquidity ratios for Coca-Cola and for PepsiCo and comment on the relative liquidity of the two competitors.

1. Current ratio.
2. Accounts receivable turnover.
3. Average collection period.
4. Inventory turnover.
5. Days in inventory.

b. Compute the following solvency ratios for the two companies and comment on the relative solvency of the two competitors.

1. Debt to assets ratio.
2. Times interest earned.
3. Free cash flow.

c. Compute the following profitability ratios for the two companies and comment on the relative profitability of the two competitors.

1. Profit margin.
2. Asset turnover.
3. Return on assets.
4. Return on common stockholders' equity.

Real-World Focus

CT13.5 You can use the Internet to employ comparative data and industry data to evaluate a company's performance and financial position.

Instructions

Identify two competing companies and then go to the **MarketWatch** website. Type the company name in the search box (e.g., **Best Buy**) and then use the information from the Profile tab to answer the following questions.

a. Evaluate the company's liquidity relative to the industry averages and to the competitor that you chose.

b. Evaluate the company's solvency relative to the industry averages and to the competitor that you chose.

c. Evaluate the company's profitability relative to the industry averages and to the competitor that you chose.

CT13.6 The *Wall Street Journal* contains an article by Michael Rapoport entitled "Has Kraft Heinz Made $24 Billion Since Merger or $6 Billion? It Depends."

Instructions

Read the article and then answer the following questions.

a. The article compares **Kraft Heinz**'s cash flow from operations of approximately $6 billion with its "adjusted operating earnings" of approximately $24 billion. What is EBIDTA, and how does Kraft's "adjusted operating earnings" differ from EBIDTA?

b. In what ways is EBITDA similar to cash flow from operations, and how does it differ?

c. What is the Securities and Exchange Commission's position regarding the reporting of "tailored financial metrics" such as EBITDA?

d. What arguments do companies give for favoring non-GAAP earnings metrics relative to net income as determined under GAAP?

e. What is your opinion of whether companies should be allowed to report non-GAAP numbers and whether they provide useful information?

Decision-Making Across the Organization

CT13.7 You are a loan officer for White Sands Bank of Taos. Paul Jason, president of P. Jason Corporation, has just left your office. He is interested in an 8-year loan to expand the company's operations. The borrowed funds would be used to purchase new equipment. As evidence of the company's debt-worthiness, Jason provided you with the following facts.

	2025	2024
Current ratio	3.1	2.1
Asset turnover	2.8	2.2
Net income	Up 32%	Down 8%
Earnings per share	$3.30	$2.50

Jason is a very insistent (some would say pushy) man. When you told him that you would need additional information before making your decision, he acted offended and said, "What more could you possibly want to know?" You responded that, at a minimum, you would need complete, audited financial statements.

Instructions

With the class divided into groups, answer the following.

a. Explain why you would want the financial statements to be audited.

b. Discuss the implications of the ratios provided for the lending decision you are to make. That is, does the information paint a favorable picture? Are these ratios relevant to the decision?

c. List three other ratios that you would want to calculate for this company, and explain why you would use each.

Communication Activity

CT13.8 Larry Dundee is the chief executive officer of Palmer Electronics. Dundee is an expert engineer but a novice in accounting. Dundee asks you, as an accounting student, to explain (a) the bases for comparison in analyzing Palmer's financial statements and (b) the limitations, if any, in financial statement analysis.

Instructions

Write a memo to Larry Dundee that explains the basis for comparison and the factors affecting quality of earnings.

Ethics Case

CT13.9 René Kelly, president of RL Industries, wishes to issue a press release to bolster her company's image and maybe even its stock price, which has been gradually falling. As controller, you have been asked to provide a list of 20 financial ratios and other operating statistics for RL Industries' first-quarter financials and operations.

Two days after you provide the data requested, Erin Lourdes, the public relations director of RL, asks you to prove the accuracy of the financial and operating data contained in the press release written by the president and edited by Erin. In the news 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. She also emphasizes that production was up 50% over the prior year's first quarter.

You note that the 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 although the current ratio improved, the accounts receivable turnover fell from 12 to 9. Nor is there any mention that the reported profit for the quarter would have been a loss had not the estimated lives of RL plant and machinery been increased by 30%. Erin emphasized, "The Pres wants this release by early this afternoon."

Instructions

- **a.** Who are the stakeholders in this situation?
- **b.** Is there anything unethical in the president's actions?
- **c.** Should you as controller remain silent? Does Erin have any responsibility?

All About You

CT13.10 In this chapter, you learned how to use many tools for performing a financial analysis of a company. When making personal investments, however, it is most likely that you won't be buying stocks and bonds in individual companies. Instead, when most people want to invest in stock, they buy mutual funds. By investing in a mutual fund, you reduce your risk because the fund diversifies by buying the stock of a variety of different companies, bonds, and other investments, depending on the stated goals of the fund.

Before you invest in a fund, you will need to decide what type of fund you want. For example, do you want a fund that has the potential of high growth (but also high risk), or are you looking for lower risk and a steady stream of income? Do you want a fund that invests only in U.S. companies, or do you want one that invests globally? Many resources are available to help you with these types of decisions.

Instructions

Do an Internet search on "Motley Fool Here's How to Determine Your Ideal Asset Allocation Strategy" and then complete the investment allocation questionnaire. Add up your total points to determine the type of investment fund that would be appropriate for you.

FASB Codification Activity

CT13.11 If your school has a subscription to the FASB Codification, log in and prepare responses to the following. Use the Master Glossary for determining the proper definitions.

- **a.** Discontinued operations.
- **b.** Comprehensive income.

Answers to Insight and Accounting Across the Organization Questions

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.

More Frequent Ups and Downs **Q:** When predicting future earnings, how should analysts treat the one-time charge that results from a switch to the different approach for accounting for pension plans? **A:** Because the change in principle will only happen once, it should be ignored when predicting future earnings. That is, because it will not happen again in future periods, it would not be included in estimates of future results.

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 balance sheet date. Management can alter the cash balance by increasing or decreasing long-term assets or long-term debt, or by issuing or purchasing common stock.

High Ratings Can Bring Low Returns **Q:** Why are credit rating agencies important to the financial markets? **A:** Credit rating agencies perform financial analysis on publicly traded companies and then publish research reports and credit ratings. Investors and creditors rely on the information provided by credit rating agencies in making investment and lending decisions.

Appendix A

Specimen Financial Statements: Apple Inc.

Once each year, a corporation communicates to its stockholders and other interested parties by issuing a complete set of audited financial statements. The **annual report**, as this communication is called, summarizes the financial results of the company's operations for the year and its plans for the future. Many annual reports are attractive, multicolored, glossy public relations pieces, containing pictures of corporate officers and directors as well as photos and descriptions of new products and new buildings. Yet the basic function of every annual report is to report financial information, almost all of which is a product of the corporation's accounting system.

The content and organization of corporate annual reports have become fairly standardized. Excluding the public relations part of the report (pictures, products, etc.), the following are the traditional financial portions of the annual report:

- Financial Highlights
- Letter to the Stockholders
- Management's Discussion and Analysis
- Financial Statements
- Notes to the Financial Statements
- Management's Responsibility for Financial Reporting
- Management's Report on Internal Control over Financial Reporting
- Report of Independent Registered Public Accounting Firm
- Selected Financial Data

The official SEC filing of the annual report is called a **Form 10-K**, which often omits the public relations pieces found in most standard annual reports. On the following pages, we present **Apple Inc.**'s financial statements taken from the company's 2020 Form 10-K. The complete Form 10-K, including notes to the financial statements, is available at the company's website.

Apple Inc.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except number of shares which are reflected in thousands and per share amounts)

	Years ended		
	September 26, 2020	September 28, 2019	September 29, 2018
Net sales:			
Products	$ 220,747	$ 213,883	$ 225,847
Services	53,768	46,291	39,748
Total net sales	274,515	260,174	265,595
Cost of sales:			
Products	151,286	144,996	148,164
Services	18,273	16,786	15,592
Total cost of sales	169,559	161,782	163,756
Gross margin	104,956	98,392	101,839
Operating expenses:			
Research and development	18,752	16,217	14,236
Selling, general and administrative	19,916	18,245	16,705
Total operating expenses	38,668	34,462	30,941
Operating income	66,288	63,930	70,898
Other income/(expense), net	803	1,807	2,005
Income before provision for income taxes	67,091	65,737	72,903
Provision for income taxes	9,680	10,481	13,372
Net income	$ 57,411	$ 55,256	$ 59,531
Earnings per share:			
Basic	$ 3.31	$ 2.99	$ 3.00
Diluted	$ 3.28	$ 2.97	$ 2.98
Shares used in computing earnings per share:			
Basic	17,352,119	18,471,336	19,821,510
Diluted	17,528,214	18,595,651	20,000,435

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years ended		
	September 26, 2020	**September 28, 2019**	**September 29, 2018**
Net income	$ 57,411	$ 55,256	$ 59,531
Other comprehensive income/(loss):			
Change in foreign currency translation, net of tax	88	(408)	(525)
Change in unrealized gains/losses on derivative instruments, net of tax:			
Change in fair value of derivatives	79	(661)	523
Adjustment for net (gains)/losses realized and included in net income	(1,264)	23	382
Total change in unrealized gains/losses on derivative instruments	(1,185)	(638)	905
Change in unrealized gains/losses on marketable debt securities, net of tax:			
Change in fair value of marketable debt securities	1,202	3,802	(3,407)
Adjustment for net (gains)/losses realized and included in net income	(63)	25	1
Total change in unrealized gains/losses on marketable debt securities	1,139	3,827	(3,406)
Total other comprehensive income/(loss)	42	2,781	(3,026)
Total comprehensive income	$ 57,453	$ 58,037	$ 56,505

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.
CONSOLIDATED BALANCE SHEETS
(In millions, except number of shares which are reflected in thousands and par value)

	September 26, 2020	September 28, 2019
ASSETS:		
Current assets:		
Cash and cash equivalents	$ 38,016	$ 48,844
Marketable securities	52,927	51,713
Accounts receivable, net	16,120	22,926
Inventories	4,061	4,106
Vendor non-trade receivables	21,325	22,878
Other current assets	11,264	12,352
Total current assets	143,713	162,819
Non-current assets:		
Marketable securities	100,887	105,341
Property, plant and equipment, net	36,766	37,378
Other non-current assets	42,522	32,978
Total non-current assets	180,175	175,697
Total assets	$323,888	$338,516
LIABILITIES AND SHAREHOLDERS' EQUITY:		
Current liabilities:		
Accounts payable	$ 42,296	$ 46,236
Other current liabilities	42,684	37,720
Deferred revenue	6,643	5,522
Commercial paper	4,996	5,980
Term debt	8,773	10,260
Total current liabilities	105,392	105,718
Non-current liabilities:		
Term debt	98,667	91,807
Other non-current liabilities	54,490	50,503
Total non-current liabilities	153,157	142,310
Total liabilities	258,549	248,028
Commitments and contingencies		
Shareholders' equity:		
Common stock and additional paid-in capital, $0.00001 par value: 50,400,000 shares authorized; 16,976,763 and 17,772,945 shares issued and outstanding, respectively	50,779	45,174
Retained earnings	14,966	45,898
Accumulated other comprehensive income/(loss)	(406)	(584)
Total shareholders' equity	65,339	90,488
Total liabilities and shareholders' equity	$323,888	$338,516

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In millions, except per share amounts)

	Years ended		
	September 26, 2020	September 28, 2019	September 29, 2018
Total shareholders' equity, beginning balances	$90,488	$107,147	$134,047
Common stock and additional paid-in capital:			
Beginning balances	45,174	40,201	35,867
Common stock issued	880	781	669
Common stock withheld related to net share settlement of equity awards	(2,250)	(2,002)	(1,778)
Share-based compensation	6,975	6,194	5,443
Ending balances	50,779	45,174	40,201
Retained earnings:			
Beginning balances	45,898	70,400	98,330
Net income	57,411	55,256	59,531
Dividends and dividend equivalents declared	(14,087)	(14,129)	(13,735)
Common stock withheld related to net share settlement of equity awards	(1,604)	(1,029)	(948)
Common stock repurchased	(72,516)	(67,101)	(73,056)
Cumulative effects of changes in accounting principles	(136)	2,501	278
Ending balances	14,966	45,898	70,400
Accumulated other comprehensive income/(loss):			
Beginning balances	(584)	(3,454)	(150)
Other comprehensive income/(loss)	42	2,781	(3,026)
Cumulative effects of changes in accounting principles	136	89	(278)
Ending balances	(406)	(584)	(3,454)
Total shareholders' equity, ending balances	$65,339	$ 90,488	$107,147
Dividends and dividend equivalents declared per share or RSU	$ 0.795	$ 0.75	$ 0.68

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Years ended		
	September 26, 2020	September 28, 2019	September 29, 2018
Cash, cash equivalents and restricted cash, beginning balances	$50,224	$25,913	$20,289
Operating activities:			
Net income	57,411	55,256	59,531
Adjustments to reconcile net income to cash generated by operating activities:			
Depreciation and amortization	11,056	12,547	10,903
Share-based compensation expense	6,829	6,068	5,340
Deferred income tax benefit	(215)	(340)	(32,590)
Other	(97)	(652)	(444)
Changes in operating assets and liabilities:			
Accounts receivable, net	6,917	245	(5,322)
Inventories	(127)	(289)	828
Vendor non-trade receivables	1,553	2,931	(8,010)
Other current and non-current assets	(9,588)	873	(423)
Accounts payable	(4,062)	(1,923)	9,175
Deferred revenue	2,081	(625)	(3)
Other current and non-current liabilities	8,916	(4,700)	38,449
Cash generated by operating activities	80,674	69,391	77,434
Investing activities:			
Purchases of marketable securities	(114,938)	(39,630)	(71,356)
Proceeds from maturities of marketable securities	69,918	40,102	55,881
Proceeds from sales of marketable securities	50,473	56,988	47,838
Payments for acquisition of property, plant and equipment	(7,309)	(10,495)	(13,313)
Payments made in connection with business acquisitions, net	(1,524)	(624)	(721)
Purchases of non-marketable securities	(210)	(1,001)	(1,871)
Proceeds from non-marketable securities	92	1,634	353
Other	(791)	(1,078)	(745)
Cash generated by/(used in) investing activities	(4,289)	45,896	16,066
Financing activities:			
Proceeds from issuance of common stock	880	781	669
Payments for taxes related to net share settlement of equity awards	(3,634)	(2,817)	(2,527)
Payments for dividends and dividend equivalents	(14,081)	(14,119)	(13,712)
Repurchases of common stock	(72,358)	(66,897)	(72,738)
Proceeds from issuance of term debt, net	16,091	6,963	6,969
Repayments of term debt	(12,629)	(8,805)	(6,500)
Repayments of commercial paper, net	(963)	(5,977)	(37)
Other	(126)	(105)	—
Cash used in financing activities	(86,820)	(90,976)	(87,876)
Increase/(Decrease) in cash, cash equivalents and restricted cash	(10,435)	24,311	5,624
Cash, cash equivalents and restricted cash, ending balances	$39,789	$50,224	$25,913
Supplemental cash flow disclosure:			
Cash paid for income taxes, net	$ 9,501	$15,263	$10,417
Cash paid for interest	$ 3,002	$ 3,423	$ 3,022

See accompanying Notes to Consolidated Financial Statements.

Specimen Financial Statements: Columbia Sportswear Company

Columbia Sportswear Company is a leader in outdoor sportswear. The following are Columbia's financial statements as presented in its 2020 annual report. The complete annual report, including notes to the financial statements, is available at the company's website.

COLUMBIA SPORTSWEAR COMPANY
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)

	Year Ended December 31,		
	2020	**2019**	**2018**
Net sales	$2,501,554	$3,042,478	$2,802,326
Cost of sales	1,277,665	1,526,808	1,415,978
Gross profit	1,223,889	1,515,670	1,386,348
Selling, general and administrative expenses	1,098,948	1,136,186	1,051,152
Net licensing income	12,108	15,487	15,786
Income from operations	137,049	394,971	350,982
Interest income, net	435	8,302	9,876
Other non-operating income (expense), net	2,039	2,156	(141)
Income before income tax	139,523	405,429	360,717
Income tax expense	(31,510)	(74,940)	(85,769)
Net income	108,013	330,489	274,948
Net income attributable to non-controlling interest	—	—	6,692
Net income attributable to Columbia Sportswear Company	$ 108,013	$ 330,489	$ 268,256
Earnings per share attributable to Columbia Sportswear Company:			
Basic	$ 1.63	$ 4.87	$ 3.85
Diluted	$ 1.62	$ 4.83	$ 3.81
Weighted average shares outstanding:			
Basic	66,376	67,837	69,614
Diluted	66,772	68,493	70,401

See accompanying notes to consolidated financial statements

COLUMBIA SPORTSWEAR COMPANY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)

	Year Ended December 31,		
	2020	**2019**	**2018**
Net income	$108,013	$330,489	$274,948
Other comprehensive income (loss):			
Unrealized holding gains (losses) on available-for-sale securities, net	4	56	(56)
Unrealized holding gains (losses) on derivative transactions (net of tax effects of $6,271, $830, and $(7,782), respectively)	(18,851)	(2,383)	24,262
Foreign currency translation adjustments (net of tax effects of $(388), $2,188, and $1,557, respectively)	24,078	2,064	(18,079)
Other comprehensive income (loss)	5,231	(263)	6,127
Comprehensive income	113,244	330,226	281,075
Comprehensive income attributable to non-controlling interest	—	—	7,480
Comprehensive income attributable to Columbia Sportswear Company	$113,244	$330,226	$273,595

See accompanying notes to consolidated financial statements

COLUMBIA SPORTSWEAR COMPANY
CONSOLIDATED BALANCE SHEETS
(In thousands)

	December 31, 2020	December 31, 2019
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 790,725	$ 686,009
Short-term investments	1,224	1,668
Accounts receivable, net of allowance of $21,810 and $8,925, respectively	452,945	488,233
Inventories, net	556,530	605,968
Prepaid expenses and other current assets	54,197	93,868
Total current assets	1,855,621	1,875,746
Property, plant and equipment, net	309,792	346,651
Operating lease right-of-use assets	339,244	394,501
Intangible assets, net	103,558	123,595
Goodwill	68,594	68,594
Deferred income taxes	96,126	78,849
Other non-current assets	63,636	43,655
Total assets	$2,836,571	$2,931,591
LIABILITIES AND EQUITY		
Current Liabilities:		
Accounts payable	$ 206,697	$ 255,372
Accrued liabilities	257,278	295,723
Operating lease liabilities	65,466	64,019
Income taxes payable	23,181	15,801
Total current liabilities	552,622	630,915
Non-current operating lease liabilities	353,181	371,507
Income taxes payable	49,922	48,427
Deferred income taxes	5,205	6,361
Other long-term liabilities	42,870	24,934
Total liabilities	1,003,800	1,082,144
Commitments and contingencies (Note 12)		
Shareholders' Equity:		
Preferred stock; 10,000 shares authorized; none issued and outstanding	—	—
Common stock (no par value); 250,000 shares authorized; 66,252 and 67,561 issued and outstanding, respectively	20,165	4,937
Retained earnings	1,811,800	1,848,935
Accumulated other comprehensive income (loss)	806	(4,425)
Total shareholders' equity	1,832,771	1,849,447
Total liabilities and shareholders' equity	$2,836,571	$2,931,591

See accompanying notes to consolidated financial statements

COLUMBIA SPORTSWEAR COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2020	**2019**	**2018**
Cash flows from operating activities:			
Net income	$108,013	$330,489	$274,948
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation, amortization, and non-cash lease expense	146,601	121,725	58,230
Provision for uncollectible accounts receivable	19,156	(108)	3,908
Loss on disposal or impairment of intangible assets, property, plant and equipment, and right-of-use assets	31,342	5,442	4,208
Deferred income taxes	(11,263)	(1,808)	1,462
Stock-based compensation	17,778	17,832	14,291
Changes in operating assets and liabilities:			
Accounts receivable	22,885	(37,429)	(29,509)
Inventories, net	64,884	(84,058)	(94,716)
Prepaid expenses and other current assets	33,712	(15,068)	(9,771)
Other assets	(21,224)	(3,547)	(12,421)
Accounts payable	(49,275)	(10,419)	19,384
Accrued liabilities	(52,115)	18,863	66,900
Income taxes payable	9,082	(9,402)	(3,958)
Operating lease assets and liabilities	(52,112)	(54,197)	—
Other liabilities	8,613	7,137	(3,387)
Net cash provided by operating activities	276,077	285,452	289,569
Cash flows from investing activities:			
Purchases of short-term investments	(35,044)	(136,257)	(518,755)
Sales and maturities of short-term investments	36,631	400,501	352,127
Capital expenditures	(28,758)	(123,516)	(65,622)
Proceeds from sale of property, plant and equipment	—	—	19
Net cash provided by (used in) investing activities	(27,171)	140,728	(232,231)
Cash flows from financing activities:			
Proceeds from credit facilities	402,422	78,186	70,576
Repayments on credit facilities	(403,146)	(78,186)	(70,576)
Payment of line of credit issuance fees	(3,278)	—	—
Proceeds from issuance of common stock related to stock-based compensation	6,919	19,793	18,484
Tax payments related to stock-based compensation	(4,533)	(5,806)	(4,285)
Repurchase of common stock	(132,889)	(121,702)	(201,600)
Purchase of non-controlling interest	—	(17,880)	—
Cash dividends paid	(17,195)	(65,127)	(62,664)
Cash dividends paid to non-controlling interest	—	—	(19,949)
Net cash used in financing activities	(151,700)	(190,722)	(270,014)
Net effect of exchange rate changes on cash	7,510	(1,244)	(8,695)
Net increase (decrease) in cash and cash equivalents	104,716	234,214	(221,371)
Cash and cash equivalents, beginning of period	686,009	451,795	673,166
Cash and cash equivalents, end of period	$790,725	$686,009	$451,795
Supplemental disclosures of cash flow information:			
Cash paid during the year for income taxes	$ 14,687	$ 99,062	$ 77,408
Supplemental disclosures of non-cash investing and financing activities:			
Property, plant and equipment acquired through increase in liabilities	$ 3,831	$ 9,543	$ 11,831

See accompanying notes to consolidated financial statements

COLUMBIA SPORTSWEAR COMPANY
CONSOLIDATED STATEMENTS OF EQUITY
(In thousands, except per share amounts)

	Columbia Sportswear Company Shareholders' Equity					
	Common Stock					
	Shares Outstanding	Amount	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-Controlling Interest	Total
BALANCE, JANUARY 1, 2018	69,995	$45,829	$1,585,009	$(8,887)	$30,308	$1,652,259
Net income	—	—	268,256	—	6,692	274,948
Other comprehensive income (loss):						
Unrealized holding losses on available-for-sale securities, net	—	—	—	(56)	—	(56)
Unrealized holding gains on derivative transactions, net	—	—	—	23,195	1,067	24,262
Foreign currency translation adjustment, net	—	—	—	(17,800)	(279)	(18,079)
Cash dividends ($0.90 per share)	—	—	(62,664)	—	—	(62,664)
Dividends to non-controlling interest	—	—	—	—	(21,332)	(21,332)
Adoption of new accounting standards	—	—	14,600	(515)	—	14,085
Issuance of common stock related to stock-based compensation, net	600	14,199	—	—	—	14,199
Stock-based compensation expense	—	14,291	—	—	—	14,291
Repurchase of common stock	(2,349)	(74,319)	(127,281)	—	—	(201,600)
BALANCE, DECEMBER 31, 2018	68,246	—	1,677,920	(4,063)	16,456	1,690,313
Net income	—	—	330,489	—	—	330,489
Purchase of non-controlling interest	—	—	—	(99)	(16,456)	(16,555)
Other comprehensive income (loss):						
Unrealized holding gains on available-for-sale securities, net	—	—	—	56	—	56
Unrealized holding losses on derivative transactions, net	—	—	—	(2,383)	—	(2,383)
Foreign currency translation adjustment, net	—	—	—	2,064	—	2,064
Cash dividends ($0.96 per share)	—	—	(65,127)	—	—	(65,127)
Issuance of common stock related to stock-based compensation, net	558	13,987	—	—	—	13,987
Stock-based compensation expense	—	17,832	—	—	—	17,832
Repurchase of common stock	(1,243)	(26,882)	(94,347)	—	—	(121,229)
BALANCE, DECEMBER 31, 2019	67,561	4,937	1,848,935	(4,425)	—	1,849,447
Net income	—	—	108,013	—	—	108,013
Other comprehensive income (loss):						
Unrealized holding gains on available-for-sale securities, net	—	—	—	4	—	4
Unrealized holding losses on derivative transactions, net	—	—	—	(18,851)	—	(18,851)
Foreign currency translation adjustment, net	—	—	—	24,078	—	24,078
Cash dividends ($0.26 per share)	—	—	(17,195)	—	—	(17,195)
Issuance of common stock related to stock-based compensation, net	248	2,386	—	—	—	2,386
Stock-based compensation expense	—	17,778	—	—	—	17,778
Repurchase of common stock	(1,557)	(4,936)	(127,953)	—	—	(132,889)
BALANCE, DECEMBER 31, 2020	66,252	20,165	1,811,800	806	—	1,832,771

Appendix C

Specimen Financial Statements: Under Armour, Inc.

