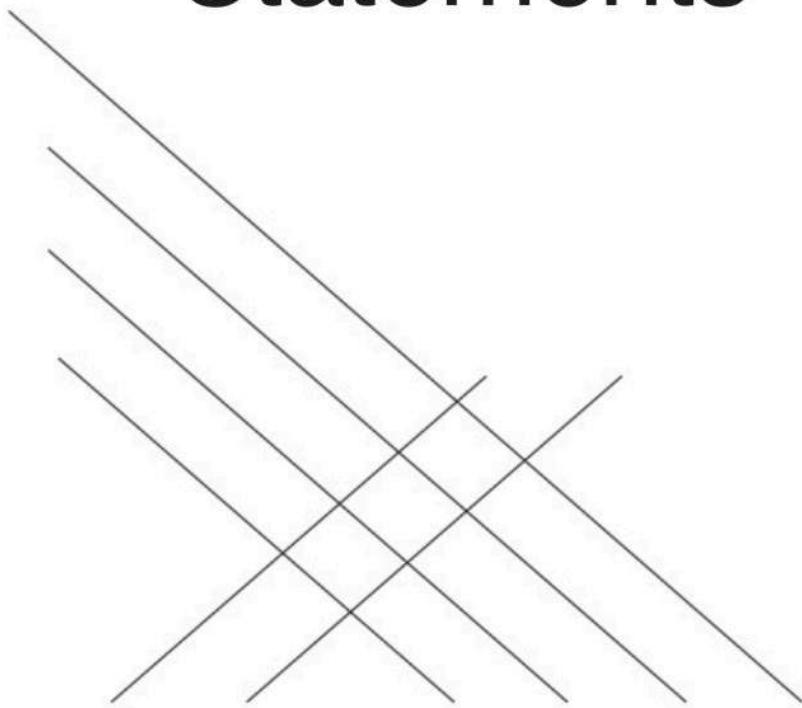




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The Financial Statements



Learning Objectives

After studying this chapter, you should be able to describe the following:

- The objectives of financial reporting
 - The accounting equation
 - The four main financial statements
 - The characteristics of accounting information
 - The main accounting concepts
-

2.1

Introduction

In the first chapter, we established the need for accounting for scorekeeping, attention directing, and decision making. We now go on to discuss the information financial accounting provides for scorekeeping. The set of financial reports that are produced for public use by a company consists of the following:

- The balance sheet
- The income statement
- The statement of changes in equity
- The cash flow statement

Each of these statements has a role; together, they provide a rich body of information about the organization. Each will be discussed in detail. First, though, we should establish what it is we are trying to achieve with these reports.

We will concentrate on the reporting process used by publicly traded companies. Only public companies are required to report externally. Other entities may choose to make their financial statements public, but they have no legal obligation to do so. The rules that are discussed in this chapter are those that apply to a company registered under the *Canada Business Corporations Act*. The rules that apply to a company incorporated under any of the provincial corporations Acts may differ slightly, but the main points are the same.

Not only is there a difference between publicly traded companies and other types of business entities in the way they publish information, there are also some differences in the reports themselves — mostly in the way equity is treated. Those differences, however, will not be addressed here.

2.2

The Objectives of Financial Reporting

A company is incorporated under either the federal or one of the provincial companies Acts. These Acts, together with their associated administrative regulations, require the company to observe certain standards of financial reporting, in particular that

The Objectives of Financial Reporting

- the company must produce financial statements;
- the financial statements must be distributed annually to the shareholders;
- the financial statements shall consist of an income statement, a balance sheet, a statement of changes in equity, and a statement of cash flows; and
- the statements should be prepared in accordance with the standards of the Chartered Professional Accountants of Canada (CPA Canada).

To elicit what CPA Canada requires, we have to look at the CPA Canada Standards and Guidance Collection, *CPA Canada Handbook: The Standards and Guidance Collection (CPA Handbook)*. The *CPA Handbook* is divided into four separate frameworks:

- Part 1 — International financial reporting standards (IFRS)
- Part 2 — Accounting standards for private enterprises (ASPE)
- Part 3 — Not-for-profit accounting standards
- Part 4 — Pension plan accounting standards

The Part 1 framework standards are required for public companies, whereas the Part 2 framework standards may be used by private companies. In this textbook, we assume that companies are public; therefore, we will follow the standards of Part 1. However, many companies in Canada are private and as such follow the ASPE standards. Where there are significant differences, we will examine the difference. The Part 3 framework contains standards for the not-for-profit sector, which is not covered in this print edition.¹ The *CPA Handbook* contains detailed provisions about the treatment of some, though far from all, of the elements of financial statements.

It is, therefore, clear that much of the detail of the way in which financial statements are prepared lies elsewhere. Such detail can be found in the professional knowledge that accountants have and use in their work on a day-to-day basis.

The *CPA Handbook* begins with the conceptual framework that describes the primary users of the financial statements and the underlying objectives of financial statements. According to the *CPA Handbook*, financial statements are prepared for the following purposes:

- for the use of actual and potential investors and creditors,
- for the use of those who make investing and lending decisions, and
- to assist users in making decisions relating to providing resources to the entity, predicting future cash flows, and assessing management's stewardship of the entity's economic resources.

In order to be useful for the users of the financial statements, the information shown should reflect the economic resources of the entity, claims against the entity, and changes in those resources and claims. This information is shown on the balance sheet and the statement of changes in equity. The statements should also reflect how efficiently and effectively the entity's management and governing board have discharged their responsibilities to use the entity's economic resources. This information is largely reflected on the income statement and the cash flow statement.

¹ A detailed coverage of this topic is included in Chapter 16 of the online streaming eBook edition of this book.

Chapter 2 The Financial Statements

The CPA statement of objectives is quite appropriate in the context of the shares of companies that are bought and sold by the general public through stock exchanges. It is also reasonable to state that the legal requirement for providing all shareholders with financial statements has a purpose. This purpose is to be found in the concept of *stewardship*.

The shareholders of the company do not take part in the day-to-day management. They appoint directors (and the directors, in turn, appoint managers) to carry out the actual work of management. This situation is sometimes referred to as the divorce of ownership and control. The financial statements provide some evidence of the extent to which the directors have exercised good (or, sometimes, bad) management. In other words, they enable shareholders to assess whether or not the directors have exercised their stewardship of the company assets effectively.

2.3

The Accounting Equation

Before we discuss any of the financial statements in any detail, it is necessary to introduce the accounting equation. The accounting equation is the logical structure that underlies the recording and reporting of financial results. It is normally expressed in terms of “debits” and “credits”. Knowledge of the mechanics of debits and credits is not required for an understanding of accounting. All the same, those who have frequent dealings with accountants and accounting reports may find that some familiarity with debits and credits and the more technical vocabulary of accounting is useful. Most companies will use an accounting software that simulates the equation. There are third-party softwares available for purchase, or companies can develop their own internally. For those who are interested, an introduction to the basic ideas is presented in Appendix 2.1 of this chapter, and further details are provided in appendices to Chapters 3, 5, and 6.

All four financial statements are drawn from an accounting system based on the accounting equation. This is most evident in the structure of the balance sheet (a financial representation of the company at an instant of time). The balance sheet is essentially a detailed listing of

- what the company owns,
- what the company owes, and
- the owners’ financial interest claim on the company.

It is done in a way that satisfies the following equation:

$$\text{ASSETS} = \text{LIABILITIES} + \text{EQUITY}$$

Each capitalized term in the equation represents the total value of all