Under Armour, Inc. is a leader in outdoor sportswear. The following are Under Armour's financial statements as presented in its 2020 annual report. Under Armour's complete annual report, including notes to the financial statements, is available at the company's website.

Under Armour, Inc. and Subsidiaries
Consolidated Balance Sheets
(In thousands, except share data)

	December 31, 2020	December 31, 2019
Assets		
Current assets		
Cash and cash equivalents	$1,517,361	$ 788,072
Accounts receivable, net	527,340	708,714
Inventories	895,974	892,258
Prepaid expenses and other current assets	282,300	313,165
Total current assets	3,222,975	2,702,209
Property and equipment, net	658,678	792,148
Operating lease right-of-use assets	536,660	591,931
Goodwill	502,214	550,178
Intangible assets, net	13,295	36,345
Deferred income taxes	23,930	82,379
Other long-term assets	72,876	88,341
Total assets	$5,030,628	$4,843,531
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 575,954	$ 618,194
Accrued expenses	378,859	374,694
Customer refund liabilities	203,399	219,424
Operating lease liabilities	162,561	125,900
Other current liabilities	92,503	83,797
Total current liabilities	1,413,276	1,422,009
Long term debt	1,003,556	592,687
Operating lease liabilities, non-current	839,414	580,635
Other long-term liabilities	98,389	98,113
Total liabilities	3,354,635	2,693,444

(continues)

	December 31, 2020	December 31, 2019
Commitments and contingencies (see Note 10)		
Stockholders' equity		
Class A Common Stock, $0.0003 1/3 par value; 400,000,000 shares authorized as of December 31, 2020 and 2019; 188,603,686 shares issued and outstanding as of December 31, 2020 (2019: 188,289,680)	62	62
Class B Convertible Common Stock, $0.0003 1/3 par value; 34,450,000 shares authorized, issued and outstanding as of December 31, 2020 and 2019.	11	11
Class C Common Stock, $0.0003 1/3 par value; 400,000,000 shares authorized as of December 31, 2020 and 2019; 231,953,667 shares issued and outstanding as of December 31, 2020 (2019: 229,027,730)	77	76
Additional paid-in capital	1,061,173	973,717
Retained earnings	673,855	1,226,986
Accumulated other comprehensive loss	(59,185)	(50,765)
Total stockholders' equity	1,675,993	2,150,087
Total liabilities and stockholders' equity	$5,030,628	$4,843,531

See accompanying notes.

Under Armour, Inc. and Subsidiaries
Consolidated Statements of Operations
(In thousands, except per share amounts)

	Year Ended December 31,		
	2020	2019	2018
Net revenues	$4,474,667	$5,267,132	$5,193,185
Cost of goods sold	2,314,572	2,796,599	2,852,714
Gross profit	2,160,095	2,470,533	2,340,471
Selling, general and administrative expenses	2,171,934	2,233,763	2,182,339
Restructuring and impairment charges	601,599	—	183,149
Income (loss) from operations	(613,438)	236,770	(25,017)
Interest expense, net	(47,259)	(21,240)	(33,568)
Other income (expense), net	168,153	(5,688)	(9,203)
Income (loss) before income taxes	(492,544)	209,842	(67,788)
Income tax expense (benefit)	49,387	70,024	(20,552)
Income (loss) from equity method investment	(7,246)	(47,679)	934
Net income (loss)	$ (549,177)	$ 92,139	$ (46,302)
Basic net income (loss) per share of Class A, B and C common stock	$ (1.21)	$ 0.20	$ (0.10)
Diluted net income (loss) per share of Class A, B and C common stock	$ (1.21)	$ 0.20	$ (0.10)
Weighted average common shares outstanding Class A, B and C common stock			
Basic	454,089	450,964	445,815
Diluted	454,089	454,274	445,815

See accompanying notes.

Under Armour, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income (Loss)
(In thousands)

	Year Ended December 31,		
	2020	**2019**	**2018**
Net income (loss)	$(549,177)	$92,139	$(46,302)
Other comprehensive income (loss):			
Foreign currency translation adjustment	(5,060)	10,754	(18,535)
Unrealized gain (loss) on cash flow hedge, net of tax benefit (expense) of $1,791, $7,798, and $(7,936) for the years ended December 31, 2020, 2019, and 2018, respectively.	(18,075)	(21,646)	22,800
Gain (loss) on intra-entity foreign currency transactions	14,715	(886)	(5,041)
Total other comprehensive (loss)	(8,420)	(11,778)	(776)
Comprehensive income (loss)	$(557,597)	$80,361	$(47,078)

See accompanying notes.

Under Armour, Inc. and Subsidiaries
Consolidated Statements of Stockholders' Equity
(In thousands)

	Class A Common Stock		Class B Convertible Common Stock		Class C Common Stock		Additional part-in-Capital	Retained Earnings	Accumulated Other Comprehensive Income	Total Equity
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2017	185,257	61	34,450	11	222,375	74	872,266	1,184,441	(38,211)	$2,018,642
Exercise of stock options	2,084	1	—	—	2,127	—	6,747	—	—	6,748
Shares withheld in consideration of employee tax obligations relative to stock-based compensation arrangements	(23)	—	—	—	(140)	—	—	(2,564)	—	(2,564)
Issuance of Class A Common Stock, net of forfeitures	392	—	—	—	—	—	—	—	—	—
Issuance of Class C Common Stock, net of forfeitures	—	—	—	—	2,060	1	(4,168)	—	—	(4,167)
Impact of adoption of accounting standard updates	—	—	—	—	—	—	—	3,507	—	3,507
Stock-based compensation expense	—	—	—	—	—	—	41,783	—	—	41,783
Comprehensive income (loss)	—	—	—	—	—	—	—	(46,302)	(776)	(47,078)
Balance as of December 31, 2018	187,710	$62	34,450	$11	226,422	$75	$916,628	$1,139,082	$(38,987)	$2,016,871

(continues)

(continued)

	Class A Common Stock		Class B Convertible Common Stock		Class C Common Stock		Additional part-in-Capital	Retained Earnings	Accumulated Other Comprehensive Income	Total Equity
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2018	187,710	$62	34,450	$11	226,422	$75	$ 916,628	$1,139,082	$(38,987)	$2,016,871
Exercise of stock options and warrants	441	—	—	—	293	—	2,101	—	—	2,101
Shares withheld in consideration of employee tax obligations relative to stock-based compensation arrangements	(15)	—	—	—	(227)	—	—	(4,235)	—	(4,235)
Issuance of Class A Common Stock, net of forfeitures	154	—	—	—	—	—	—	—	—	—
Issuance of Class C Common Stock, net of forfeitures	—	—	—	—	2,540	1	5,370	—	—	5,371
Impact of adoption of accounting standard updates	—	—	—	—	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	49,618	—	—	49,618
Comprehensive loss	—	—	—	—	—	—	—	92,139	(11,778)	80,361
Balance as of December 31, 2019	188,290	$62	34,450	$11	229,028	$76	$ 973,717	$1,226,986	$(50,765)	$2,150,087
Exercise of stock options	148	—	—	—	136	—	517	—	—	517
Shares withheld in consideration of employee tax obligations relative to stock-based compensation arrangements	(1)	—	—	—	(262)	—	—	(3,954)	—	(3,954)
Issuance of Class A Common Stock, net of forfeitures	166	—	—	—	—	—	—	—	—	—
Issuance of Class C Common Stock, net of forfeitures	—	—	—	—	3,052	1	4,225	—	—	4,226
Stock-based compensation expense	—	—	—	—	—	—	42,070	—	—	42,070
Equity Component value of convertible notes issuance, net	—	—	—	—	—	—	40,644	—	—	40,644
Comprehensive income (loss)	—	—	—	—	—	—	—	(549,177)	(8,420)	(557,597)
Balance as of December 31, 2020	188,603	$62	34,450	$11	231,954	$77	$1,061,173	$ 673,855	$(59,185)	$1,675,993

See accompanying notes.

Under Armour, Inc. and Subsidiaries
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2020	**2019**	**2018**
Cash flows from operating activities			
Net income (loss)	$ (549,177)	$ 92,139	$ (46,302)
Adjustments to reconcile net income (loss) to net cash provided by operating activities			
Depreciation and amortization	164,984	186,425	181,768
Unrealized foreign currency exchange rate (gains) losses	(9,295)	(2,073)	14,023
Impairment charges	470,543	39,000	9,893
Amortization of bond premium	12,070	254	254
Gain on sale of MyFitnessPal platform	(179,318)	—	—
Loss on disposal of property and equipment	3,740	4,640	4,256
Stock-based compensation	42,070	49,618	41,783
Deferred income taxes	43,992	38,132	(38,544)
Changes in reserves and allowances	10,347	(26,096)	(234,998)
Changes in operating assets and liabilities:			
Accounts receivable	167,614	(45,450)	186,834
Inventories	15,306	149,519	109,919
Prepaid expenses and other assets	18,603	24,334	(107,855)
Other non-current assets	(259,735)	19,966	—
Accounts payable	(40,673)	59,458	26,413
Accrued expenses and other liabilities	318,532	(18,987)	134,594
Customer refund liability	(19,250)	(80,710)	305,141
Income taxes payable and receivable	2,511	18,862	41,051
Net cash provided by operating activities	212,864	509,031	628,230
Cash flows from investing activities			
Sale of MyFitnessPal platform	198,916	—	—
Purchase of businesses	(40,280)	—	—
Purchases of property and equipment	(92,291)	(145,802)	(170,385)
Sale of property and equipment	—	—	11,285
Purchase of equity method investment	—	—	(39,207)
Purchases of other assets	—	(1,311)	(4,597)
Net cash (used in) provided by investing activities	66,345	(147,113)	(202,904)
Cash flows from financing activities			
Proceeds from long term debt and revolving credit facility	1,288,753	25,000	505,000
Payments on long term debt and revolving credit facility	(800,000)	(162,817)	(695,000)
Purchase of capped call	(47,850)	—	—
Employee taxes paid for shares withheld for income taxes	(3,675)	(4,235)	(2,743)
Proceeds from exercise of stock options and other stock issuances	4,744	7,472	2,580
Other financing fees	100	63	306
Payments of debt financing costs	(5,219)	(2,553)	(11)
Net cash (used in) provided by financing activities	436,853	(137,070)	(189,868)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	16,445	5,100	12,467
Net increase in cash, cash equivalents and restricted cash	732,507	229,948	247,925

(continues)

(continued)

	Year Ended December 31,		
	2020	2019	2018
Cash, cash equivalents and restricted cash			
Beginning of period	796,008	566,060	318,135
End of period	$1,528,515	$796,008	$566,060
Non-cash investing and financing activities			
Change in accrual for property and equipment	$ (13,875)	$ (8,084)	$ (14,611)
Other supplemental information			
Cash paid (received) for income taxes, net of refunds	24,443	23,352	(16,738)
Cash paid for interest, net of capitalized interest	28,626	18,031	28,586

See accompanying notes.

Specimen Financial Statements: Amazon.com, Inc.

Amazon.com, Inc. is the world's largest online retailer. It also produces consumer electronics—notably the Kindle e-book reader and the Alexa digital assistant in its Echo speakers—and is a major provider of cloud computing services. The following are Amazon's financial statements as presented in the company's 2020 annual report. The complete annual report, including notes to the financial statements, is available at the company's website.

AMAZON.COM, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended December 31,		
	2018	**2019**	**2020**
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH, BEGINNING OF PERIOD	$21,856	$32,173	$36,410
OPERATING ACTIVITIES:			
Net income	10,073	11,588	21,331
Adjustments to reconcile net income to net cash from operating activities:			
Depreciation and amortization of property and equipment and capitalized content costs, operating lease assets, and other	15,341	21,789	25,251
Stock-based compensation	5,418	6,864	9,208
Other operating expense (income), net	274	164	(71)
Other expense (income), net	219	(249)	(2,582)
Deferred income taxes	441	796	(554)
Changes in operating assets and liabilities:			
Inventories	(1,314)	(3,278)	(2,849)
Accounts receivable, net and other	(4,615)	(7,681)	(8,169)
Accounts payable	3,263	8,193	17,480
Accrued expenses and other	472	(1,383)	5,754
Unearned revenue	1,151	1,711	1,265
Net cash provided by (used in) operating activities	30,723	38,514	66,064
INVESTING ACTIVITIES:			
Purchases of property and equipment	(13,427)	(16,861)	(40,140)
Proceeds from property and equipment sales and incentives	2,104	4,172	5,096
Acquisitions, net of cash acquired, and other	(2,186)	(2,461)	(2,325)
Sales and maturities of marketable securities	8,240	22,681	50,237
Purchases of marketable securities	(7,100)	(31,812)	(72,479)
Net cash provided by (used in) investing activities	(12,369)	(24,281)	(59,611)

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FINANCING ACTIVITIES:			
Proceeds from short-term debt, and other	886	1,402	6,796
Repayments of short-term debt, and other	(813)	(1,518)	(6,177)
Proceeds from long-term debt	182	871	10,525
Repayments of long-term debt	(155)	(1,166)	(1,553)
Principal repayments of finance leases	(7,449)	(9,628)	(10,642)
Principal repayments of financing obligations	(337)	(27)	(53)
Net cash provided by (used in) financing activities	(7,686)	(10,066)	(1,104)
Foreign currency effect on cash, cash equivalents, and restricted cash	(351)	70	618
Net increase (decrease) in cash, cash equivalents, and restricted cash	10,317	4,237	5,967
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH, END OF PERIOD	$32,173	$36,410	$42,377

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except per share data)

	Year Ended December 31,		
	2018	**2019**	**2020**
Net product sales	$141,915	$160,408	$215,915
Net service sales	90,972	120,114	170,149
Total net sales	232,887	280,522	386,064
Operating expenses:			
Cost of sales	139,156	165,536	233,307
Fulfillment	34,027	40,232	58,517
Technology and content	28,837	35,931	42,740
Marketing	13,814	18,878	22,008
General and administrative	4,336	5,203	6,668
Other operating expense (income), net	296	201	(75)
Total operating expenses	220,466	265,981	363,165
Operating income	12,421	14,541	22,899
Interest income	440	832	555
Interest expense	(1,417)	(1,600)	(1,647)
Other income (expense), net	(183)	203	2,371
Total non-operating income (expense)	(1,160)	(565)	1,279
Income before income taxes	11,261	13,976	24,178
Provision for income taxes	(1,197)	(2,374)	(2,863)
Equity-method investment activity, net of tax	9	(14)	16
Net income	$ 10,073	$ 11,588	$ 21,331
Basic earnings per share	$ 20.68	$ 23.46	$ 42.64
Diluted earnings per share	$ 20.14	$ 23.01	$ 41.83
Weighted-average shares used in computation of earnings per share:			
Basic	487	494	500
Diluted	500	504	510

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Year Ended December 31,		
	2018	**2019**	**2020**
Net income	$10,073	$11,588	$21,331
Other comprehensive income (loss):			
Net change in foreign currency translation adjustments:			
Foreign currency translation adjustments, net of tax of $6, $(5), and $(36)	(538)	78	561
Reclassification adjustment for foreign currency translation included in "Other operating expense (income), net," net of tax of $0, $29, and $0	—	(108)	—
Net foreign currency translation adjustments	(538)	(30)	561
Net change in unrealized gains (losses) on available-for-sale debt securities:			
Unrealized gains (losses), net of tax of $0, $(12), and $(83)	(17)	83	273
Reclassification adjustment for losses (gains) included in "Other income (expense), net," net of tax of $0, $0, and $8	8	(4)	(28)
Net unrealized gains (losses) on available-for-sale debt securities	(9)	79	245
Total other comprehensive income (loss)	(547)	49	806
Comprehensive income	$ 9,526	$11,637	$22,137

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.
CONSOLIDATED BALANCE SHEETS
(In millions, except per share data)

	December 31,	
	2019	**2020**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 36,092	$ 42,122
Marketable securities	18,929	42,274
Inventories	20,497	23,795
Accounts receivable, net and other	20,816	24,542
Total current assets	96,334	132,733
Property and equipment, net	72,705	113,114
Operating leases	25,141	37,553
Goodwill	14,754	15,017
Other assets	16,314	22,778
Total assets	$225,248	$321,195
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 47,183	$ 72,539
Accrued expenses and other	32,439	44,138
Unearned revenue	8,190	9,708
Total current liabilities	87,812	126,385
Long-term lease liabilities	39,791	52,573
Long-term debt	23,414	31,816
Other long-term liabilities	12,171	17,017
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock, $0.01 par value:		
Authorized shares — 500		
Issued and outstanding shares — none	—	—
Common stock, $0.01 par value:		
Authorized shares — 5,000		
Issued shares — 521 and 527		
Outstanding shares — 498 and 503	5	5
Treasury stock, at cost	(1,837)	(1,837)
Additional paid-in capital	33,658	42,865
Accumulated other comprehensive income (loss)	(986)	(180)
Retained earnings	31,220	52,551
Total stockholders' equity	62,060	93,404
Total liabilities and stockholders' equity	$225,248	$321,195

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions)

	Common Stock						
	Shares	Amount	Treasury Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
Balance as of January 1, 2018	484	$5	$(1,837)	$21,389	$(484)	$ 8,636	$27,709
Cumulative effect of change in accounting principles related to revenue recognition, income taxes, and financial instruments					(4)	916	912
Net income	—	—	—	—	—	10,073	10,073
Other comprehensive income (loss)	—	—	—	—	(547)	—	(547)
Exercise of common stock options	7	—	—	—	—	—	—
Stock-based compensation and issuance of employee benefit plan stock	—	—	—	5,402	—	—	5,402
Balance as of December 31, 2018	491	5	(1,837)	26,791	(1,035)	19,625	43,549
Cumulative effect of change in accounting principle related to leases						7	7
Net income	—	—	—	—	—	11,588	11,588
Other comprehensive income (loss)	—	—	—	—	49	—	49
Exercise of common stock options	7	—	—	—	—	—	—
Stock-based compensation and issuance of employee benefit plan stock	—	—	—	6,867	—	—	6,867
Balance as of December 31, 2019	498	5	(1,837)	33,658	(986)	31,220	62,060
Net income	—	—	—	—	—	21,331	21,331
Other comprehensive income (loss)	—	—	—	—	806	—	806
Exercise of common stock options	5	—	—	—	—	—	—
Stock-based compensation and issuance of employee benefit plan stock	—	—	—	9,207	—	—	9,207
Balance as of December 31, 2020	503	$5	$(1,837)	$42,865	$(180)	$52,551	$93,404

See accompanying notes to consolidated financial statements.

Appendix E

Specimen Financial Statements: Walmart Inc.

The following are **Walmart Inc.**'s financial statements as presented in the company's annual report for the year ended January 31, 2021. The complete annual report, including notes to the financial statements, is available at the company's website.

Walmart Inc.
Consolidated Statements of Income
(Amounts in millions, except per share data)

	Fiscal Years Ended January 31,		
	2021	**2020**	**2019**
Revenues:			
Net sales	$555,233	$519,926	$510,329
Membership and other income	3,918	4,038	4,076
Total revenues	559,151	523,964	514,405
Costs and expenses:			
Cost of sales	420,315	394,605	385,301
Operating, selling, general and administrative expenses	116,288	108,791	107,147
Operating income	22,548	20,568	21,957
Interest:			
Debt	1,976	2,262	1,975
Finance, capital lease and financing obligations	339	337	371
Interest income	(121)	(189)	(217)
Interest, net	2,194	2,410	2,129
Other (gains) and losses	(210)	(1,958)	8,368
Income before income taxes	20,564	20,116	11,460
Provision for income taxes	6,858	4,915	4,281
Consolidated net income	13,706	15,201	7,179
Consolidated net income attributable to noncontrolling interest	(196)	(320)	(509)
Consolidated net income attributable to Walmart	$ 13,510	$ 14,881	$ 6,670
Net income per common share:			
Basic net income per common share attributable to Walmart	$ 4.77	$ 5.22	$ 2.28
Diluted net income per common share attributable to Walmart	4.75	5.19	2.26
Weighted-average common shares outstanding:			
Basic	2,831	2,850	2,929
Diluted	2,847	2,868	2,945
Dividends declared per common share	$ 2.16	$ 2.12	$ 2.08

See accompanying notes.

Walmart Inc.
Consolidated Statements of Comprehensive Income
(Amounts in millions)

	Fiscal Years Ended January 31,		
	2021	**2020**	**2019**
Consolidated net income	$13,706	$15,201	$7,179
Consolidated net income attributable to noncontrolling interest	(196)	(320)	(509)
Consolidated net income attributable to Walmart	13,510	14,881	6,670
Other comprehensive income (loss), net of income taxes			
Currency translation and other	842	286	(226)
Net investment hedges	(221)	122	272
Cash flow hedges	235	(399)	(290)
Minimum pension liability	(30)	(1,244)	131
Other comprehensive income (loss), net of income taxes	826	(1,235)	(113)
Other comprehensive (income) loss attributable to noncontrolling interest	213	(28)	188
Other comprehensive income (loss) attributable to Walmart	1,039	(1,263)	75
Comprehensive income, net of income taxes	14,532	13,966	7,066
Comprehensive (income) loss attributable to noncontrolling interest	17	(348)	(321)
Comprehensive income attributable to Walmart	$14,549	$13,618	$6,745

See accompanying notes.

Walmart Inc.
Consolidated Balance Sheets
(Amounts in millions)

	As of January 31, 2021	2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 17,741	$ 9,465
Receivables, net	6,516	6,284
Inventories	44,949	44,435
Prepaid expenses and other	20,861	1,622
Total current assets	90,067	61,806
Property and equipment, net	92,201	105,208
Operating lease right-of-use assets	13,642	17,424
Finance lease right-of-use assets, net	4,005	4,417
Goodwill	28,983	31,073
Other long-term assets	23,598	16,567
Total assets	$252,496	$236,495
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term borrowings	$ 224	$575
Accounts payable	49,141	46,973
Accrued liabilities	37,966	22,296
Accrued income taxes	242	280
Long-term debt due within one year	3,115	5,362
Operating lease obligations due within one year	1,466	1,793
Finance lease obligations due within one year	491	511
Total current liabilities	92,645	77,790
Long-term debt	41,194	43,714
Long-term operating lease obligations	12,909	16,171
Long-term finance lease obligations	3,847	4,307
Deferred income taxes and other	14,370	12,961
Commitments and contingencies		
Equity:		
Common stock	282	284
Capital in excess of par value	3,646	3,247
Retained earnings	88,763	83,943
Accumulated other comprehensive loss	(11,766)	(12,805)
Total Walmart shareholders' equity	80,925	74,669
Noncontrolling interest	6,606	6,883
Total equity	87,531	81,552
Total liabilities and equity	$252,496	$236,495

Walmart Inc.
Consolidated Statements of Shareholders' Equity
(Amounts in millions)

	Common Stock		Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Walmart Shareholders' Equity	Noncontrolling Interest	Total Equity
	Shares	Amount						
Balances as of February 1, 2018	2,952	$295	$2,648	$85,107	$(10,181)	$77,869	$2,953	$80,822
Adoption of new accounting standards, net of income taxes	—	—	—	2,361	(1,436)	925	(1)	924
Consolidated net income	—	—	—	6,670	—	6,670	509	7,179
Other comprehensive income (loss), net of income taxes	—	—	—	—	75	75	(188)	(113)
Cash dividends declared ($2.08 per share)	—	—	—	(6,102)	—	(6,102)	—	(6,102)
Purchase of Company stock	(80)	(8)	(245)	(7,234)	—	(7,487)	—	(7,487)
Cash dividend declared to noncontrolling interest	—	—	—	—	—	—	(488)	(488)
Noncontrolling interest of acquired entity	—	—	—	—	—	—	4,345	4,345
Other	6	1	562	(17)	—	546	8	554
Balances as of January 31, 2019	2,878	288	2,965	80,785	(11,542)	72,496	7,138	79,634
Adoption of new accounting standards on February 1, 2019, net of income taxes		—	—	(266)	—	(266)	(34)	(300)
Consolidated net income	—	—	—	14,881	—	14,881	320	15,201
Other comprehensive income (loss), net of income taxes	—	—	—	—	(1,263)	(1,263)	28	(1,235)
Cash dividends declared ($2.12 per share)	—	—	—	(6,048)	—	(6,048)	—	(6,048)
Purchase of Company stock	(53)	(5)	(199)	(5,435)	—	(5,639)	—	(5,639)
Cash dividend declared to noncontrolling interest	—	—	—	—	—	—	(475)	(475)
Other	7	1	481	26	—	508	(94)	414
Balances as of January 31, 2020	2,832	284	3,247	83,943	(12,805)	74,669	6,883	81,552
Consolidated net income	—	—	—	13,510	—	13,510	196	13,706
Other comprehensive income (loss), net of income taxes	—	—	—	—	1,039	1,039	(213)	826
Cash dividends declared ($2.16 per share)	—	—	—	(6,116)	—	(6,116)	—	(6,116)
Purchase of Company stock	(20)	(2)	(97)	(2,559)	—	(2,658)	—	(2,658)
Cash dividends declared to noncontrolling interest	—	—	—	—	—	—	(365)	(365)
Other	9	—	496	(15)	—	481	105	586
Balances as of January 31, 2021	2,821	$282	$3,646	$88,763	$(11,766)	$80,925	$6,606	$87,531

See accompanying notes.

Walmart Inc.
Consolidated Statements of Cash Flows
(Amounts in millions)

	Fiscal Years Ended January 31,		
	2021	**2020**	**2019**
Cash flows from operating activities:			
Consolidated net income	$13,706	$15,201	$ 7,179
Adjustments to reconcile consolidated net income to net cash provided by operating activities:			
Depreciation and amortization	11,152	10,987	10,678
Net unrealized and realized (gains) and losses	(8,589)	(1,886)	3,516
Losses on disposal of business operations	8,401	15	4,850
Asda pension contribution	—	(1,036)	—
Deferred income taxes	1,911	320	(499)
Other operating activities	1,521	1,981	1,734
Changes in certain assets and liabilities, net of effects of acquisitions and dispositions:			
Receivables, net	(1,086)	154	(368)
Inventories	(2,395)	(300)	(1,311)
Accounts payable	6,966	(274)	1,831
Accrued liabilities	4,623	186	183
Accrued income taxes	(136)	(93)	(40)
Net cash provided by operating activities	36,074	25,255	27,753
Cash flows from investing activities:			
Payments for property and equipment	(10,264)	(10,705)	(10,344)
Proceeds from the disposal of property and equipment	215	321	519
Proceeds from the disposal of certain operations	56	833	876
Payments for business acquisitions, net of cash acquired	(180)	(56)	(14,656)
Other investing activities	102	479	(431)
Net cash used in investing activities	(10,071)	(9,128)	(24,036)
Cash flows from financing activities:			
Net change in short-term borrowings	(324)	(4,656)	(53)
Proceeds from issuance of long-term debt	—	5,492	15,872
Repayments of long-term debt	(5,382)	(1,907)	(3,784)
Dividends paid	(6,116)	(6,048)	(6,102)
Purchase of Company stock	(2,625)	(5,717)	(7,410)
Dividends paid to noncontrolling interest	(434)	(555)	(431)
Other financing activities	(1,236)	(908)	(629)
Net cash used in financing activities	(16,117)	(14,299)	(2,537)
Effect of exchange rates on cash, cash equivalents and restricted cash	235	(69)	(438)
Net increase in cash, cash equivalents and restricted cash	10,121	1,759	742
Cash and cash equivalents reclassified as assets held for sale	(1,848)	—	—
Cash, cash equivalents and restricted cash at beginning of year	9,515	7,756	7,014
Cash, cash equivalents and restricted cash at end of year	$17,788	$ 9,515	$ 7,756
Supplemental disclosure of cash flow information:			
Income taxes paid	$ 5,271	$ 3,616	$ 3,982
Interest paid	2,216	2,464	2,348

See accompanying notes.

Appendix F

Time Value of Money

Appendix Preview

Would you rather receive $1,000 today or a year from now? You should prefer to receive the $1,000 today because you can invest the $1,000 and then earn interest on it. As a result, you will have more than $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.

Appendix Outline

LEARNING OBJECTIVES	REVIEW
1. Compute interest and future values.	• Nature of interest • Future value of a single amount • Future value of an annuity
2. Compute present values.	• Present value variables • Present value of a single amount • Present value of an annuity • Time periods and discounting • Present value of a long-term note or bond
3. Compute the present value in capital budgeting situations.	• Using alternative discount rates
4. Use technological tools to solve time value of money problems.	• Present value of a single sum • Present value of an annuity • Future value of a single sum • Future value of an annuity • Internal rate of return • Useful applications

F.1 Interest and Future Values

LEARNING OBJECTIVE 1

Compute interest and future values.

Nature of Interest

Interest is payment for the use of another party's money.

- Interest 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 over which the principal is borrowed or invested.

Simple Interest

Simple interest is computed on the principal amount only.

- Simple interest is the return on the principal only (we use an annual interest rate unless stated otherwise).
- Simple interest is usually expressed as shown in **Illustration F.1**.

ILLUSTRATION F.1
Interest computation

$$\text{Interest} = \underset{p}{\text{Principal}} \times \underset{i}{\text{Rate}} \times \underset{n}{\text{Time}}$$

For example, if you borrowed $5,000 for 2 years at a simple interest rate of 12% annually, you would pay $1,200 in total interest, computed as follows.

$$\begin{aligned} \text{Interest} &= p \times i \times n \\ &= \$5{,}000 \times .12 \times 2 \\ &= \$1{,}200 \end{aligned}$$

Compound Interest

Compound interest is computed on principal **and** on any interest earned that has not been paid or withdrawn.

- Compound interest 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 F.2** shows the computation of interest to be received and the accumulated year-end balances.

ILLUSTRATION F.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	

$25.03 Difference

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	

Note the following in Illustration F.2.

- 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 amount 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.

Most business situations use compound interest. Simple interest is generally applicable only to short-term situations of one year or less.

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 F.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 formula shown in Illustration F.3.

$$FV = p \times (1 + i)^n$$

ILLUSTRATION F.3
Formula for future value

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

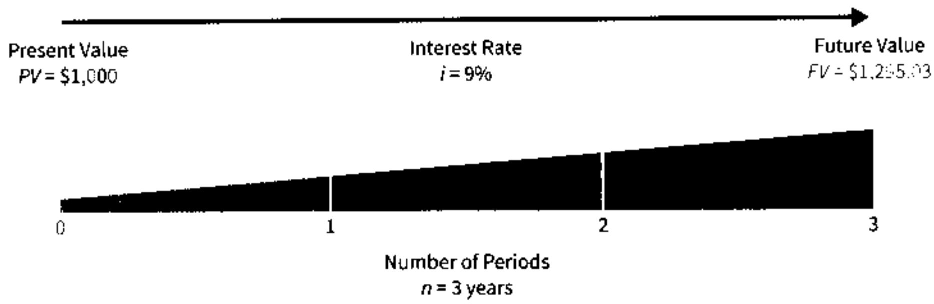
The $1,295.03 is computed as follows.

$$\begin{aligned} FV &= \quad p \quad \times (1 + i)^n \\ &= \$1{,}000 \times (1 + .09)^3 \\ &= \$1{,}000 \times 1.29503 \\ &= \$1{,}295.03 \end{aligned}$$

The 1.29503 is computed by multiplying $(1.09 \times 1.09 \times 1.09)$. The amounts in this example can be depicted in the time diagram shown in Illustration F.4.

ILLUSTRATION F.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 is such a table.

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

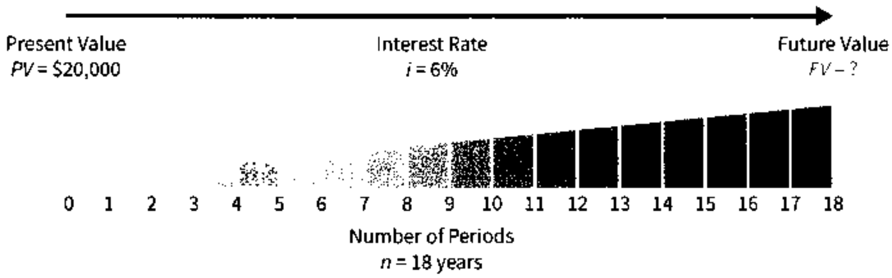
- In Table 1, n is the number of compounding periods, the percentages are the periodic interest rates, and the five-digit decimal numbers in the respective columns are the future value of 1 factors.
- To use Table 1, you multiply the principal amount by the future value factor for the specified number 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 F.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.

The demonstration problem in **Illustration F.5** shows how to use Table 1.

ILLUSTRATION F.5

Demonstration problem—Using Table 1 for *FV* of 1

John and Mary Rich invested $20,000 in a savings account, paying 6% interest compounded annually, 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).

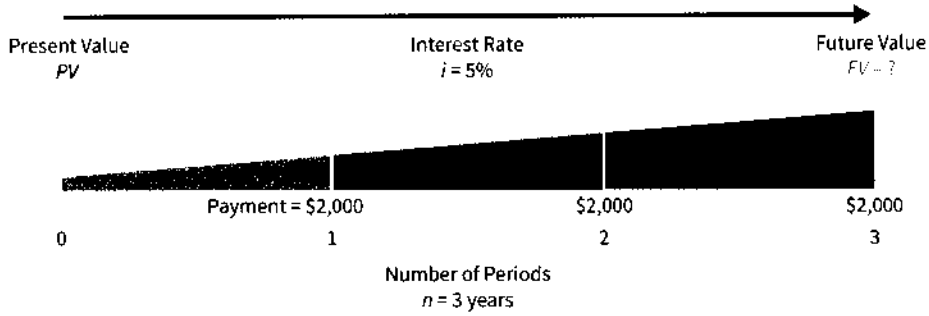
Future Value of an Annuity

The preceding discussion involved the accumulation of only a single principal sum. Individuals and businesses frequently encounter situations in which a **series** of equal dollar 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 dollar 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).
  3. The amount of the periodic payments (receipts).

To illustrate the computation of the future value of an annuity, assume that you invest $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 F.6**.

ILLUSTRATION F.6
Time diagram for a three-year annuity



The $2,000 invested at the end of year 1 will earn interest for two years (years 2 and 3), and the $2,000 invested at the end of year 2 will earn interest for one year (year 3). However, the last $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 F.7**.

ILLUSTRATION F.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	$2,000		1.10250		$2,205
2	1	2,000		1.05000		2,100
3	0	2,000		1.00000		2,000
				3.15250		$6,305

- The first $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 $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 $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 $2,000 invested is only $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 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

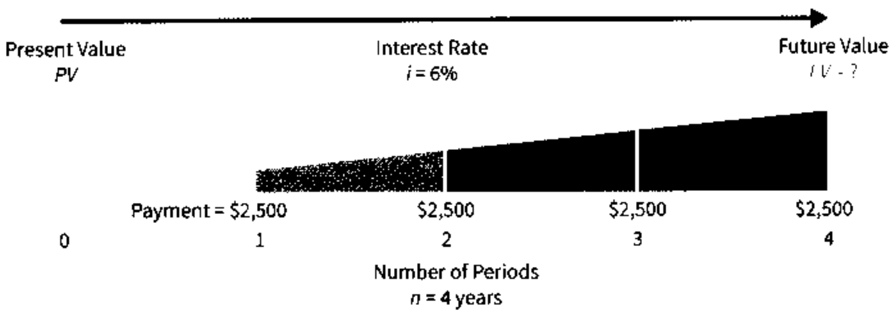
- Table 2 shows the future value of 1 to be received periodically for a given number of payments. It assumes that each payment is made at the **end** of each period.
- We can see from Table 2 that the future value of an annuity of 1 factor for three payments at 5% is 3.15250.
- The future value factor is the total of the three individual future value factors shown in Illustration F.7. Multiplying this amount by the annual investment of $2,000 produces a future value of $6,305.

The demonstration problem in **Illustration F.8** shows how to use Table 2.

ILLUSTRATION F.8

Demonstration problem—Using Table 2 for *FV* of an annuity of 1

John and Char Lewis's 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).

F.2 Present Values

LEARNING OBJECTIVE 2

Compute present values.

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).
  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

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 F.9**.

Present Value (PV) = Future Value (FV) ÷ $(1 + i)^n$

ILLUSTRATION F.9
Formula for present value

The computation of $1,000 discounted at 10% for one year is as follows.

$$\begin{aligned} PV &= \;\; FV \;\; \div (1+i)^n \\ &= \$1{,}000 \div (1 + .10)^1 \\ &= \$1{,}000 \div 1.10 \\ &= \$909.09 \end{aligned}$$

The future amount ($1,000), the discount rate (10%), and the number of periods (1) are known. The variables in this situation are depicted in the time diagram in **Illustration F.10**.

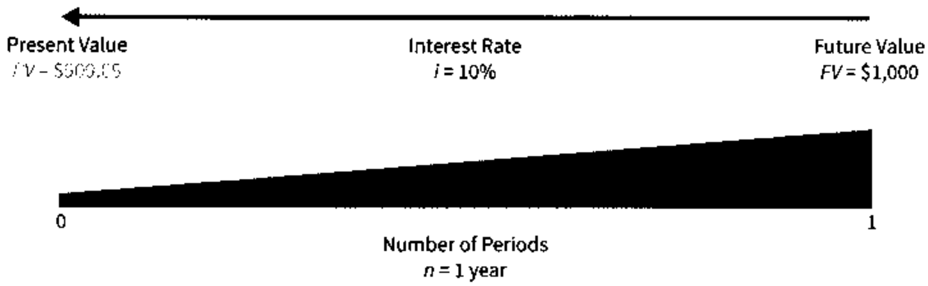


ILLUSTRATION F.10
Finding present value if discounted for one period

If the single amount of $1,000 is to be received **in two years** and discounted at 10%, the formula $PV = \$1{,}000 \div (1 + .10)^2$ is used, where $(1 + .10)^2$ is equal to 1.21 (1.10 × 1.10). Its present value is $826.45 ($1,000 ÷ 1.21), depicted in **Illustration F.11**.

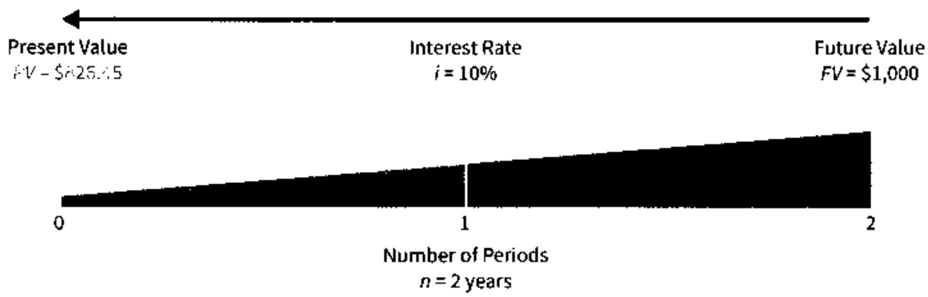


ILLUSTRATION F.11
Finding present value if discounted for two periods

The present value of 1 may also be determined through tables that show the present value of 1 for n periods. In Table 3, n is the number of discounting periods involved.

- The percentages are the periodic interest rates or discount rates, and the five-digit decimal numbers in the respective columns are the present value of 1 factors.
- 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.

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

For example, the present value factor for one period at a discount rate of 10% is .90909, which is the value used to compute \$909.09 (\$1,000 × .90909) in Illustration F.10. For two periods at a discount rate of 10%, the present value factor is .82645, which is the value used to compute \$826.45 (\$1,000 × .82645) in Illustration F.11.

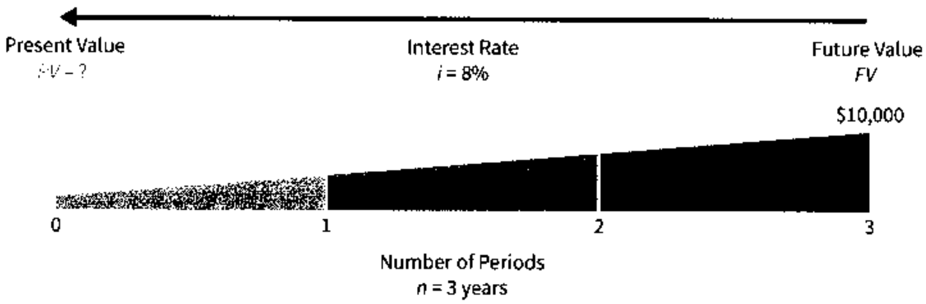
- Note that a higher discount rate produces a smaller present value. For example, using a 15% discount rate, the present value of \$1,000 due one year from now is \$869.57 (\$1,000 × .86957), versus \$909.09 at 10%.
- Also note that the farther in the future that the future value is, the smaller the present value. For example, using the same discount rate of 10%, the present value of \$1,000 due in **five years** at 10% is \$620.92 (\$1,000 × .62092). The present value of \$1,000 due in **one year** is \$909.09, a difference of \$288.17.

The following two demonstration problems (**Illustrations** F.12 and F.13) illustrate how to use Table 3.

ILLUSTRATION F.12

Demonstration problem—Using Table 3 for *PV* of 1

Suppose you have a winning lottery ticket and the state gives you the option of taking $10,000 3 years from now or taking the present value of $10,000 now. The state uses an 8% rate in discounting annually. How much will you receive if you accept your winnings now?

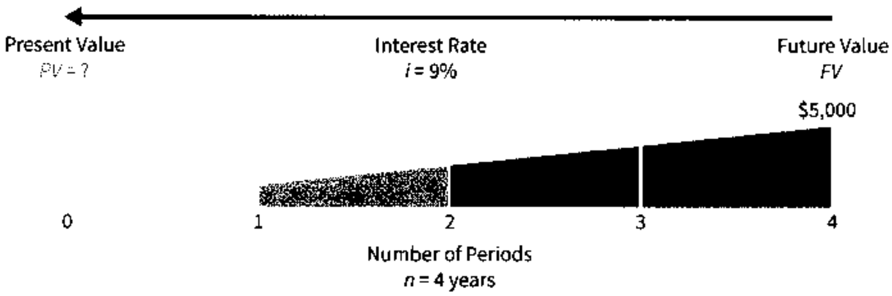


Answer: The present value factor from Table 3 is .79383 (3 periods at 8%). The present value of $10,000 to be received in 3 years discounted annually at 8% is **$7,938.30** ($10,000 × .79383).

ILLUSTRATION F.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 annually, 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 annually at 9% is **$3,542.15** ($5,000 × .70843).

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 dollar 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).
  3. The amount of the periodic receipts or payments.

To illustrate the computation of the present value of an annuity, assume that you 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 F.14**. **Illustration F.15** shows the computation of its present value in this situation.

ILLUSTRATION F.14
Time diagram for a three-year annuity

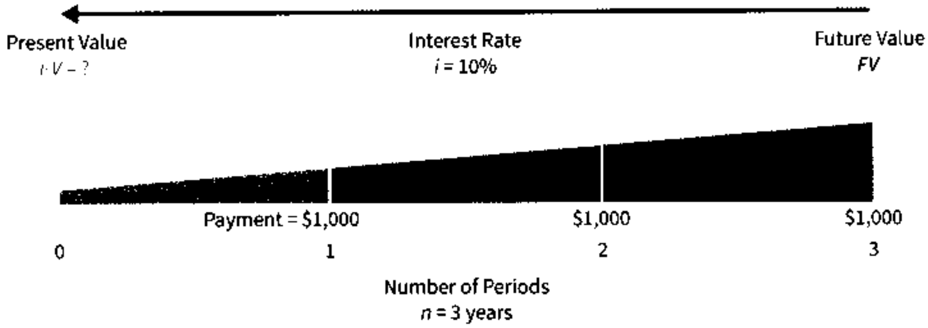


ILLUSTRATION F.15
Present value of a series of future amounts computation

Future Amount	×	Present Value of 1 Factor at 10%	=	Present Value
$1,000 (1 year away)		.90909		$ 909.09
1,000 (2 years away)		.82645		826.45
1,000 (3 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, 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

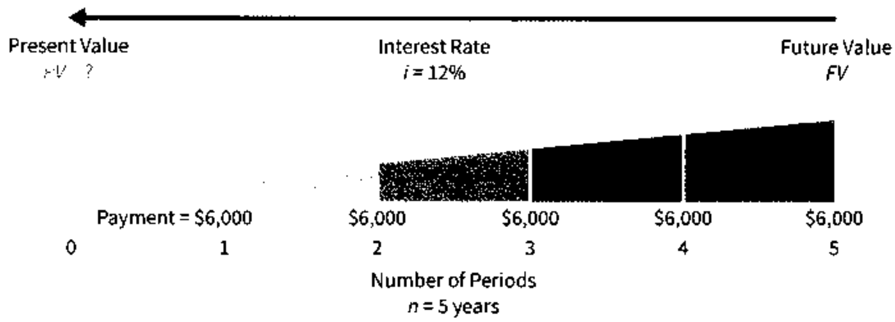
- Table 4 shows that the present value of an annuity of 1 factor for three payments at 10% is 2.48685.[1] This present value factor is the total of the three individual present value factors, as shown in Illustration F.15.
- Applying this amount to the annual cash flow of $1,000 produces a present value of $2,486.85.

The following demonstration problem (Illustration F.16) illustrates how to use Table 4.

ILLUSTRATION F.16

Demonstration problem—Using Table 4 for *PV* of an annuity of 1

Kildare Company has just signed a contract for equipment that requires 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 payments?



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 F.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 F.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. Part of each period's $1,000 is received and earns interest six months sooner.

Present Value of a Long-Term Note or Bond

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.

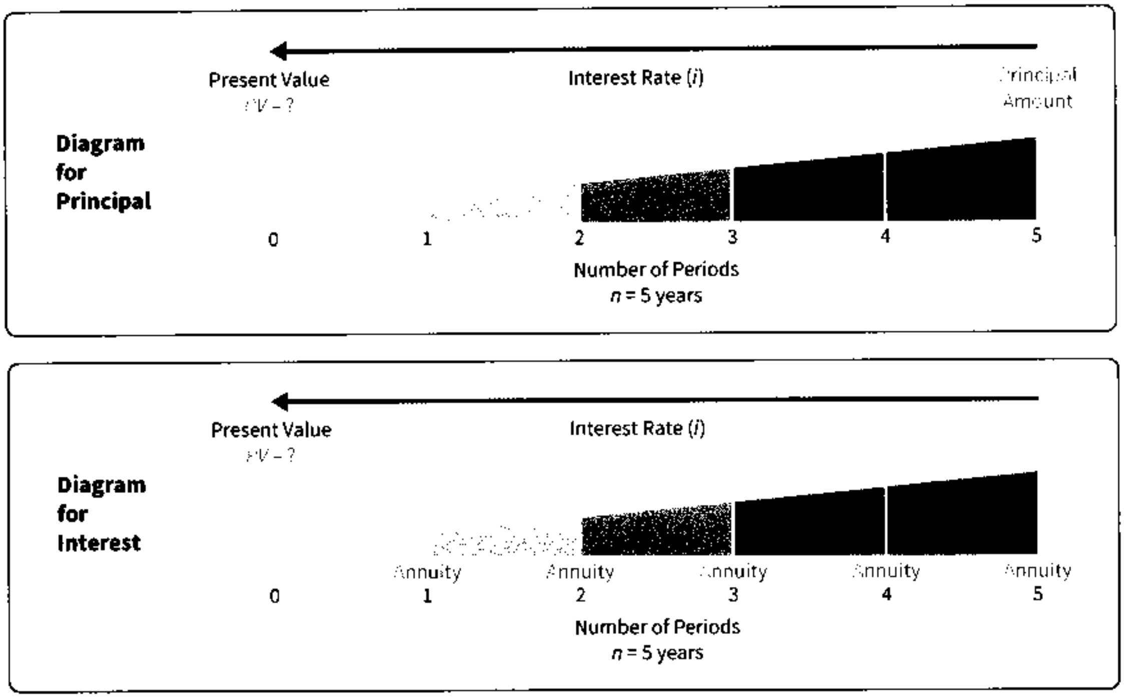
The first variable (dollars to be paid) is made up of two elements:

1. A series of interest payments (an annuity).
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 F.17.

[1]The difference of .00001 between 2.48686 and 2.48685 is due to rounding.

ILLUSTRATION F.17
Time diagrams for the present value of a bond



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 5%, 10-year bonds with a face value of $100,000 with interest payable **annually** on January 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. $100,000 at maturity.
  2. A series of 10 interest payments of $5,000 each ($100,000 × 5%) 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 time diagrams in Illustration F.18 depict the variables involved in this discounting situation.

ILLUSTRATION F.18
Time diagrams for present value of a 5%, 10-year bond paying interest annually

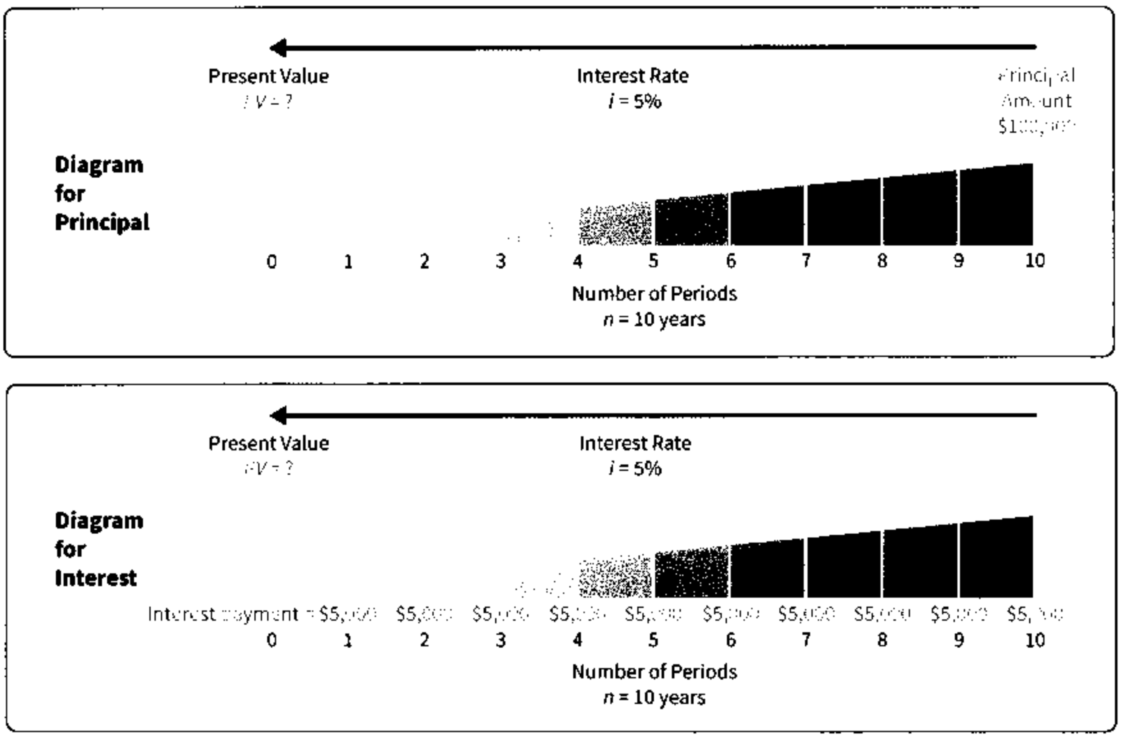


Illustration F.19 shows the computation of the present value of these bonds.

ILLUSTRATION F.19
Present value of principal and interest—face value

5% Contractual Rate—5% Discount Rate	
Present value of principal to be received at maturity	
$100,000 × *PV* of 1 due in 10 periods at 5%	
$100,000 × .61391 (Table 3)	$ 61,391
Present value of interest to be received periodically over the term of the bonds	
$5,000 × *PV* of 1 due periodically for 10 periods at 5%	
$5,000 × 7.72173 (Table 4)	38,609*
Present value of bonds	$100,000

*Rounded

Now assume that the investor's required rate of return (discount rate) is 6%, not 5%. The future amounts are again $100,000 and $5,000, respectively, but now a discount rate of 6% must be used. The present value of the bonds is $92,639, as computed in Illustration F.20.

ILLUSTRATION F.20
Present value of principal and interest—discount

5% Contractual Rate—6% Discount Rate	
Present value of principal to be received at maturity	
$100,000 × *PV* of 1 due in 10 periods at 6%	
$100,000 × .55839 (Table 3)	$55,839
Present value of interest to be received periodically over the term of the bonds	
$5,000 × *PV* of 1 due periodically for 10 periods at 6%	
$5,000 × 7.36009 (Table 4)	36,800*
Present value of bonds	$92,639

*Rounded

Conversely, if the discount rate is 4% and the contractual rate is 5%, the present value of the bonds is $108,111, computed as shown in Illustration F.21.

ILLUSTRATION F.21
Present value of principal and interest—premium

5% Contractual Rate—4% Discount Rate	
Present value of principal to be received at maturity	
$100,000 × *PV* of 1 due in 10 periods at 4%	
$100,000 × .67556 (Table 3)	$ 67,556
Present value of interest to be received periodically over the term of the bonds	
$5,000 × *PV* of 1 due periodically for 10 periods at 4%	
$5,000 × 8.11090 (Table 4)	40,555*
Present value of bonds	$108,111

*Rounded

The above discussion relied on present value tables in solving present value problems.

- Calculators, apps, and Excel spreadsheets 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, and periods, and then pressing the PV key. (We discuss the use of financial calculators in a later section.)

F.3 Capital Budgeting Situations

LEARNING OBJECTIVE 3

Compute the present value 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.

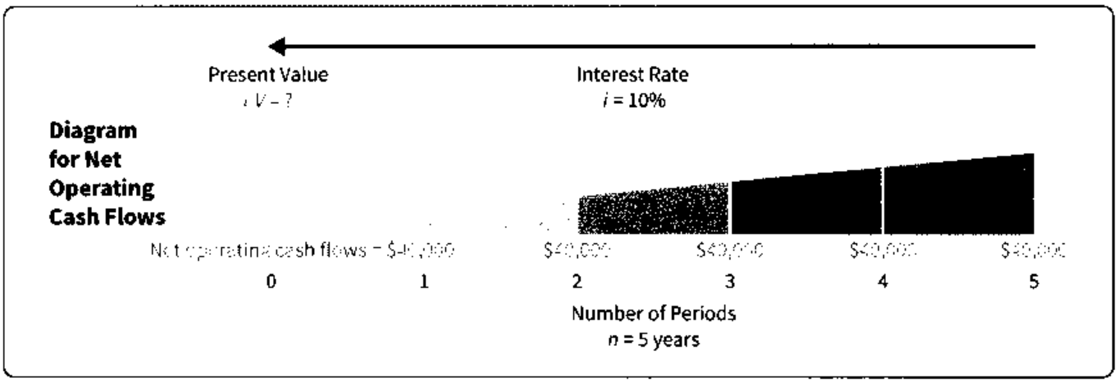
To illustrate, Nagel-Siebert Trucking Company, a cross-country freight carrier in Montgomery, Illinois, is considering adding another truck to its fleet because of a purchasing opportunity. **Navistar International**, Nagel-Siebert's primary supplier of overland rigs, is overstocked and offers to sell 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 salvage 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?

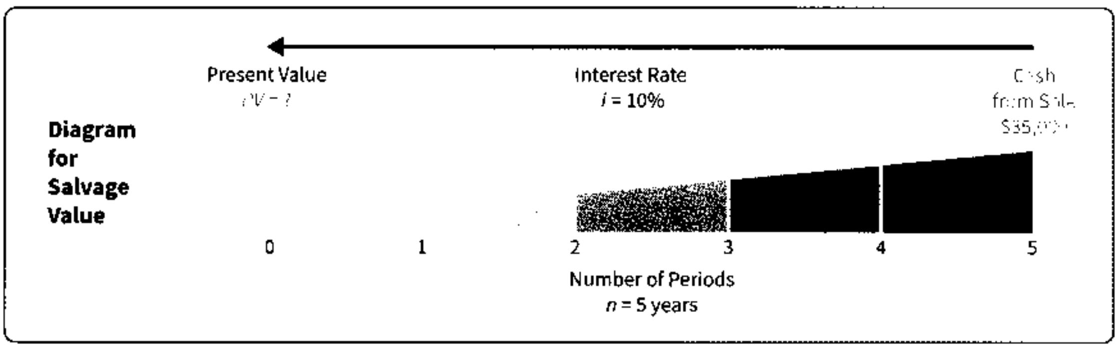
The cash flows that must be discounted to present value by Nagel-Siebert are as follows.

- Cash payable on delivery (today): $154,000.
- Net cash flow from operating the rig: $40,000 for five years (at the end of each year).
- Cash received from sale of rig at the end of five years: $35,000.

The time diagrams for the latter two cash flows are shown in **Illustration F.22**.

ILLUSTRATION F.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).
- Computing the present value of the $35,000 salvage value is **discounting a single sum** (Table 3).

The computation of these present values is shown in Illustration F.23.

ILLUSTRATION F.23

Present value computations at 10%

Present Values Using a 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 salvage 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

- 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 F.24.

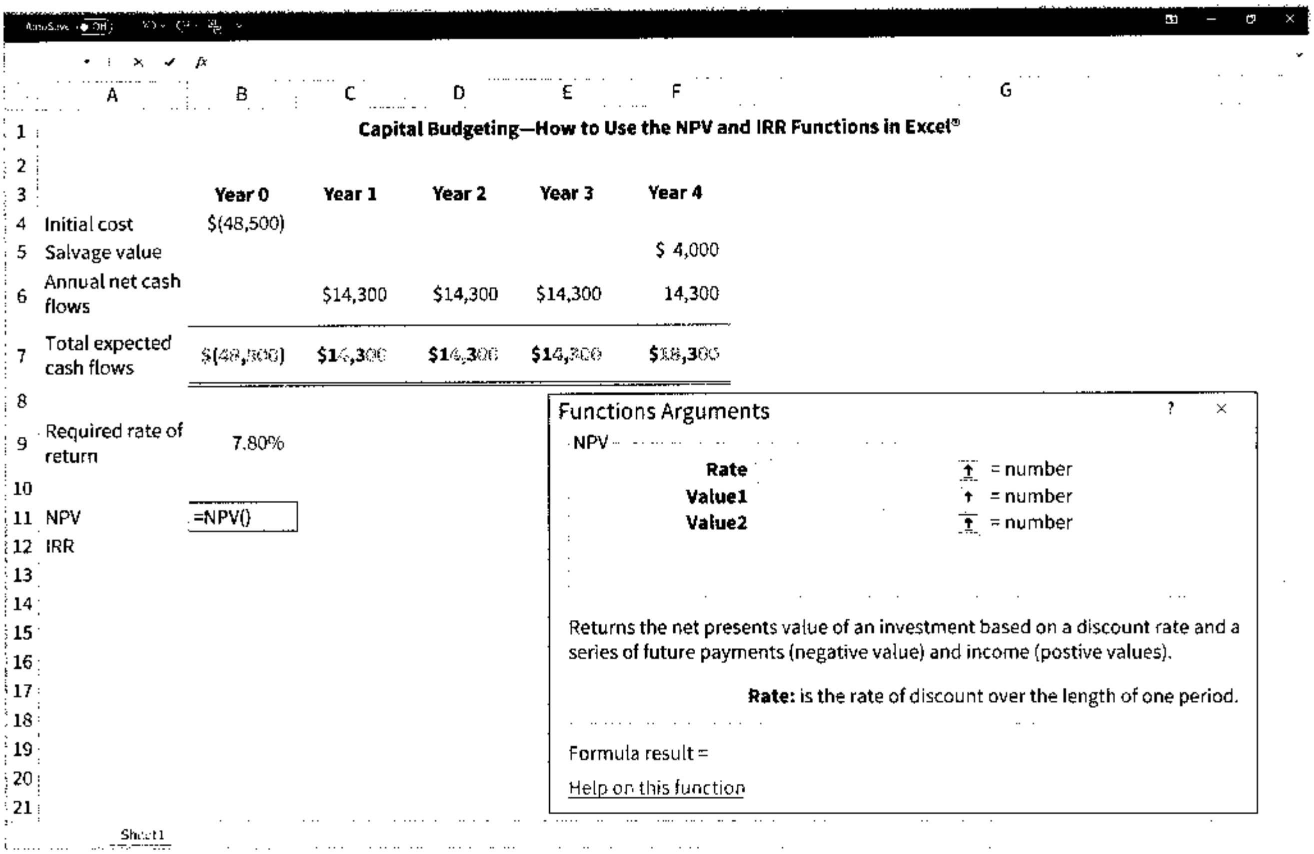
ILLUSTRATION F.24

Present value computations at 15%

Present Values Using a 15% 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 15%	
$40,000 × 3.35216 (Table 4)	$134,086.40
Present value of salvage value (cash) to be received in 5 years	
$35,000 × *PV* of 1 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 × *PV* of 1 due today	
$154,000 × 1.00000	(154,000.00)
Net present value	$ (2,512.30)

- 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.**

Finally, note that these capital budgeting calculations can also be performed using Excel. A big benefit of using Excel is the ability to quickly experiment with different input variables such as the number of payments, interest rates, or payment amounts. An instructional video demonstrating how to use Excel to perform capital budgeting calculations is provided in Wiley Course Resources. The following shows a sample worksheet from that video.



	A	B	C	D	E	F
1			Capital Budgeting—How to Use the NPV and IRR Functions in Excel®			
2						
3		Year 0	Year 1	Year 2	Year 3	Year 4
4	Initial cost	$(48,500)				
5	Salvage value					$ 4,000
6	Annual net cash flows		$14,300	$14,300	$14,300	14,300
7	Total expected cash flows	$(48,500)	$14,300	$14,300	$14,300	$18,300
8						
9	Required rate of return	7.80%				
10						
11	NPV	=NPV()				
12	IRR					

F.4 Using Technological Tools

LEARNING OBJECTIVE 4

Use technological tools to solve time value of money problems.

The above discussion relied on using tables to solve time value of money problems. Technological tools, such as financial calculators and Excel, may also be used to solve these problems without the use of these tables.

The use of **Excel functions**, such as present and future value, allows users to quickly solve a variety of accounting problems and offers the ability to quickly modify inputs to understand how, for example, changes in discount rate might impact the present value. When using Excel, each function will require some combination of the following inputs.

- **Rate.** Interest rate per period; annual rate must be adjusted if compounding is less than one year.
- **Nper.** Number of periods, which may be equal to or less than one year.
- **Pmt.** Amount of the payment made each period. If you are solving a problem with a single sum and no annuity payment, this field can be left blank.
- **PV or FV.** Present or future value; if left blank, this amount will default to zero.
- **Type.** Entering 0 indicates that payments come at the end of a period. Entering 1 indicates that payments come at the beginning of a period.

To use **financial calculators**, you enter the time value of money variables into the calculator. Illustration F.25 shows the five most common keys used to solve time value of money problems.[2]

[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 F.25
Financial calculator keys

where:

N	=	number of periods
I	=	interest rate per period (some calculators use I/YR; in this case, the interest rate is per compounding period, e.g., for monthly compounding, divide the annual interest rate by 12)
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 Excel or 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 F.26** depicts this problem.

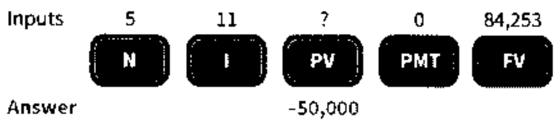


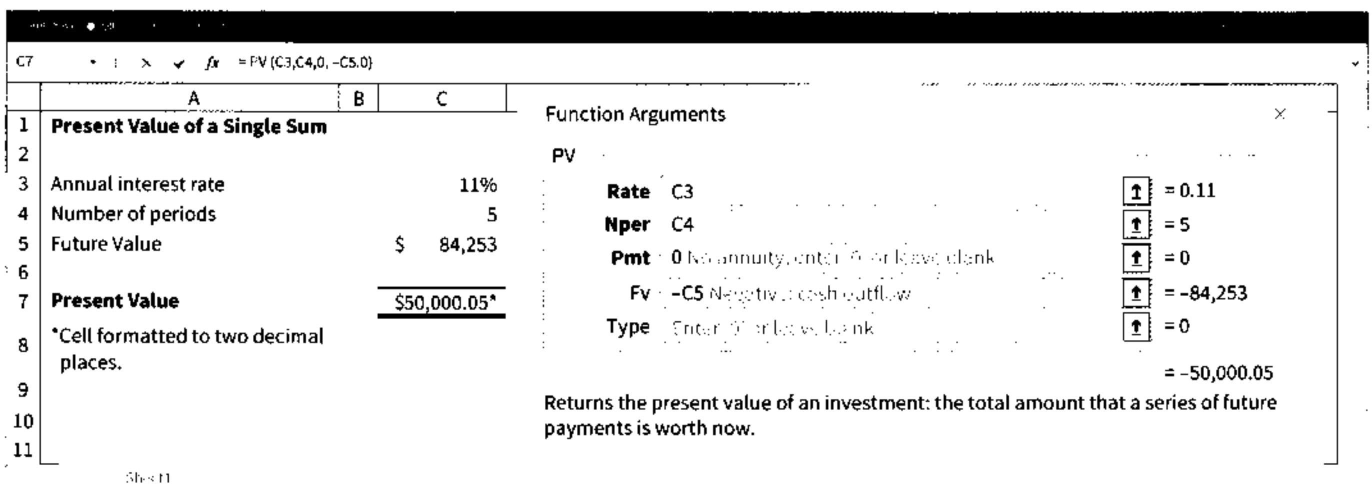
ILLUSTRATION F.26
Calculator solution for present value of a single sum

Illustration F.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.

Illustration F.27 shows the Excel solution for this problem.

ILLUSTRATION F.27 **Excel solution for present value of a single sum**



Plus and Minus

The use of plus and minus signs in time value of money problems can be confusing. Excel views cash inflows as positive values, while cash outflows must be entered as negative values. 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, as shown in the calculator solution, 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, as shown in the Excel solution, then the final answer would have been reported as a positive 50,000.

We hope 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 the problem.

Compounding Periods

In the problem above, 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.

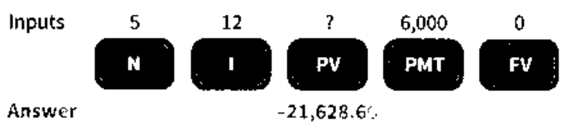
Rounding

The factors used in the appendix are generally rounded to five decimals, whereas Excel does not round this intermediate part of the calculation. 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

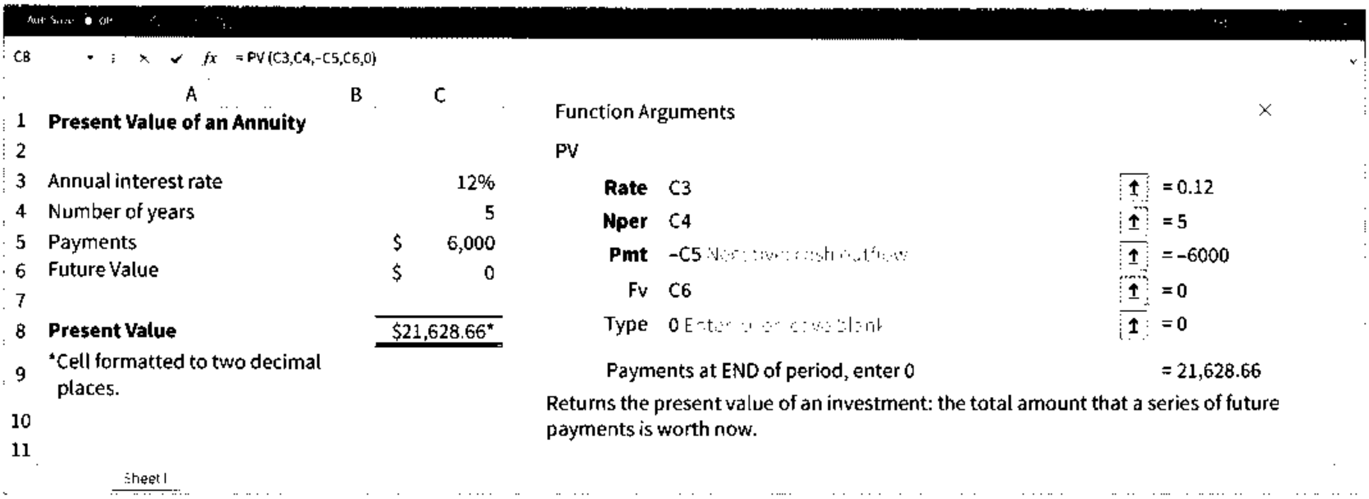
To illustrate how to solve a present value of an annuity problem using Excel or a financial calculator, assume that you are asked to determine the present value of rental receipts of \$6,000 each to be received at the end of each of the next five years, when discounted at 12%, as pictured in **Illustration F.28**.

ILLUSTRATION F.28
Calculator solution for present value of an annuity



In this case, you enter N = 5, I = 12, PMT = 6,000, and FV = 0, and then press PV to arrive at the answer of −\$21,628.66. **Illustration F.29** shows the Excel solution for this problem.

ILLUSTRATION F.29 **Excel solution for present value of an annuity**



Future Value of a Single Sum

Now let us look at an investment to illustrate how to solve a future value problem using Excel or a financial calculator. Assume that you will invest $20,000 today into a fund and you intend to leave it there for 15 years. The fund earns 7% interest. Illustration F.30 shows how to compute the future value of the fund at the end of year 15.

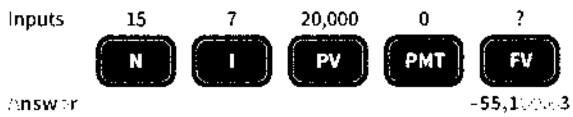
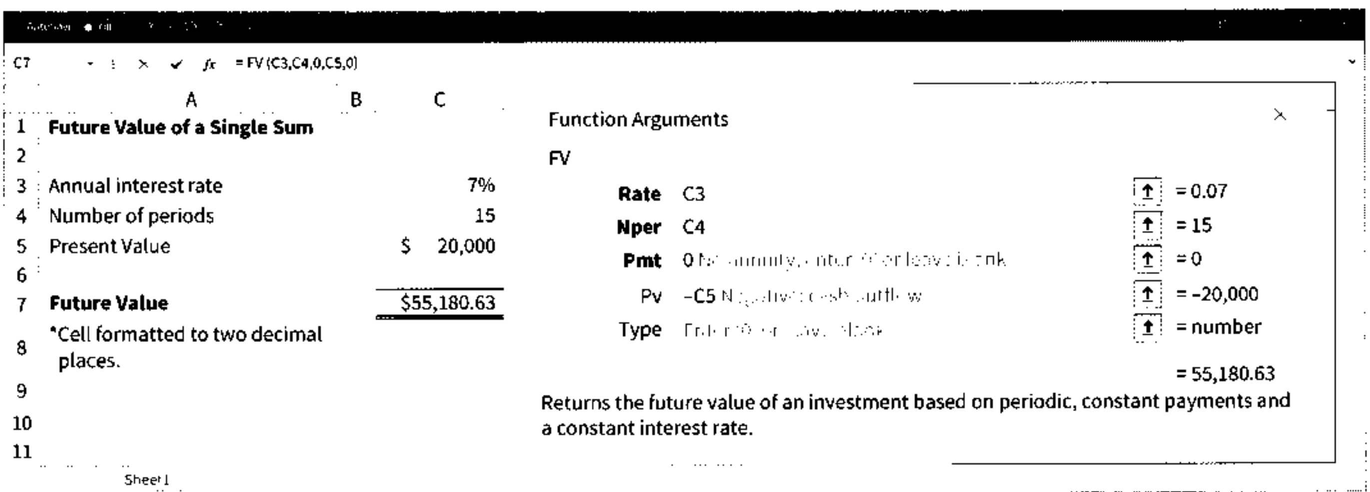


ILLUSTRATION F.30
Calculator solution for future value of single sum

In this case, you enter N = 15, I = 7, PV = 20,000, and PMT = 0, and then press FV to calculate the future value of −$55,180.63. Illustration F.31 shows the Excel solution for this problem.

ILLUSTRATION F.31 **Excel solution for future value of a single sum**



Future Value of an Annuity

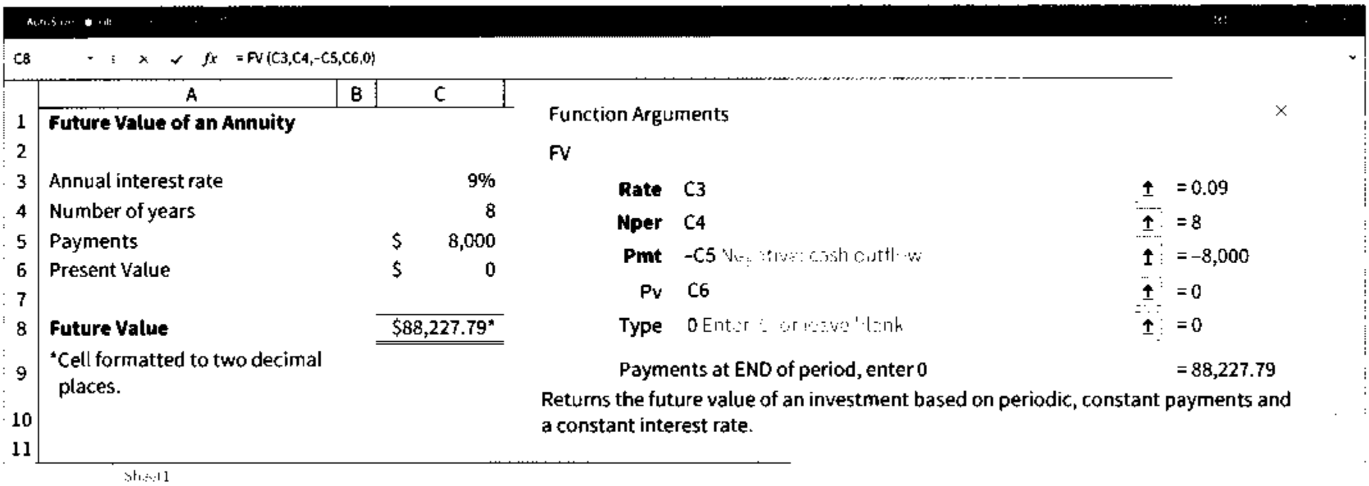
You can use Excel or a financial calculator to solve a future value of an annuity problem for an annuity investment. Assume that you will invest $8,000 into a fund at the end of each of the next eight years. The fund earns 9% interest. **Illustration F.32** shows how to compute the future value of the fund at the end of the eighth year.

ILLUSTRATION F.32
Calculator solution for future value of an annuity

Inputs	8	9	0	8,000	?
	N	**I**	**PV**	**PMT**	**FV**
Answer					−88,227.79

In this case, you enter N = 8, I = 9, PV = 0, and PMT = 8,000, and then press FV to determine the future value of −$88,227.79. **Illustration F.33** shows the Excel solution for this problem.

ILLUSTRATION F.33 **Excel solution for future value of an annuity**


C8 fx =FV(C3,C4,-C5,C6,0)

	A	B	C
1	**Future Value of an Annuity**		
2			
3	Annual interest rate		9%
4	Number of years		8
5	Payments	$	8,000
6	Present Value	$	0
7			
8	**Future Value**		$88,227.79*
9	*Cell formatted to two decimal places.		
10			
11			

Function Arguments

FV

Rate	C3	= 0.09
Nper	C4	= 8
Pmt	-C5 Negative cash outflow	= −8,000
Pv	C6	= 0
Type	0	= 0

Payments at END of period, enter 0 = 88,227.79

Returns the future value of an investment based on periodic, constant payments and a constant interest rate.

Sheet1

Internal Rate of Return

You can also use Excel or a financial calculator to compute the internal rate of return of an investment that has equal cash flows. Suppose that a purchase of a piece of equipment with a seven-year life requires an initial investment of $54,000, has positive cash flows of $7,800 per year, and has an estimated salvage value of $11,000. The computation is shown in **Illustration F.34**.

ILLUSTRATION F.34
Calculator solution for internal rate of return

Inputs	7	?	−54,000	7,800	11,000
	N	**I**	**PV**	**PMT**	**FV**
Answer		4.52%			

In this case, you enter N = 7, PV = −54,000 (we entered as a negative, since it is an outflow), PMT = 7,800, and FV = 11,000, and then press I to determine the answer of 4.52%.

- Notice that the advantage to this approach is that you arrive at a much more precise result, rather than the rough approximation provided by the present value tables.
- To determine the internal rate of return using your calculator for an investment with unequal cash flows, you need to employ the cash flow key (CF) and the internal rate of return key (IRR). (The use of these function keys varies across calculators, so you should consult the user manual for your calculator or the manufacturer's website for specific information.)

Illustration F.35 shows the Excel solution for this problem.

ILLUSTRATION F.35 **Excel solution for internal rate of return**

A13 f_x =IRR(A4:A11)

	A	B	C
1	**Internal Rate of Return**		
2			
3	**Inflow/Outflow**		**Description**
4	($54,000)		Initial investment
5	7,800		Cash flow year 1
6	7,800		Cash flow year 2
7	7,800		Cash flow year 3
8	7,800		Cash flow year 4
9	7,800		Cash flow year 5
10	7,800		Cash flow year 6
11	18,800		Cash flow year 7
12			
13	4.52%*		Internal rate of return
14	*Cell formatted to two decimal places.		

Function Arguments

IRR

Values A4:A11 = reference

Guess = number

Returns the internal rate of return for a series of cash flows.

Values is an array or a reference to cells that contain numbers for which you want to calculate the internal rate of return.

Useful Applications

With Excel or 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 12% 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** F.36.

Inputs	36	12	6,000	?	0
	N	I	PV	PMT	FV
Answer				199.29	

ILLUSTRATION F.36

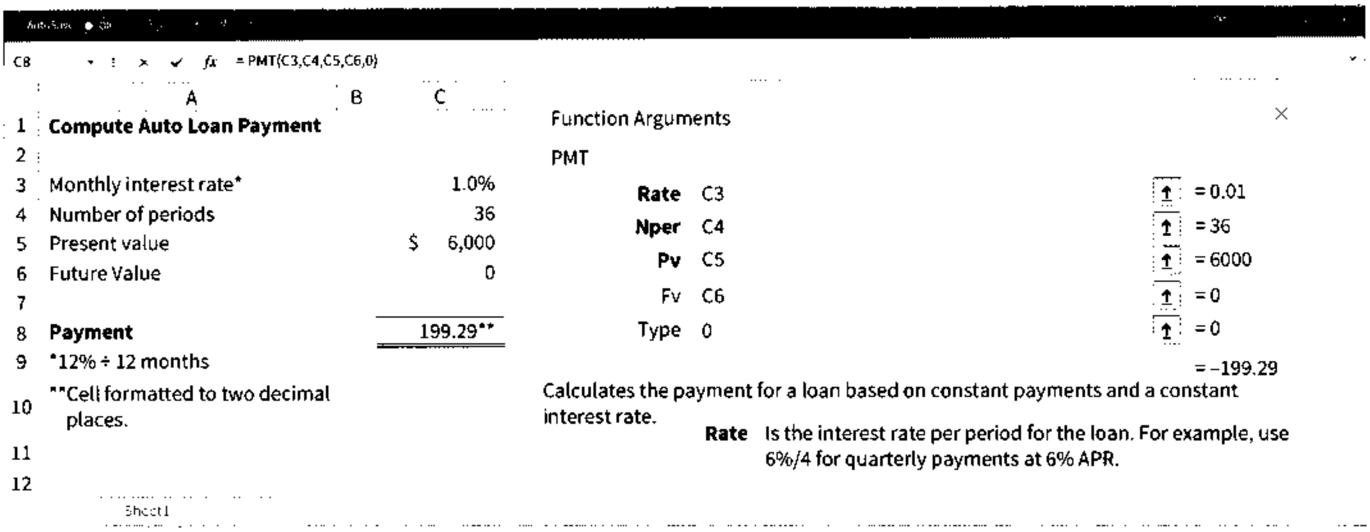
Calculator solution for auto loan payments

To solve this problem, you enter N = 36 (12 × 3), I = 12, PV = 6,000, and FV = 0, and then press PMT.

- You will find that the monthly payments will be $199.29.
- 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.

Illustration F.37 shows the Excel solution for this problem.

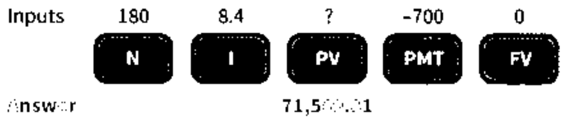
ILLUSTRATION F.37 **Excel solution for auto loan payments**



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 F.38 depicts this problem.

ILLUSTRATION F.38
Calculator solution for mortgage amount

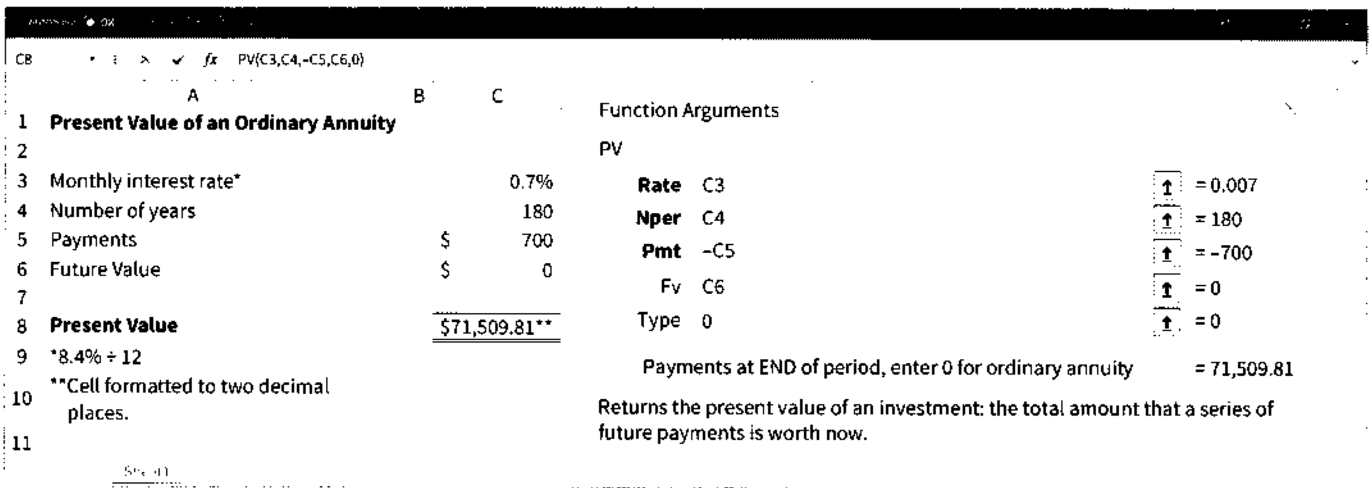


You enter N = 180 (12 × 15 years), I = 8.4, PMT = −700, and FV = 0, and then press PV.

- 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.

Illustration F.39 shows the Excel solution for this problem.

ILLUSTRATION F.39 **Excel solution for mortgage amount**



Review and Practice

Learning Objectives Review

1 Compute interest and future values.

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.

To 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.

To 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.

2 Compute present values.

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).

To 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.

To solve for present value of an annuity, prepare a time diagram of the problem. Identify the amount of future periodic receipts or payments (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.

To compute the present value of notes and bonds, determine the present value of the principal amount and the present value of the interest payments. 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.

To 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.

3 Compute the present value 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).

4 Use technological tools to solve time value of money problems.

Excel and financial calculators can be used to solve the same and additional problems as those solved with time value of money tables. Enter the amounts for all of the known elements of a time value of money problem (periods, interest rate, payments, future or present value), and the Excel function or calculator 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. F-5).

Compound interest The interest computed on the principal and any interest earned that has not been paid or withdrawn. (p. F-2).

Discounting the future amount(s) The process of determining present value. (p. F-8).

Future value of an annuity The sum of all the payments (receipts) plus the accumulated compound interest on them. (p. F-5).

Future value of a single amount The value at a future date of a given amount invested, assuming compound interest. (p. F-3).

Interest Payment for the use of another person's money. (p. F-2).

Present value The value now of a given amount to be paid or received in the future, assuming compound interest. (p. F-8).

Present value of an annuity The value now of a series of future receipts or payments, discounted assuming compound interest. (p. F-11).

Principal The amount borrowed or invested. (p. F-2).

Simple interest The interest computed on the principal only. (p. F-2).

Many additional resources are available for practice in Wiley Course Resources.

Brief Exercises

(Use tables to solve brief exercises BEF.1 to BEF.23.)

Compute the future value of a single amount.

BEF.1 **(LO 1), AP** Jozy Altidore invested $6,000 at 5% annual interest, and left the money invested without withdrawing any of the interest for 12 years. At the end of the 12 years, Jozy withdrew the accumulated amount of money. (a) What amount did Jozy withdraw, assuming the investment earns simple interest? (b) What amount did Jozy withdraw, assuming the investment earns interest compounded annually?

Use future value tables.

BEF.2 **(LO 1), AP** For each of the following cases, indicate (a) what interest rate columns and (b) what number of periods you would refer to in looking up the future value factor.

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

Compute the future value of a single amount.

BEF.3 **(LO 1), AP** Liam Company signed a lease for an office building for a period of 12 years. Under the lease agreement, a security deposit of $9,600 is made. The deposit will be returned at the expiration of the lease with interest compounded at 4% per year. What amount will Liam receive at the time the lease expires?

Compute the future value of an annuity.

BEF.4 **(LO 1), AP** Bates Company issued $1,000,000, 10-year bonds. It agreed to make annual deposits of $78,000 to a fund (called a sinking fund), which will be used to pay off the principal amount of the bond at the end of 10 years. 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 10 years?

Compute the future value of a single amount and of an annuity.

BEF.5 **(LO 1), AP** Andrew and Emma Garfield 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.

BEF.6 **(LO 1), AP** Hugh Curtin borrowed $35,000 on July 1, 2025. This amount plus accrued interest at 8% compounded annually is to be repaid on July 1, 2030. How much will Hugh have to repay on July 1, 2030?

Use present value tables.

BEF.7 **(LO 2), AP** For each of the following cases, indicate (a) what interest rate columns and (b) what number of periods you would refer to in looking up the discount rate.

1. In Table 3 (present value of 1):

	Annual Rate	Number of Years Invested	Discounts Per Year
Case A	12%	7	Annually
Case B	8%	11	Semiannually
Case C	10%	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	6%	5	10	Semiannually

BEF.8 **(LO 2), AP** **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%?

Determine present values.

BEF.9 **(LO 2), AP** Messi Company is considering an investment that will return a lump sum of $900,000 6 years from now. What amount should Messi Company pay for this investment to earn an 8% return?

Compute the present value of a single amount investment.

BEF.10 **(LO 2), AP** Lloyd Company earns 6% on an investment that will return $450,000 8 years from now. What is the amount Lloyd should invest now to earn this rate of return?

Compute the present value of a single amount investment.

BEF.11 **(LO 2), AP** Robben Company is considering investing in an annuity contract that will return $40,000 annually at the end of each year for 15 years. What amount should Robben Company pay for this investment if it earns an 8% return?

Compute the present value of an annuity investment.

BEF.12 **(LO 2), AP** 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 Enterprises invested to earn the 5% rate of return?

Compute the present value of an annual investment.

BEF.13 **(LO 2), AP** Dempsey Railroad Co. is about to issue $400,000 of 10-year bonds paying an 11% interest rate, with interest payable annually. The discount rate for such securities is 10%. How much can Dempsey expect to receive for the sale of these bonds?

Compute the present value of bonds.

BEF.14 **(LO 2), AP** Dempsey Railroad Co. is about to issue $400,000 of 10-year bonds paying an 11% interest rate, with interest payable annually. The discount rate is 12% (instead of 10% as in BEF.13). In this case, how much can Dempsey expect to receive from the sale of these bonds?

Compute the present value of bonds.

BEF.15 **(LO 2), AP** Neymar Taco Company receives a $75,000, 6-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 Neymar?

Compute the present value of a note.

BEF.16 **(LO 2), AP** Gleason Enterprises issued 6%, 8-year, $2,500,000 par value bonds that pay interest annually on April 1. The bonds are dated April 1, 2025, and are issued on that date. The discount rate of interest for such bonds on April 1, 2025, is 8%. What cash proceeds did Gleason receive from issuance of the bonds?

Compute the present value of bonds.

BEF.17 **(LO 2), AP** Frazier Company issues a 10%, 5-year mortgage note on January 1, 2025, 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 are the cash proceeds received from the issuance of the note?

Compute the present value of a note.

BEF.18 **(LO 2), AP** 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 interest rate on a single amount.

BEF.19 **(LO 2), AP** Tim Howard has been offered the opportunity of investing $36,125 now. The investment will earn 11% per year and at the end of that time will return Tim $75,000. How many years must Tim wait to receive $75,000? (*Hint:* Use Table 3.)

Compute the number of periods of a single amount.

BEF.20 **(LO 2), AP** 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.)

Compute the interest rate on an annuity.

BEF.21 **(LO 2), AP** Kevin Morales invests $7,793.83 now for a series of $1,300 annual returns beginning one year from now. Kevin will earn a return of 9% on the initial investment. How many annual payments of $1,300 will Kevin receive? (*Hint:* Use Table 4.)

Compute the number of periods of an annuity.

BEF.22 **(LO 3), AP** Barney Googal owns a garage and is contemplating purchasing a tire retreading machine for $12,820. After estimating costs and revenues, Barney projects a net cash inflow from the retreading machine of $2,700 annually for 7 years. Barney hopes to earn a return of 9% on such investments. What is the present value of the retreading operation? Should Barney Googal purchase the retreading machine?

Compute the present value of a machine for purposes of making a purchase decision.

Compute the maximum price to pay for a machine.

EF.23 **(LO 3), AP** Snyder Company is considering purchasing equipment. The equipment will produce the following cash inflows: Year 1, $25,000; Year 2, $30,000; and Year 3, $40,000. Snyder requires a minimum rate of return of 11%. What is the maximum price Snyder should pay for this equipment?

Determine interest rate.

EF.24 **(LO 4), AP** Carly Simon wishes to invest $18,000 on July 1, 2025, and have it accumulate to $50,000 by July 1, 2035. Use Excel or a financial calculator to determine at what exact annual rate of interest Carly must invest the $18,000. (*Hint:* Use Excel RATE function.)

Determine interest rate.

EF.25 **(LO 4), AP** On July 17, 2024, Keith Urban borrowed $42,000 from his grandfather to open a clothing store. Starting July 17, 2025, Keith has to make 10 equal annual payments of $6,500 each to repay the loan. Use Excel or a financial calculator to determine what interest rate Keith is paying. (*Hint:* Use Excel RATE function.)

Determine interest rate.

EF.26 **(LO 4), AP** 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 Excel or a financial calculator, compute the exact rate of interest earned on the mortgage by the bank. (*Hint:* Use Excel RATE function.)

Various time value of money situations.

EF.27 **(LO 4), AP** Using Excel or a financial calculator, solve for the unknowns in each of the following situations. (*Hint:* Use Excel PV function.)

a. On June 1, 2024, Jennifer Lawrence purchases lakefront property from her neighbor, Josh Hutcherson, and agrees to pay the purchase price in 7 payments of $16,000 each, the first payment to be payable June 1, 2025. (Assume that interest compounded at an annual rate of 7.35% is implicit in the payments.) What is the purchase price of the property?

b. On January 1, 2024, Gerrard Corporation purchased 200 of the $1,000 face value, 8% coupon, 10-year bonds of Sterling Inc. The bonds mature on January 1, 2034, and pay interest annually beginning January 1, 2025. Gerrard purchased the bonds to yield 10.65%. How much did Gerrard pay for the bonds?

Various time value of money situations.

EF.28 **(LO 4), AP** Using Excel or a financial calculator, provide a solution to each of the following situations. (*Hint:* Use Excel PMT function.)

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, 2025, 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, 2025, how much will each payment be?

Determine internal rate of return.

EF.29 **(LO 4), AP** Renolds Corporation is considering two alternative investments in excavating equipment. Investment A requires an initial investment of $184,000, has positive cash flows of $27,500 per year, and has an estimated salvage value of $21,000. Investment B requires an initial investment of $234,000, has positive cash flows of $32,800 per year, and has an estimated salvage value of $19,000. Each piece of equipment is expected to have a 12-year useful life. Use Excel or a financial calculator to determine the internal rate of return of each project to decide which is more desirable. (Round to two decimal places, e.g., 9.74%.) (*Hint:* Use Excel IRR function.)

Appendix G

Reporting and Analyzing Investments

Appendix Preview

Some companies believe in aggressive growth through investing in the stock of existing companies. Besides purchasing stock, 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 appendix, the way in which a company accounts for its investments is determined by a number of factors.

Appendix Outline

LEARNING OBJECTIVES	REVIEW	PRACTICE
1. Explain how to account for debt investments.	• Why corporations invest • Accounting for debt investments	**DO IT! 1** Debt Investments
2. Explain how to account for stock investments.	• Holdings of less than 20% • Holdings between 20% and 50% • Holdings of more than 50%	**DO IT! 2** Stock Investments
3. Discuss how debt and stock investments are reported in the financial statements.	• Debt securities • Equity securities • Balance sheet presentation • Presentation of realized and unrealized gain or loss	**DO IT! 3a** Trading and Available-for-Sale Debt Securities **DO IT! 3b** Financial Statement Presentation of Investments

Go to the Review and Practice section at the end of the appendix for a review of key concepts and practice applications with solutions.

G.1 Accounting for Debt Investments

LEARNING OBJECTIVE 1

Explain how to account for debt investments.

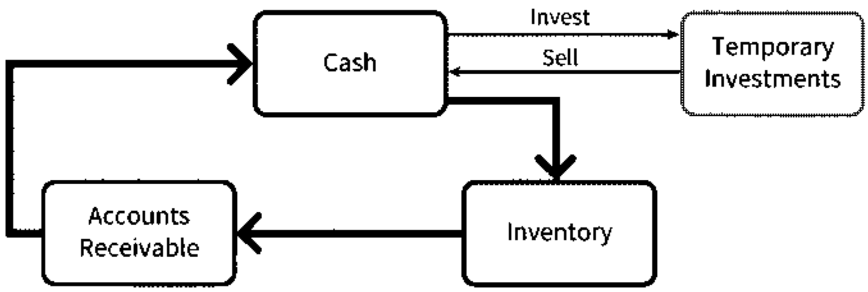
Why Corporations Invest

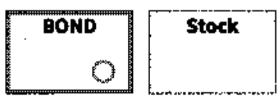
Corporations purchase investments in debt or equity securities generally for one of three reasons.

① **To invest excess cash until needed**

1. **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 Cape Cod marina has more sales in the spring and summer than in the fall and winter. The reverse is true for an Aspen ski shop. Thus, at the end of an operating cycle, many companies may have cash on hand that is temporarily idle until the start of another operating cycle. These companies may invest the excess funds to earn—through interest and dividends—a greater return than they would get by just holding the funds in the bank. Illustration G.1 shows the role that such temporary investments play in the operating cycle.

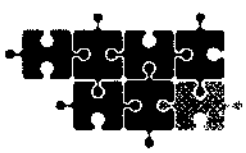
ILLUSTRATION G.1
Temporary investments and the operating cycle





② **To generate earnings**

2. **Some companies such as banks purchase investments to generate earnings from investment income.** Although banks make most of their earnings by lending money, they also generate earnings by investing in primarily debt securities because loan demand varies both seasonally and with changes in the economic climate. Thus, when loan demand is low, a bank must find other uses for its cash. Some companies also attempt to generate investment income through speculative investments. That is, they are speculating that the investment will increase in value and thus result in positive returns. Therefore, they invest mostly in the common stock of other corporations.



③ **To meet strategic goals**

3. **Companies invest for strategic reasons.** A company may purchase a noncontrolling interest in another company in a related industry in which it wishes to establish a presence. Or, a company can exercise some influence over one of its customers or suppliers by purchasing a significant, but not controlling, interest in that company. Another option is for a corporation to purchase a controlling interest in another company in order to enter a new industry without incurring the costs and risks associated with starting from scratch.

Accounting for Debt Investments

Debt investments are investments in government and corporation bonds. In accounting for debt investments, companies must make entries to record (1) the acquisition, (2) the interest revenue, and (3) the sale.

Recording Acquisition of Bonds

At acquisition, debt 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.

For example, assume that Kuhl Corporation acquires 50 Doan Inc. 8%, 10-year, $1,000 bonds on January 1, 2025, at a cost of $50,000. Kuhl records the investment as:

Jan. 1	Debt Investments	50,000	
	Cash		50,000
	(To record purchase of 50 Doan Inc. bonds)		

A	=	L	+	SE
+50,000				
−50,000				

Cash Flows
−50,000

Recording Bond Interest

The Doan Inc. bonds pay interest of $4,000 annually on January 1 ($50,000 × 8%). If Kuhl Corporation'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 Inc. bonds)		

A	=	L	+	SE
+4,000				
				+4,000 Rev

Cash Flows
no effect

Kuhl reports Interest Receivable as a current asset in the balance sheet. It reports Interest Revenue under "Other revenues and gains" in the income statement.

Kuhl records 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	=	L	+	SE
+4,000				
−4,000				

Cash Flows
+4,000

A credit to Interest Revenue at this time would be incorrect. Why? Because the company earned and accrued the interest revenue in the preceding accounting period.

Recording Sale of Bonds

When Kuhl Corporation sells the bond investments, it credits the investment account for the cost of the bonds. The company 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 (see **Helpful Hint**).

Assume, for example, that Kuhl receives net proceeds of $53,000 on the sale of the Doan Inc. bonds on January 1, 2026, after receiving the interest due. Since the securities cost $50,000, Kuhl has realized a gain of $3,000. It records the sale as follows.

> HELPFUL HINT
>
> **The accounting for short-term debt investments and long-term debt investments is similar. Any exceptions are discussed in more advanced courses.**

Jan. 1	Cash	53,000	
	Debt Investments		50,000
	Gain on Sale of Debt Investments		3,000
	(To record sale of Doan Inc. bonds)		

A	=	L	+	SE
+53,000				
−50,000				
				+3,000 Rev

Cash Flows
+53,000

Kuhl reports the gain on the sale of debt investments under "Other revenues and gains" in the income statement and reports losses under "Other expenses and losses."

DO IT! 1 Debt Investments

Waldo Corporation had the following transactions pertaining to debt investments.

Jan. 1, 2025	Purchased 30 $1,000 Hillary Co. 10% bonds for $30,000. Interest is payable annually on January 1.
Dec. 31, 2025	Accrued interest on Hillary Co. bonds in 2025.
Jan. 1, 2026	Received interest on Hillary Co. bonds.

> 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.**

Jan. 1, 2026 Sold 15 Hillary Co. bonds for $14,600.
Dec. 31, 2026 Accrued interest on Hillary Co. bonds in 2026.

Journalize the above transactions, including the accrual of interest on December 31, 2025.

Solution

Jan. 1 (2025)	Debt Investments Cash (To record purchase of 30 Hillary Co. bonds)	30,000	 30,000
Dec. 31 (2025)	Interest Receivable Interest Revenue ($30,000 × 10%) (To accrue interest on Hillary Co. bonds)	3,000	 3,000
Jan. 1 (2026)	Cash Interest Receivable (To record receipt of interest on Hillary Co. bonds)	3,000	 3,000
Jan. 1 (2026)	Cash Loss on Sale of Debt Investments Debt Investments [$30,000 × (15 ÷ 30)] (To record sale of 15 Hillary Co. bonds)	14,600 400	 15,000
Dec. 31 (2026)	Interest Receivable Interest Revenue ($15,000 × 10%) (To accrue interest on Hillary Co. bonds)	1,500	 1,500

Related exercise material: BEG.1, DO IT! G.1, EG.2, and EG.3.

G.2 Accounting for Stock Investments

LEARNING OBJECTIVE 2

Explain how to account for stock investments.

Stock investments are investments in the capital stock of corporations. When a company holds stock (and/or debt) of several different corporations, the group of securities is an **investment portfolio**.

- The accounting for investments in common stock depends on the extent of the investor's influence over the operating and financial affairs of the issuing corporation (the **investee**).
- **Illustration** G.2 shows the general guidelines.

Companies are required to use judgment instead of blindly following the guidelines.[1] We explain and illustrate the application of each guideline next.

[1]Among the factors that companies should consider in determining an investor's influence are whether (1) the investor has representation on the investee's board of directors, (2) the investor participates in the investee's policy-making process, (3) there are material transactions between the investor and the investee, and (4) the common stock held by other stockholders is concentrated or dispersed.

ILLUSTRATION G.2 Accounting guidelines for stock investments

Investor's Ownership Interest in Investee's Common Stock	Presumed Influence on Investee	Accounting Guidelines
Less than 20%	Insignificant	Cost method
Between 20% and 50%	Significant	Equity method
More than 50%	Controlling	Consolidated financial statements

Holdings of Less Than 20%

In the accounting for stock 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 Stock

At acquisition, stock 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 on July 1, 2025, Sanchez Corporation acquires 1,000 shares (10% ownership) of Beal Corporation common stock at $40 per share. The entry for the purchase is:

July 1	Stock Investments	40,000	
	Cash		40,000
	(To record purchase of 1,000 shares of Beal common stock)		

A = L + SE
+40,000
−40,000

Cash Flows
−40,000

Recording Dividends

During the time the company holds the stock, it makes entries for any cash dividends received. Thus, if Sanchez Corporation receives a $2 per share dividend on December 31, the entry is:

Dec. 31	Cash (1,000 × $2)	2,000	
	Dividend Revenue		2,000
	(To record receipt of a cash dividend)		

A = L + SE
+2,000
+2,000 Rev

Cash Flows
+2,000

Sanchez reports Dividend Revenue under "Other revenues and gains" in the income statement.

Recording Sale of Stock

When a company sells a stock investment, it recognizes the difference between the net proceeds from the sale (sales price less brokerage fees) and the cost of the stock as a gain or a loss.

Assume, for instance, that Sanchez Corporation receives net proceeds of $39,500 on the sale of its Beal Corporation stock on February 10, 2026. Because the stock cost $40,000, Sanchez has incurred a loss of $500. It records the sale as:

A = L +

+39,500

−500 Exp

−40,000

Cash Flows
+39,500

Feb. 10	Cash	39,500	
	Loss on Sale of Stock Investments	500	
	Stock Investments		40,000
	(To record sale of Beal common stock)		

Sanchez reports the loss account under "Other expenses and losses" in the income statement and shows a gain on sale under "Other revenues and gains."

Holdings Between 20% and 50%

When an investor company owns only a small portion of the shares of stock of another company, the investor cannot exercise control over the investee.

- When an investor owns between 20% and 50% of the common stock of a corporation, it is presumed that the investor has significant influence over the financial and operating activities of the investee.
- The investor probably has a representative on the investee's board of directors.
- Through that representative, the investor begins to exercise some control over the investee—and the investee company in some sense becomes part of the investor company.

For example, **Time Warner** (now **WarnerMedia**) at one time owned 20% of **Turner Broadcasting**. Because it exercised significant control over major decisions made by Turner, Time Warner used an approach called the equity method. Under the **equity method, the investor records its share of the net income of the investee in the year when it is earned.** An alternative might be to delay recognizing the investor's share of net income until a cash dividend is declared. But that approach would ignore the fact that the investor and investee are, in some sense, one company, making the investor better off by the investee's net income.

Under the **equity method**, the company initially records the investment in common stock at cost. After that, it adjusts the investment account **annually** to show the investor's equity in the investee. Each year, the investor does the following.

1. It increases (debits) the investment account and increases (credits) revenue for its share of the investee'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 investee.

Recording Acquisition of Stock

Assume that Milar Corporation acquires 30% of the common stock of Beck Company for $120,000 on January 1, 2025. The entry to record this transaction is:

A = L +

+120,000
−120,000

Cash Flows
−120,000

Jan. 1	Stock Investments	120,000	
	Cash		120,000
	(To record purchase of Beck common stock)		

Recording Revenue and Dividends

For 2025, Beck reports net income of $100,000. It declares and pays a $40,000 cash dividend. Milar must record (1) its share of Beck's income, $30,000 (30% × $100,000), and (2) the

[2]Conversely, the investor increases (debits) a loss account and decreases (credits) the investment account for its share of the investee's net loss.

reduction in the investment account for the dividends received, $12,000 (30% × $40,000). The entries are:

(1)

Dec. 31	Stock Investments	30,000	
	Revenue from Stock Investments		30,000
	(To record 30% equity in Beck's 2025 net income)		

A = L +
+30,000
+30,000 Rev

Cash Flows
no effect

(2)

Dec. 31	Cash	12,000	
	Stock Investments		12,000
	(To record dividends received)		

A = L +
+12,000
−12,000

Cash Flows
+12,000

After Milar posts the transactions for the year, the investment and revenue accounts are as shown in **Illustration G.3**.

ILLUSTRATION G.3
Investment and revenue accounts after posting

Stock Investments

Jan. 1		120,000	Dec. 31	12,000
Dec. 31		30,000		
Dec. 31	Bal.	138,000		

Revenue from Stock Investments

		Dec. 31	30,000

During the year, the investment account increased by $18,000. This $18,000 is explained as follows.

1. Milar records a $30,000 increase in revenue from its stock investment in Beck.
2. Milar records a $12,000 decrease due to dividends received from its stock 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 of dividend revenue (30% × $40,000) if it used the cost method.

Holdings of More Than 50%

A company that owns more than 50% of the common stock of another entity is known as the **parent company**.

- The entity whose stock is owned by the parent company is called the **subsidiary (affiliated) company**. Because of its stock ownership, the parent company has a **controlling interest** in the subsidiary company.

When a company owns more than 50% of the common stock of another company, it usually prepares **consolidated financial statements**.

- Consolidated financial statements present the assets and liabilities of the parent and subsidiary companies.
- They also present the total revenues and expenses of the parent and subsidiary companies.
- Companies prepare consolidated statements **in addition to** the financial statements for the individual parent and subsidiary companies.

As noted earlier, prior to acquiring all of **Turner Broadcasting**, **Time Warner** accounted for its investment in Turner using the equity method. Time Warner's net investment in Turner was reported in a single line item—Other investments. After the merger, Time Warner instead consolidated Turner's results with its own. Under this approach, Time Warner included the individual assets and liabilities of Turner with its own assets. That is, Turner's plant and equipment were added to Time Warner's plant and equipment, its receivables were added to Time Warner's receivables, and so on. More recently, a similar sort of consolidation went on when Time Warner merged with AT&T (see **Helpful Hint**).

HELPFUL HINT

If the parent (A) has three wholly owned subsidiaries (B, C, and D), there are four separate legal entities but only one economic entity from the viewpoint of the shareholders of the parent company.

Consolidated statements are useful to the stockholders, board of directors, and management of the parent company. Consolidated statements indicate to creditors, prospective investors, and regulatory agencies 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 to determine whether a breakup of the company was in the public interest. **Illustration G.4** lists three companies that prepare consolidated statements and some of the companies they have owned.

ILLUSTRATION G.4

Examples of consolidated companies and their subsidiaries

PepsiCo	Avis Budget Group	The Walt Disney Company
Frito-Lay	Avis Car Rental	ABC Enterprises, Inc.
Tropicana	Budget Car Rental	Walt Disney Parks and Resorts
Quaker	Payless Car Rental	Pixar
Pepsi-Cola	Apex Car Rentals	Marvel Entertainment
Gatorade	Zipcar	ESPN

ACTION PLAN

- **Since the investor owns less than 20% of the common stock of another corporation, net income earned by the investee is not considered a proper basis for recognizing income from the investment by the investor. In this case, use the cost method to account for the investment. Record income as dividends received.**
- **Since the investor owns between 20 and 50% of the company, employ the equity method to account for the investment. Record the investor's share of the net income of the investee and increase the investment by that amount. Reduce the investment for any dividends received.**

DO IT! 2 Stock Investments

The following are two independent situations.

1. Rho Jean Inc. acquired 5% of the 400,000 shares of common stock of Stillwater Corp. at a total cost of $6 per share on May 18, 2025. On August 30, Stillwater declared and paid a $75,000 dividend. On December 31, Stillwater reported net income of $244,000 for the year.
2. Debbie, Inc. obtained significant influence over North Sails by buying 40% of North Sails' 60,000 outstanding shares of common stock at a cost of $12 per share on January 1, 2025. On April 15, North Sails declared and paid a cash dividend of $45,000. On December 31, North Sails reported net income of $120,000 for the year.

Prepare all necessary journal entries for 2025 for (1) Rho Jean Inc. and (2) Debbie, Inc.

Solution

1.	May 18	Stock Investments (400,000 × 5% × $6)	120,000	
		Cash		120,000
		(To record purchase of 20,000 shares of Stillwater Co. stock)		
	Aug. 30	Cash	3,750	
		Dividend Revenue ($75,000 × 5%)		3,750
		(To record receipt of cash dividend)		
2.	Jan. 1	Stock Investments (60,000 × 40% × $12)	288,000	
		Cash		288,000
		(To record purchase of 24,000 shares of North Sails' stock)		
	Apr. 15	Cash	18,000	
		Stock Investments ($45,000 × 40%)		18,000
		(To record receipt of cash dividend)		
	Dec. 31	Stock Investments ($120,000 × 40%)	48,000	
		Revenue from Stock Investments		48,000
		(To record 40% equity in North Sails' net income)		

Related exercise material: BEG.2, BEG.3, DO IT! G.2, EG.4, EG.5, EG.6, EG.7, and EG.8.

G.3 Reporting Investments in Financial Statements

LEARNING OBJECTIVE 3

Discuss how debt and stock investments are reported in the financial statements.

The value of debt and stock investments may fluctuate greatly during the time they are held. For example, in a recent 12-month period, the stock of airline manufacturer Boeing hit a high of 386 and a low of 95.01. In light of such price fluctuations, how should companies value investments at the balance sheet date? Valuation could be at cost, at fair value, or at the lower-of-cost-or-market 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.

Debt Securities

For purposes of valuation and reporting at a financial statement date, debt investments are classified into three categories:

1. **Trading securities** are bought and held primarily for sale in the near term to generate income on short-term price differences.
2. **Available-for-sale securities** are held with the intent of selling them sometime in the future.
3. **Held-to-maturity securities** are debt securities that the investor has the intent and ability to hold to maturity.[3]

Illustration G.5 shows the valuation guidelines for these debt securities.

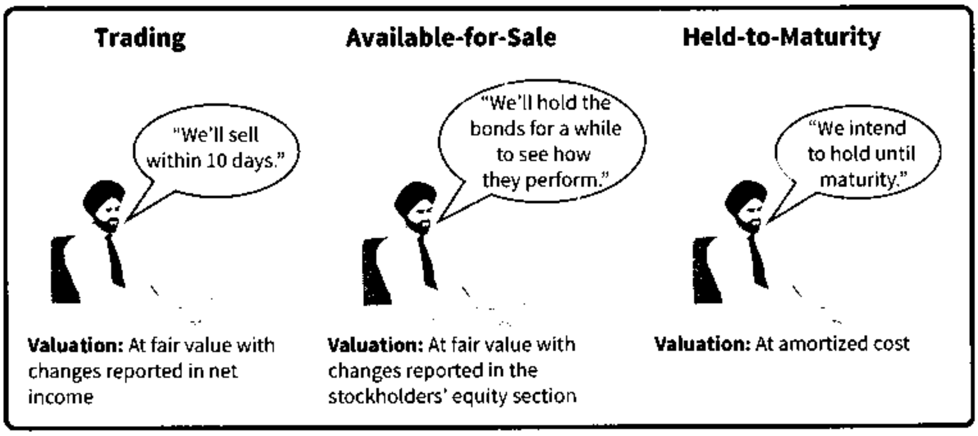


ILLUSTRATION G.5
Valuation guidelines for debt securities

Trading Securities

Trading securities are held with the intention of selling them in a short period of time (generally less than three months and sometimes less than a full day). **Trading** means frequent buying and selling.

[3]This category is provided for completeness. The accounting and valuation issues related to held-to-maturity securities are discussed in more advanced accounting courses.

- As indicated in Illustration G.5, 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 a current asset.

As an example, **Illustration** G.6 shows the costs and fair values for investments classified as trading securities for Pace Corporation on December 31, 2025. Pace has an unrealized gain of $7,000 because total fair value ($147,000) is $7,000 greater than total cost ($140,000).

ILLUSTRATION G.6
Valuation of trading securities

Trading Securities, December 31, 2025

Investments	Cost	Fair Value	Unrealized Gain (Loss)
Yorkville Company bonds	$ 50,000	$ 48,000	$(2,000)
Kodak Company bonds	90,000	99,000	9,000
Total	$140,000	$147,000	$ 7,000

HELPFUL HINT

Companies report an unrealized gain or loss in the income statement because of the likelihood that the securities will be sold at fair value since they are a short-term investment.

The fact that trading securities are a short-term investment increases the likelihood that Pace will sell them at fair value for a gain. Pace records fair value and the unrealized gain through an adjusting entry at the time it prepares financial statements (see **Helpful Hint**). 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	+	SE
+7,000				+7,000 Rev

Cash Flows
no effect

Dec. 31	Fair Value Adjustment—Trading	7,000	
	Unrealized Gain or Loss—Income		7,000
	(To record unrealized gain on trading securities)		

The use of the Fair Value Adjustment—Trading account enables the company to maintain a record of the investment cost. Actual cost is needed to determine the gain or loss realized when the securities are sold. The company 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 companies report on the balance sheet.**
- They report the unrealized gain on the income statement under "Other revenues and gains."
- The term **income** in the account title 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 Gain or Loss—Income and a credit to Fair Value Adjustment—Trading. Companies report the unrealized loss under "Other expenses and losses" in the income statement.

The Fair Value Adjustment—Trading account is carried forward into future accounting periods. No entries are made to this account during the period. At the end of each reporting period, a company adjusts the balance in the account to the difference between cost and fair value at that time. It closes the Unrealized Gain or Loss—Income account at the end of the reporting period.

Available-for-Sale Securities

As indicated earlier, available-for-sale securities are held with the intent of selling them sometime in the future. If the intent is to sell the securities within the next year or operating cycle, a company classifies the securities as current assets in the balance sheet. Otherwise, it classifies them as long-term assets in the investments section of the balance sheet.

- Companies also report available-for-sale securities at fair value.
- The procedure for determining fair value and unrealized gain or loss for these securities is the same as that for trading securities.

To illustrate, assume that Shelton Corporation has two securities that are classified as available-for-sale. **Illustration G.7** provides information on the cost, fair value, and amount of the unrealized gain or loss on December 31, 2025. There is an unrealized loss of $9,537 because total cost ($293,537) is $9,537 more than total fair value ($284,000).

ILLUSTRATION G.7

Valuation of available-for-sale securities

Available-for-Sale Securities, December 31, 2025

Investments	Cost	Fair Value	Unrealized Gain (Loss)
Campbell Soup Co. bonds	$ 93,537	$103,600	$10,063
Hershey Foods bonds	200,000	180,400	(19,600)
Total	$293,537	$284,000	$(9,537)

Both the adjusting entry and the reporting of the unrealized loss from Shelton's available-for-sale securities differ from those illustrated for trading securities. The differences result because these securities are not going to be sold in the near term. Thus, prior to actual sale it is much more likely that changes in fair value may reverse the unrealized loss.

- Therefore, a company does not report an unrealized loss in the income statement for available-for-sale securities.
- Instead, the company reports it as an item of other comprehensive income in the statement of comprehensive income.

In the adjusting entry, Shelton identifies the fair value adjustment account with available-for-sale securities, and identifies the unrealized gain or loss account with stockholders' equity (see **Helpful Hint**). The adjusting entry for Shelton to record the unrealized loss of $9,537 is as follows.

HELPFUL HINT

The entry is the same regardless of whether the securities are considered short-term or long-term.

Dec. 31	Unrealized Gain or Loss—Equity	9,537	
	Fair Value Adjustment—Available-for-Sale		9,537
	(To record unrealized loss on available-for-sale securities)		

A	=	L	+	SE
				−9,537 Eq
−9,537				

Cash Flows
no effect

If total fair value exceeds total cost, Shelton would record the adjusting entry as an increase (debit) to Fair Value Adjustment—Available-for-Sale and a credit to Unrealized Gain or Loss—Equity.

Shelton's unrealized loss of $9,537 would appear in the statement of comprehensive income as shown in **Illustration G.8**.

ILLUSTRATION G.8

Statement of comprehensive income

Shelton Corporation
Statement of Comprehensive Income
For the Year Ended December 31, 2025

Net income	$118,000
Other comprehensive income	
Unrealized loss on available-for-sale securities	(9,537)
Comprehensive income	$108,463

For available-for-sale securities, the company carries forward the Unrealized Gain or Loss—Equity account to future periods. At each future balance sheet date, the account is adjusted with the Fair Value Adjustment—Available-for-Sale account to show the difference between cost and fair value at that time (see **Ethics Note**).

ETHICS NOTE

Recently, the SEC accused investment bank Morgan Stanley of overstating the value of certain bond investments by $75 million. The SEC stated that, in applying fair value accounting, Morgan Stanley used its own more optimistic assumptions rather than relying on external pricing sources.

ACTION PLAN

- **Mark trading securities to fair value and report the adjustment in current-period income.**
- **Mark available-for-sale securities to fair value and report the adjustment as a separate component of stockholders' equity.**

DO IT! 3a Trading and Available-for-Sale Debt Securities

Some of Powderhorn Corporation's investment debt securities are classified as trading securities and some are classified as available-for-sale. The cost and fair value of each category at December 31, 2025, are as follows.

	Cost	Fair Value	Unrealized Gain (Loss)
Trading securities	$93,600	$94,900	$1,300
Available-for-sale securities	$48,800	$51,400	$2,600

At December 31, 2024, the Fair Value Adjustment—Trading account had a debit balance of $9,200, and the Fair Value Adjustment—Available-for-Sale account had a credit balance of $5,750. Prepare the required journal entries for each group of securities for December 31, 2025.

Solution

Trading securities:

Unrealized Gain or Loss—Income	7,900*	
Fair Value Adjustment—Trading		7,900
(To record unrealized loss on trading securities)		

*$9,200 − $1,300

Available-for-sale securities:

Fair Value Adjustment—Available-for-Sale	8,350**	
Unrealized Gain or Loss—Equity		8,350
(To record unrealized gain on available-for-sale securities)		

**$5,750 + $2,600

Related exercise material: BEG.4, BEG.6, DO IT! G.3a, EG.10, EG.11, and EG.12.

Equity Securities

The valuation and reporting of equity securities at a financial statement date depends on the levels of influence involved, as shown in **Illustration G.9**.

ILLUSTRATION G.9

Accounting and reporting for equity securities by category

Category	Valuation	Unrealized Gains or Losses	Other Income Effects
Holdings less than 20%	Fair value	Recognized in net income	Dividends declared; gains and losses from sale
Holdings between 20% and 50%	Equity	Not recognized	Proportionate share of investee's net income
Holdings more than 50%	Consolidation	Not recognized	Not applicable

When an investor has an interest of less than 20%, it is presumed that the investor has little or no influence over the investee. In such cases, if market prices are available subsequent to acquisition, the company values and reports the stock investment using the fair value method.

Illustration of Stock Holdings Less Than 20%

At December 31, 2025, Shelton Corporation has two equity securities in which it has less than a 20% ownership interest and therefore has little or no influence over these companies. Shelton has the following cost and fair value for these two companies, as shown in **Illustration G.10**.

Investments	Cost	Fair Value	Unrealized Gain (Loss)
Twitter Co.	$259,700	$275,000	$15,300
Campbell Soup Co.	317,500	304,000	(13,500)
Totals	$577,200	$579,000	$ 1,800

ILLUSTRATION G.10

Computation of fair value adjustment—equity security portfolio (2025)

For Shelton's equity securities portfolio, the gross unrealized gain is $15,300 and the gross unrealized loss is $13,500, resulting in a net unrealized gain of $1,800. That is, the fair value of the equity securities portfolio is above cost by $1,800.

Shelton records the net unrealized gains and losses related to changes in the fair value equity securities in an Unrealized Gain or Loss—Income account. In this case, Shelton prepares an adjusting entry debiting the Fair Value Adjustment—Stock account and crediting the Unrealized Gain or Loss—Income account to record the increase in fair value and to record the gain as follows.

December 31, 2025		
Fair Value Adjustment—Stock	1,800	
Unrealized Gain or Loss—Income		1,800
(To record unrealized gain on equity securities)		

Similar to trading securities, Shelton adjusts the balance in the Fair Value Adjustment—Stock account for the difference between cost and fair value. In addition, the unrealized gain related to Shelton's equity securities is reported in the "Other revenues and gains" section of the income statement.

Balance Sheet Presentation

In the balance sheet presentation, companies must classify investments as either short-term or long-term.

Short-Term Investments

Short-term investments (also called **marketable securities**) are securities held by a company that are:

1. **Readily marketable.**
2. **Intended to be converted into cash** within the next year or operating cycle, whichever is longer (see **Helpful Hint**).

HELPFUL HINT

Trading securities are always classified as short-term. Available-for-sale securities can be either short-term or long-term.

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 because a company can readily sell it to other investors. Stocks and bonds traded on organized securities markets, such as the New York Stock Exchange, are readily marketable because 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 company 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 next winter season. 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.

[4]Short-term paper includes (1) certificates of deposits (CDs) issued by banks, (2) money market certificates issued by banks and savings and loan associations, (3) Treasury bills issued by the U.S. government, and (4) commercial paper issued by corporations with good credit ratings.

- Because of their high liquidity, companies list short-term investments immediately below Cash in the current assets section of the balance sheet.
- Short-term investments are reported at fair value.

For example, Weber Corporation would report its trading securities as shown in **Illustration G.11**.

ILLUSTRATION G.11
Balance sheet presentation of short-term investments

Weber Corporation Balance Sheet (partial)	
Current assets	
Cash	$21,000
Debt investments (at fair value)	60,000

Long-Term Investments

Companies generally report long-term investments in a separate section of the balance sheet immediately below "Current assets," as shown in **Illustration G.12**.

- Long-term investments in available-for-sale securities are reported at fair value.
- Investments in common stock accounted for under the equity method are reported at equity.

ILLUSTRATION G.12
Balance sheet presentation of long-term investments

Weber Corporation Balance Sheet (partial)		
Investments		
Debt investment (at fair value)	$100,000	
Stock investments (at fair value)	50,000	
Stock investments (at equity)	150,000	
Total investments		$300,000

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, as well as interest and dividend revenue, in the nonoperating activities section under the categories listed in **Illustration G.13**.

ILLUSTRATION G.13
Nonoperating items related to investments

Other Revenues and Gains	Other Expenses and Losses
Interest Revenue	Loss on Sale of Investments
Dividend Revenue	Unrealized Loss
Gain on Sale of Investments	
Unrealized Gain	

Companies report the cumulative amount of other comprehensive income items from the current and previous years as a separate component of stockholders' equity. To illustrate, assume that Muzzillo Inc. has common stock of $3,000,000, retained earnings of $1,500,000, and an accumulated other comprehensive loss of $100,000. **Illustration G.14** shows the financial statement presentation of the accumulated other comprehensive loss.

ILLUSTRATION G.14
Unrealized loss in stockholders' equity section

Muzzillo Inc. Balance Sheet (partial)	
Stockholders' equity	
Common stock	$3,000,000
Retained earnings	1,500,000
Total paid-in capital and retained earnings	4,500,000
Accumulated other comprehensive loss	**(100,000)**
Total stockholders' equity	$4,400,000

A classified balance sheet is shown in **Illustration G.15**. This balance sheet includes the following items (highlighted in red): short-term and long-term debt investments, stock investments, and accumulated other comprehensive income.

ILLUSTRATION G.15
Classified balance sheet

Pace Corporation Balance Sheet December 31, 2025			
Assets			
Current assets			
Cash			$ 21,000
Debt investments (at fair value)			**147,000**
Accounts receivable		$ 84,000	
Less: Allowance for doubtful accounts		4,000	80,000
Inventory, at FIFO cost			43,000
Prepaid insurance			23,000
Total current assets			314,000
Investments			
Debt investments (at fair value)		**20,000**	
Stock investments (at fair value)		**30,000**	
Stock investments (at equity)		**150,000**	
Total investments			200,000
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
Intangible assets			
Goodwill			270,000
Total assets			$1,710,000
Liabilities and Stockholders' Equity			
Current liabilities			
Accounts payable			$ 185,000
Federal income taxes payable			60,000
Interest payable			10,000
Total current liabilities			255,000
Long-term liabilities			
Bonds payable, 10%, due 2030		$ 300,000	
Less: Discount on bonds		10,000	
Total long-term liabilities			290,000
Total liabilities			545,000

ILLUSTRATION G.15
(continued)

Stockholders' equity		
Paid-in capital		
Common stock, $10 par value, 200,000 shares authorized, 80,000 shares issued and outstanding	800,000	
In excess of par—common stock	100,000	
Total paid-in capital	900,000	
Retained earnings (Note 1)	255,000	
Total paid-in capital and retained earnings	1,155,000	
Add: Accumulated other comprehensive income	10,000	
Total stockholders' equity		1,165,000
Total liabilities and stockholders' equity		$1,710,000

Note 1. Retained earnings of $100,000 is restricted for plant expansion.

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 available-for-sale securities in equity.**
- **Report realized gains and losses on investments in the income statement as "Other revenues and gains" or as "Other expenses and losses."**

DO IT! 3b 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—stock.
3. Unrealized gain or loss—equity.
4. Gain on sale of investments in stock.
5. Unrealized gain—income.

Use the following possible categories:

Balance sheet:

Current assets	Current liabilities
Investments	Long-term liabilities
Property, plant, and equipment	Stockholders' equity
Intangible assets	

Income statement:

Other revenues and gains	Other expenses and losses

Solution

Item	Financial Statement	Category
1. Interest earned on investments in bonds.	Income statement	Other revenues and gains
2. Fair value adjustment—stock	Balance sheet	Investments
3. Unrealized gain or loss—equity.	Balance sheet	Stockholders' equity
4. Gain on sale of investments in stock.	Income statement	Other revenues and gains
5. Unrealized gain—income.	Income statement	Other revenues and gains

Related exercise material: BEG.4, BEG.5, BEG.6, BEG.7, BEG.8, BEG.9, BEG.10, DO IT! G.3b, and EG.10.

Review and Practice

Learning Objectives Review

1 Explain how to account for debt investments.

Corporations invest for three common reasons: (a) they have excess cash, (b) they view investment income as a significant revenue source, and (c) they have strategic goals such as gaining control of a competitor or supplier or moving into a new line of business.

Entries for investments in debt securities are required when companies purchase bonds, receive or accrue interest, and sell bonds.

2 Explain how to account for stock investments.

Entries for investments in common stock are required when companies purchase stock, receive dividends, and sell stock. When ownership is less than 20%, the cost method is used—the investment is recorded at cost. When ownership is between 20% and 50%, the equity method should be used—the investor records its share of the net income of the investee in the year it is earned.

When a company owns more than 50% of the common stock of another company, consolidated financial statements are usually prepared. These statements are especially useful to the stockholders, board of directors, and management of the parent company.

3 Discuss how debt and stock investments are reported in the financial statements.

Investments in debt securities are classified as trading, available-for-sale, or held-to-maturity for valuation and reporting purposes. Trading securities are reported as current assets at fair value, with changes from cost reported in net income. Available-for-sale securities are also reported at fair value, with the changes from cost reported as items of other comprehensive income. Available-for-sale securities are classified as short-term or long-term depending on their expected realization.

Investments in stock when ownership is less than 20% are reported at fair values, with changes from cost reported in net income.

Short-term investments are securities held by a company that are readily marketable and 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.

Glossary Review

Available-for-sale securities Securities that are held with the intent of selling them sometime in the future. (p. G-9).

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. G-7).

Controlling interest Ownership of more than 50% of the common stock of another entity. (p. G-7).

Cost method An accounting method in which the investment in common stock is recorded at cost and revenue is recognized only when cash dividends are received. (p. G-5).

Debt investments Investments in government and corporation bonds. (p. G-2).

Equity method An accounting method in which the investment in common stock is initially recorded at cost, and the investment account is then adjusted annually to show the investor's equity in the investee. (p. G-6).

Fair value Amount for which a security could be sold in a normal market. (p. G-9).

Held-to-maturity securities Debt securities that the investor has the intent and ability to hold to maturity. (p. G-9).

Investment portfolio A group of stocks and/or debt securities in different corporations held for investment purposes. (p. G-4).

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. G-13).

Mark-to-market A method of accounting for certain investments that requires that they be adjusted to their fair value at the end of each period. (p. G-10).

Parent company A company that owns more than 50% of the common stock of another entity. (p. G-7).

Short-term investments (marketable securities) Investments that are readily marketable and intended to be converted into cash within the next year or operating cycle, whichever is longer. (p. G-13).

Stock investments Investments in the capital stock of corporations. (p. G-4).

Subsidiary (affiliated) company A company in which more than 50% of its stock is owned by another company. (p. G-7).

Trading securities Securities bought and held primarily for sale in the near term to generate income on short-term price differences. (p. G-9).

Practice Multiple-Choice Questions

1. **(LO 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.

2. **(LO 1)** Debt investments are initially recorded at:
   a. cost.
   b. cost plus accrued interest.
   c. fair value.
   d. face value.

3. **(LO 1)** Hanes Company sells debt investments costing $26,000 for $28,000. In journalizing the sale, credits are to:
   a. Debt Investments and Loss on Sale of Debt Investments.
   b. Debt Investments and Gain on Sale of Debt Investments.
   c. Stock Investments and Gain on Sale of Stock Investments.
   d. None of the answer choices is correct.

4. **(LO 2)** Pryor Company receives net proceeds of $42,000 on the sale of stock investments that cost $39,500. This transaction will result in reporting in the income statement a:

  a. loss of $2,500 under "Other expenses and losses."

  b. loss of $2,500 under "Operating expenses."

  c. gain of $2,500 under "Other revenues and gains."

  d. gain of $2,500 under "Operating revenues."

5. **(LO 2)** The equity method of accounting for long-term investments in stock should be used when the investor has significant influence over an investee and owns:

  a. between 20% and 50% of the investee's common stock.

  b. 20% or more of the investee's common stock.

  c. more than 50% of the investee's common stock.

  d. less than 20% of the investee's common stock.

6. **(LO 2)** Assume that Horicon Corp. acquired 25% of the common stock of Sheboygan Corp. on January 1, 2025, for $300,000. During 2025, Sheboygan Corp. 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, 2025, will be:

  a. $300,000. **c.** $400,000.

  b. $325,000. **d.** $340,000.

7. **(LO 2)** Assume that Horicon Corp. acquired 25% of the common stock of Sheboygan Corp. on January 1, 2025, for $300,000. During 2025, Sheboygan Corp. reported net income of $160,000 and paid total dividends of $60,000. If Horicon uses the equity method to account for its investment, what entry would Horicon make to record the receipt of the dividend from Sheboygan?

  a. Debit Cash and credit Revenue from Stock Investments.

  b. Debit Cash Dividends and credit Revenue from Stock Investments.

  c. Debit Cash and credit Stock Investments.

  d. Debit Cash and credit Dividend Revenue.

8. **(LO 2)** You have a controlling interest if:

  a. you own more than 20% of a company's stock.

  b. you are the president of the company.

  c. you use the equity method.

  d. you own more than 50% of a company's stock.

9. **(LO 2)** Which of the following statements is **false**? Consolidated financial statements are useful to determine:

  a. the profitability of specific subsidiaries.

  b. the total profitability of companies under common control.

  c. the breadth of a parent company's operations.

  d. the full extent of total obligations of companies under common control.

10. **(LO 3)** At the end of the first year of operations, the total cost of the trading securities portfolio is $120,000. Total fair value is $115,000. The financial statements should show:

  a. a reduction of an asset of $5,000 and a realized loss of $5,000.

  b. a reduction of an asset of $5,000 and an unrealized loss of $5,000 in the stockholders' equity section.

  c. a reduction of an asset of $5,000 in the current assets section and an unrealized loss of $5,000 in "Other expenses and losses."

  d. a reduction of an asset of $5,000 in the current assets section and a realized loss of $5,000 in "Other expenses and losses."

11. **(LO 3)** At December 31, 2025, the fair value of available-for-sale debt securities is $41,300 and the cost is $39,800. At January 1, 2025, there was a credit balance of $900 in the Fair Value Adjustment—Available-for-Sale account. The required adjusting entry would be:

  a. Debit Fair Value Adjustment—Available-for-Sale for $1,500 and credit Unrealized Gain or Loss—Equity for $1,500.

  b. Debit Fair Value Adjustment—Available-for-Sale for $600 and credit Unrealized Gain or Loss—Equity for $600.

  c. Debit Fair Value Adjustment—Available-for-Sale 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—Available-for-Sale for $2,400.

12. **(LO 3)** If a company wants to increase its reported income by manipulating its investment accounts, which should it do?

  a. Sell its "winner" trading securities and hold its "loser" trading securities.

  b. Hold its "winner" trading securities and sell its "loser" trading securities.

  c. Sell its "winner" available-for-sale securities and hold its "loser" available-for-sale securities.

  d. Hold its "winner" available-for-sale securities and sell its "loser" available-for-sale securities.

13. **(LO 3)** In the balance sheet, a debit balance in Unrealized Gain or Loss—Equity is reported as a(n):

  a. increase to stockholders' equity.

  b. decrease to stockholders' equity.

  c. loss in the income statement.

  d. loss in the retained earnings statement.

14. **(LO 3)** Short-term debt investments must be readily marketable and expected to be sold within:

  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.

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 accrued interest, (c) fair value, or (d) face value.

3. **b.** Credits are made to Debt Investments $26,000 and Gain on Sale of Debt Investments $2,000 ($28,000 − $26,000). 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 revenues and gains" 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 investee's common stock. The other choices are therefore incorrect.

6. **b.** Horicon records the acquisition of the stock investment by debiting Stock Investments $300,000 and crediting Cash $300,000. Then, Horicon records (1) its share in Sheboygan Corp.'s net income ($160,000 × .25) by debiting Stock Investments $40,000 and crediting Revenue from Stock 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 Stock 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 Stock Investments. The other choices are therefore incorrect.

8. **d.** You have a controlling interest if you own more than 50% of a company's stock, not (a) 20% of a company's stock, (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 results of the single economic entity. The other choices are true statements.

10. **c.** The difference between the fair value ($115,000) and total cost ($120,000) of trading securities at the end of the first year would result in a reduction of an asset of $5,000 through the valuation allowance account in the current assets section and an unrealized loss of $5,000 in "Other expenses and losses." 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 market 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—Available-for-Sale 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. **c.** When a company sells its winners as related to available-for-sale securities, it has a realized gain that increases net income. Selling the winners will affect the balance in Unrealized Holding Gain or Loss—Equity, but any change in this balance does not affect net income. Choices (a) and (b) are incorrect because trading securities' gains and losses related to changes in valuation are reported in net income. Thus, when a company sells a trading security, it should have no effect on net income because the value change was recognized in net income previously. Choice (d) is incorrect because selling the losing available-for-sale securities will decrease net income.

13. **b.** A debit balance in Unrealized Gain or Loss—**Equity** is reported on the balance sheet as a separate component of stockholders' equity, decreasing stockholders' equity. The other choices are therefore incorrect.

14. **c.** Short-term 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.

Practice Brief Exercises

1. **(LO 1)** Liriano Corporation purchased debt investments for $85,000 on January 1, 2025. On July 1, 2025, Liriano received cash interest of $6,800. Journalize the purchase and the receipt of interest. Assume that no interest has been accrued.

Journalize entries for debt investments.

Solution

1.	Jan. 1	Debt Investments	85,000	
		Cash		85,000
	July 1	Cash	6,800	
		Interest Revenue		6,800

2. **(LO 2)** On June 1, Willyjuan Company buys 2,000 shares of Minaya common stock for $57,000 cash. On October 15, Willyjuan sells the stock investments for $54,000 in cash. Journalize the purchase and sale of the common

Journalize entries for stock investments.

Solution

2.	June 1	Stock Investments	57,000	
		Cash		57,000
	Oct. 15	Cash	54,000	
		Loss on Sale of Stock Investments	3,000	
		Stock Investments		57,000

Prepare adjusting entry and indicate statement presentation using fair value.

3. **(LO 3)** The cost of the trading securities of Dylan Company at December 31, 2025, is $46,000. At December 31, 2025, the fair value of the securities is $50,000. (a) Prepare the adjusting entry to record the securities at fair value. (b) Show the financial statement presentation at December 31, 2025.

Solution

3\. a.

Dec. 31	Fair Value Adjustment—Trading	4,000	
	Unrealized Gain or Loss—Income ($50,000 – $46,000)		4,000

b.

Balance Sheet

Current assets	
Short-term investments, at fair value	$50,000

Income Statement

Other revenues and gains	
Unrealized gain—income	$4,000

Practice Exercises

Journalize debt investment transactions, accrue interest, and record sale.

1. **(LO 1)** Potter Company purchased 50 Quinn Company 6%, 10-year, $1,000 bonds on January 1, 2025, for $50,000. The bonds pay interest annually. On January 1, 2026, after receipt of interest, Potter Company sold 30 of the bonds for $28,100.

Instructions

Prepare the journal entries to record the transactions described above.

Solution

1.

2025			
Jan. 1	Debt Investments	50,000	
	Cash		50,000
Dec. 31	Interest Receivable	3,000	
	Interest Revenue ($50,000 × 6%)		3,000
2026			
Jan. 1	Cash	3,000	
	Interest Receivable		3,000
Jan. 1	Cash	28,100	
	Loss on Sale of Debt Investments	1,900	
	Debt Investments [(30 ÷ 50) × $50,000]		30,000

Journalize transactions for investments in stocks.

2. **(LO 2)** Lucy Inc. had the following transactions in 2025 pertaining to investments in common stock.

Jan.	1	Purchased 4,000 shares of Morgan Corporation common stock (5% interest) for $180,000 cash.
July	1	Received a cash dividend of $3 per share.
Dec.	1	Sold 600 shares of Morgan Corporation common stock for $32,000 cash.
Dec.	31	Received a cash dividend of $3 per share.

Instructions

Journalize the transactions.

Solution

2.

Jan. 1	Stock Investments	180,000	
	Cash		180,000
July 1	Cash (4,000 × $3)	12,000	
	Dividend Revenue		12,000
Dec. 1	Cash	32,000	
	Stock Investments [$180,000 × (600 ÷ 4,000)]		27,000
	Gain on Sale of Stock Investments		5,000
Dec. 31	Cash [(4,000 − 600) × $3]	10,200	
	Dividend Revenue		10,200

3. **(LO 3)** Remy Company started business on January 1, 2025, and has the following data at December 31, 2025.

Prepare adjusting entries for fair value, and indicate statement presentation for two classes of securities.

Debt Securities	Cost	Fair Value
Trading	$120,000	$132,000
Available-for-sale	100,000	86,000

The available-for-sale 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.

Dec. 31	Fair Value Adjustment—Trading		
	($132,000 − $120,000)	12,000	
	Unrealized Gain or Loss—Income		12,000
Dec. 31	Unrealized Gain or Loss—Equity		
	($100,000 − $86,000)	14,000	
	Fair Value Adjustment—Available-for-Sale		14,000

b.

Balance Sheet

Current assets	
Short-term investments, at fair value	$132,000
Investments	
Debt investments, at fair value	86,000
Stockholders' equity	
Less: Accumulated other comprehensive income	$14,000

Income Statement

Other revenues and gains	
Unrealized gain—income	$12,000

Practice Problem

(LO 2, 3) In its first year of operations, DeMarco Company had the following selected transactions in stock investments (holdings less than 20%).

Journalize transactions and prepare adjusting entry to record fair value.

June 1	Purchased for cash 600 shares of Sanburg common stock at $24 per share.
July 1	Purchased for cash 800 shares of Cey Corporation common stock at $33 per share.
Sept. 1	Received a $1 per share cash dividend from Cey Corporation.
Nov. 1	Sold 200 shares of Sanburg common stock for cash at $27 per share.
Dec. 15	Received a $0.50 per share cash dividend on Sanburg common stock.

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	Stock Investments	14,400	
	Cash (600 × $24)		14,400
	(To record purchase of 600 shares of Sanburg common stock)		
July 1	Stock Investments	26,400	
	Cash (800 × $33)		26,400
	(To record purchase of 800 shares of Cey common stock)		
Sept. 1	Cash (800 × $1.00)	800	
	Dividend Revenue		800
	(To record receipt of $1 per share cash dividend from Cey Corporation)		
Nov. 1	Cash (200 × $27)	5,400	
	Stock Investments (200 × $24)		4,800
	Gain on Sale of Stock Investments		600
	(To record sale of 200 shares of Sanburg common stock)		
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 Gain or Loss—Income	2,000	
	Fair Value Adjustment—Stock		2,000
	(To record unrealized loss on trading securities)		

Investment	Cost	Fair Value	Unrealized Gain (Loss)
Sanburg common stock	$ 9,600[a]	$10,000[b]	$ 400
Cey common stock	26,400[c]	24,000[d]	(2,400)
Totals	$36,000	$34,000	$(2,000)

[a]400 × $24; [b]400 × $25; [c]800 × $33; [d]800 × $30

Many additional resources are available for practice in Wiley Course Resources.

Questions

1. What are the reasons that companies invest in securities?
2. **a.** What is the cost of an investment in bonds?
   b. When is interest on bonds recorded?
3. Geena Jaymes is confused about losses and gains on the sale of debt investments. Explain these issues to Geena:
   a. How the gain or loss is computed.
   b. The statement presentation of gains and losses.

4. Heliy Company sells bonds that cost $40,000 for $45,000, including $1,000 of accrued interest. In recording the sale, Heliy books a $5,000 gain. Is this correct? Explain.

5. What is the cost of an investment in stock?

6. To acquire Gaines Corporation stock, Palmer Co. pays $61,500 in cash. What entry should be made for this investment, assuming the stock is readily marketable?

7. **a.** When should a long-term investment in common stock be accounted for by the equity method?
   b. When is revenue recognized under the equity method?

8. Stetson Corporation uses the equity method to account for its ownership of 30% of the common stock of Pike Packing. During 2025, Pike reported a net income of $80,000 and declares and pays cash dividends of $10,000. What recognition should Stetson Corporation give to these events?

9. What constitutes "significant influence" when an investor's financial interest is less than 50%?

10. Distinguish between the cost and equity methods of accounting for investments in stocks.

11. What are consolidated financial statements?

12. What are the valuation guidelines for trading and available-for-sale debt investments at a balance sheet date?

13. Pat Ernst is the controller of J-Products, Inc. At December 31, the end of its first year of operations, the company's investments in trading debt securities cost $74,000 and have a fair value of $70,000. Indicate how Pat would report these data in the financial statements prepared on December 31.

14. Pat Ernst is the controller of J-Products, Inc. At December 31, the end of its first year of operations, the company's investments in trading debt securities cost $74,000 and have a fair value of $70,000. How would Pat report the data if the investments were long-term and the debt securities were classified as available-for-sale?

15. Boise Company's investments in equity securities at December 31 show total cost of $202,000 and total fair value of $210,000. Boise has less than a 20% ownership interest in the equity securities. Prepare the adjusting entry.

16. Where is Accumulated Other Comprehensive Loss reported on the balance sheet?

17. Bargain Wholesale Supply owns stock in Cyrus Corporation, which it intends to hold indefinitely because of some negative tax consequences if sold. Should the investment in Cyrus be classified as a short-term investment? Why?

Brief Exercises

BEG.1 **(LO 1), AP** Ownbey Corporation purchased debt investments for $52,000 on January 1, 2025. On July 1, 2025, Ownbey received cash interest of $2,340. Journalize the purchase and the receipt of interest. Assume that no interest has been accrued.

Journalize entries for debt investments.

BEG.2 **(LO 2), AP** On August 1, Shaw Company buys 1,000 shares of Estrada common stock for $37,000 cash. On December 1, Shaw sells the stock investments for $40,000 in cash. Journalize the purchase and sale of the common stock.

Journalize entries for stock investments.

BEG.3 **(LO 2), AP** Noler Company owns 25% of Lauer Company. For the current year, Lauer reports net income of $180,000 and declares and pays a $50,000 cash dividend. Record Noler's equity in Lauer's net income and the receipt of dividends from Lauer.

Record transactions under the equity method.

BEG.4 **(LO 3), AP** Cost and fair value data for the trading debt securities of Munoz Company at December 31, 2025, are $64,000 and $59,000 respectively. Prepare the adjusting entry to record the securities at fair value.

Prepare adjusting entry using fair value.

BEG.5 **(LO 3), AP** Cost and fair value data for the trading debt securities of Munoz Company at December 31, 2025, are $64,000 and $59,000 respectively. Show the financial statement presentation of the trading securities and related accounts.

Indicate statement presentation using fair value.

BEG.6 **(LO 3), AP** In its first year of operations, Godfrey Corporation purchased available-for-sale debt securities costing $72,000 as a long-term investment. At December 31, 2025, the fair value of the securities is $68,000. Prepare the adjusting entry to record the securities at fair value.

Prepare adjusting entry using fair value.

BEG.7 **(LO 3), AP** In its first year of operations, Godfrey Corporation purchased, available-for-sale debt securities costing $72,000 as a long-term investment. At December 31, 2025, the fair value of the securities is $68,000. Show the financial statement presentation of the securities and related accounts. Assume the securities are noncurrent.

Indicate statement presentation using fair value.

BEG.8 **(LO 3), AP** Kruger Corporation has these long-term investments: common stock of Eidman Co. (10% ownership), cost $108,000, fair value $115,000; common stock of Pickerill Inc. (30% ownership), cost $210,000, equity $260,000; and debt investment, cost $90,000, fair value $150,000. Prepare the investments section of the balance sheet.

Prepare investments section of balance sheet.

BEG.9 **(LO 2, 3), AP** Christina Corporation purchased 400 shares of Nolan Inc. common stock for $13,200 (Christina does not have significant influence). During the year, Nolan paid a cash dividend of $3.25 per share. At year-end, Nolan stock was selling for $34.50 per share. Prepare Christina's journal entries to

Journalize transactions under cost and equity methods.

record (a) the purchase of the investment, (b) the dividends received, and (c) the fair value adjustment. (Assume a zero balance in the Fair Value Adjustment account.)

Prepare journal entries for trading securities.

BEG.10 (LO 3), AP Detroit Company has a stock portfolio valued at $6,000. Its cost was $4,000. If the Fair Value Adjustment account has a debit balance of $300, prepare the journal entry at year-end.

DO IT! Exercises

Make entries for bond investment.

DO IT! G.1 (LO 1), AP Kurtyka Corporation had the following transactions relating to debt investments:

Jan. 1, 2025	Purchased 50, $1,000, 10% Spiller Company bonds for $50,000. Interest is payable annually on January 1.
Dec. 31, 2025	Accrued interest on Spiller Company bonds.
Jan. 1, 2026	Received interest from Spiller Company bonds.
Jan. 1, 2026	Sold 30 Spiller Company bonds for $29,000.

Journalize the above transactions, including the adjusting entry for the accrual of interest on December 31, 2025.

Make journal entries for stock investments.

DO IT! G.2 (LO 2), AP Presented below are two independent situations:

1. Edelman Inc. acquired 10% of the 500,000 shares of common stock of Schuberger Corporation at a total cost of $11 per share on June 17, 2025. On September 3, Schuberger declared and paid a $160,000 dividend. On December 31, Schuberger reported net income of $550,000 for the year.
2. Wen Corporation obtained significant influence over Hunsaker Company by buying 30% of Hunsaker's 100,000 outstanding shares of common stock at a cost of $18 per share on January 1, 2025. On May 15, Hunsaker declared and paid a cash dividend of $150,000. On December 31, Hunsaker reported net income of $270,000 for the year.

Prepare all necessary journal entries for 2025 for (a) Edelman and (b) Wen.

Make journal entries for trading and available-for-sale securities.

DO IT! G.3a (LO 3), AP Some of Tollakson Corporation's investments in debt securities are classified as trading securities and some are classified as available-for-sale. The cost and fair value of each category at December 31, 2025, were as follows.

	Cost	Fair Value	Unrealized Gain (Loss)
Trading securities	$96,300	$84,900	$(11,400)
Available-for-sale securities	$59,000	$63,200	$ 4,200

At December 31, 2024, the Fair Value Adjustment—Trading account had a debit balance of $3,200, and the Fair Value Adjustment—Available-for-Sale account had a credit balance of $5,750. Prepare the required journal entries for each group of securities for December 31, 2025.

Indicate financial statement presentation of investments.

DO IT! G.3b (LO 3), K Identify where each of the following items would be reported in the financial statements.

1. Loss on sale of investments in stock.
2. Unrealized gain or loss—equity.
3. Fair value adjustment—trading.
4. Interest earned on investments in bonds.
5. Unrealized loss on trading securities.

Use the following possible categories.

Balance sheet:

Current assets	Current liabilities
Investments	Long-term liabilities
Property, plant, and equipment	Stockholders' equity
Intangible assets	

Income statement:

Other revenues and gains	Other expenses and losses

Exercises

EG.1 **(LO 1), K** Mr. Taliaferro is studying for an accounting test and has developed the following questions about investments.

Understand debt and stock investments.

1. What are three reasons why companies purchase investments in debt or stock 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 stock investment when investing cash for strategic reasons?

Instructions

Provide answers for Mr. Taliaferro.

EG.2 **(LO 1), AP** Jenek Corporation had the following transactions pertaining to debt investments.

Journalize debt investment transactions and accrue interest.

1. Purchased 40 Leeds Co. 9% bonds (each with a face value of $1,000) for $40,000 cash on January 1, 2025. Interest is payable annually on January 1.
2. Accrued interest on Leeds Co. bonds on December 31, 2025.
3. Received interest on Leeds Co. bonds on January 1, 2026.
4. Sold 30 Leeds Co. bonds for $33,000 on January 1, 2026.

Instructions

Journalize the transactions.

EG.3 **(LO 1), AP** Flynn Company purchased 70 Rinehart Company 6%, 10-year, $1,000 bonds on January 1, 2025, for $70,000. The bonds pay interest annually on January 1. On January 1, 2026, after receipt of interest, Flynn Company sold 40 of the bonds for $38,500.

Journalize debt investment transactions, accrue interest, and record sale.

Instructions

Prepare the journal entries to record the transactions described above.

EG.4 **(LO 2), AP** Hulse Company had the following transactions pertaining to stock investments.

Journalize stock investment transactions.

Feb. 1	Purchased 600 shares of Wade common stock (2%) for $7,200 cash.
July 1	Received cash dividends of $1 per share on Wade common stock.
Sept. 1	Sold 300 shares of Wade common stock for $4,300.
Dec. 1	Received cash dividends of $1 per share on Wade common stock.

Instructions

a. Journalize the transactions.

b. Explain how dividend revenue and the gain (loss) on sale should be reported in the income statement.

EG.5 **(LO 2), AP** Nosker Inc. had the following transactions pertaining to investments in common stock.

Journalize transactions for investments in stocks.

Jan. 1	Purchased 2,500 shares of Escalante Corporation common stock (5%) for $152,000 cash.
July 1	Received a cash dividend of $3 per share.
Dec. 1	Sold 500 shares of Escalante Corporation common stock for $32,000 cash.
Dec. 31	Received a cash dividend of $3 per share.

Instructions

Journalize the transactions.

EG.6 **(LO 2), AP** On February 1, Rinehart Company purchased 500 shares (2% ownership) of Givens Company common stock for $32 per share. On March 20, Rinehart Company sold 100 shares of Givens stock for $2,900. Rinehart received a dividend of $1.00 per share on April 25. On June 15, Rinehart sold 200 shares of Givens stock for $7,600. On July 28, Rinehart received a dividend of $1.25 per share.

Journalize transactions for investments in stocks.

Instructions

Prepare the journal entries to record the transactions described above.

Journalize and post transactions, under the equity method.

EG.7 **(LO 2), AP** On January 1, Zabel Corporation purchased a 25% equity in Helbert Corporation for $180,000. At December 31, Helbert declared and paid a $60,000 cash dividend and reported net income of $200,000.

Instructions

a. Journalize the transactions.

b. Determine the amount to be reported as an investment in Helbert stock at December 31.

Journalize entries under cost and equity methods.

EG.8 **(LO 2, 3), AP** The following are two independent situations.

1. Gambino Cosmetics acquired 10% of the 200,000 shares of common stock of Nevins Fashion at a total cost of $13 per share on March 18, 2025. On June 30, Nevins declared and paid a $60,000 dividend. On December 31, Nevins reported net income of $122,000 for the year. At December 31, the market price of Nevins Fashion was $15 per share.
2. Kanza, Inc., obtained significant influence over Rogan Corporation by buying 40% of Rogan's 30,000 outstanding shares of common stock at a total cost of $9 per share on January 1, 2025. On June 15, Rogan declared and paid a cash dividend of $30,000. On December 31, Rogan reported a net income of $80,000 for the year.

Instructions

Prepare all the necessary journal entries for 2025 for (a) Gambino Cosmetics and (b) Kanza, Inc.

Understand the usefulness of consolidated statements.

EG.9 **(LO 2), K** **Writing** Agee Company purchased 70% of the outstanding common stock of Himes Corporation.

Instructions

a. Explain the relationship between Agee Company and Himes Corporation.

b. How should Agee account for its investment in Himes?

c. Why is the accounting treatment described in (b) useful?

Prepare adjusting entry to record fair value, and indicate statement presentation.

Excel

EG.10 **(LO 3), AP** At December 31, 2025, the trading debt securities for Storrer, Inc. are as follows.

Security	Cost	Fair Value
A	$17,500	$16,000
B	12,500	14,000
C	23,000	21,000
	$53,000	$51,000

Instructions

a. Prepare the adjusting entry at December 31, 2025, to report the securities at fair value.

b. Show the balance sheet and income statement presentation at December 31, 2025, after adjustment to fair value.

Prepare adjusting entry to record fair value, and indicate statement presentation.

EG.11 **(LO 3), AP** **Writing** At December 31, 2025, available-for-sale debt securities for Storrer, Inc. are as follows. The securities are considered to be a long-term investment.

Security	Cost	Fair Value
A	$17,500	$16,000
B	12,500	14,000
C	23,000	21,000
	$53,000	$51,000

Instructions

a. Prepare the adjusting entry at December 31, 2025, to report the securities at fair value.

b. Show the statement presentation at December 31, 2025, after adjustment to fair value.

c. E. Kretsinger, a member of the board of directors, does not understand the reporting of the unrealized gains or losses. Write a letter to Ms. Kretsinger explaining the reporting and the purposes that it serves.

Prepare adjusting entries for fair value, and indicate statement presentation for two classes of securities.

EG.12 **(LO 3), AP** Uttinger Company has these data at December 31, 2025, the end of its first year of operations.

Debt Securities	Cost	Fair Value
Trading	$120,000	$126,000
Available-for-sale	100,000	96,000

The available-for-sale 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.

Problems

PG.1 (LO 1, 3), AP Vilander Carecenters Inc. 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 Vilander, whose fiscal year ends on December 31.

Journalize debt investment transactions and show financial statement presentation.

2025

Jan. 1 Purchased at face value $2,000,000 of Javier Nursing Centers, Inc., 10-year, 8% bonds dated January 1, 2025, directly from Javier.

Dec. 31 Accrual of interest at year-end on the Javier bonds.

Assume that all intervening transactions and adjustments have been properly recorded and the quantity of bonds owned has not changed from December 31, 2025, to December 31, 2027.

2028

Jan. 1 Received the annual interest on the Javier bonds.

Jan. 1 Sold $1,000,000 Javier bonds at 106.

Dec. 31 Accrual of interest at year-end on the Javier bonds.

Instructions

a. Journalize the listed transactions for the years 2025 and 2028.

a. Gain on sale of debt investment $60,000

b. Assume that the fair value of the bonds at December 31, 2025, was $2,200,000. These bonds are classified as available-for-sale securities. Prepare the adjusting entry to record these bonds at fair value.

c. Based on your analysis in part (b), show the balance sheet presentation of the bonds and interest receivable at December 31, 2025. Assume the investments are considered long-term. Indicate where any unrealized gain or loss is reported in the financial statements.

PG.2 (LO 2, 3), AP In January 2025, the management of Kinzie Company concludes that it has sufficient cash to permit some short-term investments in debt and equity securities. During the year, the following transactions occurred.

Journalize investment transactions, prepare adjusting entry, and show statement presentation.

Feb. 1 Purchased 600 shares of Muninger common stock for $32,400.

Mar. 1 Purchased 800 shares of Tatman common stock for $20,000.

Apr. 1 Purchased 50 of $1,000, 7% Yoakem bonds for $50,000. Interest is payable semiannually on April 1 and October 1.

July 1 Received a cash dividend of $0.60 per share on the Muninger common stock.

Aug. 1 Sold 200 shares of Muninger common stock at $58 per share.

Sept. 1 Received a $1 per share cash dividend on the Tatman common stock.

Oct. 1 Received the semiannual interest on the Yoakem bonds.

Oct. 1 Sold the Yoakem bonds for $49,000.

At December 31, the fair value of the Muninger and Tatman common stocks were $55 and $24 per share respectively. These stock investments by Kinzie Company provide less than a 20% ownership interest.

Instructions

a. Journalize the transactions and post to the accounts Debt Investments and Stock Investments. (Use the T-account form.)

a. Gain on sale of stock investment $800

b. Prepare the adjusting entry at December 31, 2025, to report the investment securities at fair value. All securities are considered to be trading securities.

c. Show the balance sheet presentation of investment securities at December 31, 2025.

d. Identify the income statement accounts and give the statement classification of each account.

Journalize transactions and adjusting entry for stock investments.

Excel

EG.3 **(LO 2, 3), AP** On December 31, 2024, the end of its first year of operations, Turnball Associates owned the following securities, that are held as a long-term investments. The securities are not held for influence or control of the investee.

Common Stock	Shares	Cost
Gehring Co.	2,000	$60,000
Wooderson Co.	5,000	45,000
Kitselton Co.	1,500	30,000

On December 31, 2024, the total fair value of the securities was equal to its cost. In 2025, the following transactions occurred.

Aug.	1	Received $0.50 per share cash dividend on Gehring Co. common stock.
Sept.	1	Sold 1,500 shares of Wooderson Co. common stock for cash at $8 per share.
Oct.	1	Sold 800 shares of Gehring Co. common stock for cash at $33 per share.
Nov.	1	Received $1 per share cash dividend on Kitselton Co. common stock.
Dec.	15	Received $0.50 per share cash dividend on Gehring Co. common stock.
	31	Received $1 per share annual cash dividend on Wooderson Co. common stock.

At December 31, the fair values per share of the common stocks were: Gehring Co. $32, Wooderson Co. $8, and Kitselton Co. $18. These investments should be classified as long-term.

Instructions

a. Journalize the 2025 transactions and post to the account Stock Investments. (Use the T-account form.)

b. Prepare the adjusting entry at December 31, 2025, to show the securities at fair value.

c. Show the balance sheet presentation of the investments and the equity section of the balance sheet at December 31, 2025. At this date, Turnball Associates has common stock $1,500,000 and retained earnings $1,000,000.

b. Unrealized gain or loss—income $4,1[illegible]

Prepare entries under the cost and equity methods, and tabulate differences.

EG.4 **(LO 2, 3), AP** Heidebrecht Design acquired 20% of the outstanding common stock of Quayle Company on January 1, 2025, by paying $800,000 for 30,000 shares. Quayle declared and paid $0.30 per share cash dividends on March 15, June 15, September 15, and December 15, 2025. Quayle reported net income of $320,000 for the year. At December 31, 2025, the market price of Quayle common stock was $34 per share.

Instructions

a. Prepare the journal entries for Heidebrecht Design for 2025 assuming Heidebrecht Design cannot exercise significant influence over Quayle. (Use the cost method.)

b. Prepare the journal entries for Heidebrecht Design for 2025, assuming Heidebrecht Design can exercise significant influence over Quayle. (Use the equity method.)

c. Indicate the balance sheet and income statement account balances at December 31, 2025, under each method of accounting.

a. Total dividend revenue $3[illegible]

b. Revenue from stock investments $[illegible]

Journalize stock investment transactions and show statement presentation.

EG.5 **(LO 2, 3), AP** Here is Frederick Company's portfolio of long-term stock investments at December 31, 2024, the end of its first year of operations.

	Cost
1,000 shares of Willhite Corporation common stock	$52,000
1,400 shares of Hutcherson Corporation common stock	84,000
1,200 shares of Downing Corporation preferred stock	33,600

On December 31, the total cost of the portfolio equaled the total fair value. Frederick had the following transactions related to the securities during 2025.

Jan.	20	Sold all 1,000 shares of Willhite Corporation common stock at $55 per share.
	28	Purchased 400 shares of $10 par value common stock of Liggett Corporation at $78 per share.
	30	Received a cash dividend of $1.15 per share on Hutcherson Corp. common stock.
Feb.	8	Received cash dividends of $0.40 per share on Downing Corp. preferred stock.
	18	Sold all 1,200 shares of Downing Corp. preferred stock at $27 per share.
July	30	Received a cash dividend of $1.00 per share on Hutcherson Corp. common stock.
Sept.	6	Purchased an additional 900 shares of $10 par value common stock of Liggett Corporation at $82 per share.
Dec.	1	Received a cash dividend of $1.50 per share on Liggett Corporation common stock.

At December 31, 2025, the fair values of the securities were:

Hutcherson Corporation common stock	$64 per share
Liggett Corporation common stock	$72 per share

Instructions

a. Prepare journal entries to record the transactions.

b. Post to the investment account. (Use a T-account.)

c. Prepare the adjusting entry at December 31, 2025 to report the portfolio at fair value.

d. Show the balance sheet presentation at December 31, 2025, for the investment-related accounts.

a. Loss on sale of stock investment $1,200

c. Unrealized gain or loss—income $5,800

PG.6 (LO 3), AP The following data, presented in alphabetical order, are taken from the records of Nieto Corporation.

Prepare a balance sheet.

Accounts payable	$ 260,000
Accounts receivable	140,000
Accumulated depreciation—buildings	180,000
Accumulated depreciation—equipment	52,000
Allowance for doubtful accounts	6,000
Bonds payable (10%, due 2033)	500,000
Buildings	950,000
Cash	62,000
Common stock ($10 par value; 500,000 shares authorized, 150,000 shares issued)	1,500,000
Dividends payable	80,000
Equipment	275,000
Goodwill	200,000
Income taxes payable	120,000
Inventory	170,000
Investment in Mara common stock (30% ownership), at equity	380,000
Investment in Sasse common stock, at fair value	300,000
Land	390,000
Notes payable (due 2026)	70,000
Paid-in capital in excess of par—common stock	130,000
Premium on bonds payable	40,000
Prepaid insurance	16,000
Retained earnings	125,000
Short-term investments, at fair value	180,000

The investment in Sasse common stock is considered to be a long-term security.

Instructions

Prepare a classified balance sheet at December 31, 2025.

Total assets $2,825,000

Company Index

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T

RAPID REVIEW
Chapter Content

ACCOUNTING CONCEPTS (Chapters 2–4)

Fundamental Qualities	Enhancing Qualities	Assumptions	Principles	Constraint
Relevance	Comparability	Monetary unit	Historical cost	Materiality
Faithful representation	Consistency	Economic entity	Fair value	
	Verifiability	Periodicity	Full disclosure	
	Timeliness	Going concern	Revenue recognition	
	Understandability	Accrual basis	Expense recognition	

BASIC ACCOUNTING EQUATION (Chapter 3)

Basic Equation	**Assets**		=	**Liabilities**		+	**Stockholders' Equity**													
Expanded Basic Equation	Assets		=	Liabilities		+	Common Stock		+	Retained Earnings		+	Revenues		−	Expenses		−	Dividends	
Debit / Credit Rules	Dr. +	Cr. −		Dr. −	Cr. +		Dr. −	Cr. +		Dr. −	Cr. +		Dr. −	Cr. +		Dr. +	Cr. −		Dr. +	Cr. −

INVENTORY (Chapters 5 and 6)

Ownership

Freight Terms	Ownership of goods on public carrier resides with:
FOB shipping point	Buyer
FOB destination	Seller

ADJUSTING ENTRIES (Chapter 4)

	Type	Adjusting Entry	
Deferrals	1. Prepaid expenses	Dr. Expenses	Cr. Assets
	2. Unearned revenues	Dr. Liabilities	Cr. Revenues
Accruals	1. Accrued revenues	Dr. Assets	Cr. Revenues
	2. Accrued expenses	Dr. Expenses	Cr. Liabilities

Note: Each adjusting entry will affect one or more income statement accounts and one or more balance sheet accounts.

Interest Computation

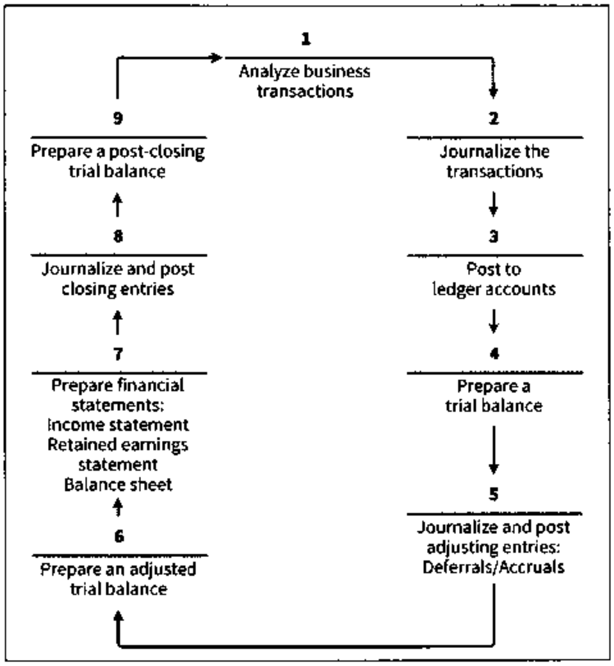
Interest = Face value of note × Annual interest rate × Time in terms of one year

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.

ACCOUNTING CYCLE (Chapter 4)



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 purchased 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
Return of sold goods	Sales Returns and Allowances Accounts Receivable Inventory Cost of Goods Sold	Sales Returns and Allowances Accounts Receivable No entry
End of period	No entry	Closing or adjusting entry required

FRAUD, INTERNAL CONTROL, AND CASH (Chapter 7)

Principles of Internal Control

Establishment of responsibility
Segregation of duties
Documentation procedures
Physical controls
Independent internal verification
Human resource controls

The Fraud Triangle

Bank Reconciliation

Bank	Books
Balance per bank statement	Balance per books
Add: Deposits in transit	Add: Unrecorded credit memoranda from bank statement
Deduct: Outstanding checks	Deduct: Unrecorded debit memoranda from bank statement
Adjusted cash balance	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 for items affecting books.

Stop and Check: Does the adjusted cash balance in the Cash account equal the reconciled balance?

RAPID REVIEW
Chapter Content

RECEIVABLES (Chapter 8)

Two 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 method	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.

Steps to Manage Accounts Receivable

1. Determine to whom to extend credit.
2. Establish a payment period.
3. Monitor collections.
4. Evaluate the receivables balance.
5. Accelerate cash receipts from receivables when necessary.

PLANT ASSETS (Chapter 9)

Computation of Annual Depreciation Expense

Straight-line	$\frac{\text{Cost} - \text{Salvage value}}{\text{Useful life (in years)}}$
***Declining-balance**	Book value at beginning of year × Declining balance rate* *Declining-balance rate = 1 ÷ Useful life (in years)
***Units-of-activity**	$\frac{\text{Cost} - \text{Salvage value}}{\text{Useful life (in units)}}$ × Units of activity during year

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**	$\frac{\text{Bond discount (premium)}}{\text{Number of interest periods}}$	
***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

STOCKHOLDERS' EQUITY (Chapter 11)

No-Par Value vs. Par Value Stock Journal Entries

No-Par Value	Par Value
Cash Common Stock	Cash Common Stock (par value) Paid-in Capital in Excess of Par Value

Comparison of Dividend Effects

	Cash	Common Stock	Retained Earnings
Cash dividend	↓	No effect	↓
Stock dividend	No effect	↑	↓
Stock split	No effect	No effect	No effect

*Items with asterisk are covered in appendix.

STATEMENT OF CASH FLOWS (Chapter 12)

Cash flows from operating activities (**indirect method**)

Net income			
Add:	Amortization and depreciation	\$ X	
	Losses on disposals of assets	X	
	Decreases in current assets	X	
	Increases in current liabilities	X	
Deduct:	Increases in current assets	(X)	
	Decreases in current liabilities	(X)	
	Gains on disposals of assets	(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)	\$ X	
Cash payments		
(Examples: to suppliers, for operating expenses, for interest, for taxes)	(X)	
Net cash provided (used) by operating activities		\$ X

FINANCIAL STATEMENT ANALYSIS (Chapter 13)

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.

Income Statement

Sales		\$ X
Cost of goods sold		X
Gross profit		X
Operating expenses		X
Income from operations		X
Other revenues (expenses) and gains (losses)		X
Income before income taxes		X
Income tax expense		X
Income from continuing operations		X
Discontinued operations		
Gain/loss from operation of division, net of tax	\$ X	
Gain/loss on disposal of division, net of tax	X	X
Net income		**\$ X**

INVESTMENTS (Appendix H)

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 Stock Investments

Event	Cost	Equity
Acquisition	Stock Investments Cash	Stock Investments Cash
Investee reports earnings	No entry	Stock Investments Investment Revenue
Investee pays dividends	Cash Dividend Revenue	Cash Stock Investments

RAPID REVIEW
Financial Statements

Order of Preparation	Date
1. Income statement	For the period ended
2. Retained earnings statement	For the period ended
3. Balance sheet	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 revenues and gains		
(Examples: interest, gains)	X	
Other expenses and losses		
(Examples: interest, losses)	X	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 revenues and gains			
(Examples: interest, gains)		X	
Other expenses and losses			
(Examples: interest, losses)		X	X
Income before income taxes			X
Income tax expense			X
Net income			$ X

Name of Company
Statement of Comprehensive Income
For the Period Ended

Net income	$ X
Other comprehensive income	X
Comprehensive income	$ X

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.

Balance Sheet

Name of Company
Balance Sheet
As of the End of the Period

Assets

Current assets			
(Examples: cash, short-term investments, accounts receivable, inventory, prepaids)			$ X
Long-term investments			
(Examples: investments in bonds, investments in stocks)			X
Property, plant, and equipment			
Land		$ X	
Buildings and equipment	$ X		
Less: Accumulated depreciation	X	X	X
Intangible assets			X
Total assets			$ X

Liabilities and Stockholders' Equity

Liabilities	
Current liabilities	
(Examples: notes payable, accounts payable, accruals, unearned revenues, current portion of notes payable)	$ X
Long-term liabilities	
(Examples: notes payable, bonds payable)	X
Total liabilities	X
Stockholders' equity	
Common stock	X
Retained earnings	X
Total liabilities and stockholders' equity	$ X

Stop and Check: Total assets on the balance sheet must equal total liabilities plus stockholders' equity; and, ending retained earnings on the balance sheet 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 long-term assets)	
Net cash provided (used) by investing activities	X
Cash flows from financing activities	
(Examples: issue / repayment of long-term liabilities, issue of stock, 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 balance sheet.

RAPID REVIEW

Tools for Analysis

Liquidity

Working capital	Current assets − Current liabilities
Current ratio	$\dfrac{\text{Current assets}}{\text{Current liabilities}}$
Inventory turnover	$\dfrac{\text{Cost of goods sold}}{\text{Average inventory}}$
Days in inventory	$\dfrac{\text{365 days}}{\text{Inventory turnover}}$
Accounts receivable turnover	$\dfrac{\text{Net credit sales}}{\text{Average net accounts receivable}}$
Average collection period	$\dfrac{\text{365 days}}{\text{Accounts receivable turnover}}$

Solvency

Debt to assets ratio	$\dfrac{\text{Total liabilities}}{\text{Total assets}}$
Times interest earned	$\dfrac{\text{Net income + Interest expense + Income tax expense}}{\text{Interest expense}}$
Free cash flow	Net cash provided by operating activities − Capital expenditures − Cash dividends

Profitability

Earnings per share	$\dfrac{\text{Net income − Preferred dividends}}{\text{Weighted-average common shares outstanding}}$
Price-earnings ratio	$\dfrac{\text{Market price per share}}{\text{Earnings per share}}$
Gross profit rate	$\dfrac{\text{Gross profit}}{\text{Net sales}}$
Profit margin	$\dfrac{\text{Net income}}{\text{Net sales}}$
Return on assets	$\dfrac{\text{Net income}}{\text{Average total assets}}$
Asset turnover	$\dfrac{\text{Net sales}}{\text{Average total assets}}$
Payout ratio	$\dfrac{\text{Cash dividends paid on common stock}}{\text{Net income}}$
Return on common stockholders' equity	$\dfrac{\text{Net income − Preferred dividends}}{\text{Average common stockholders' equity}}$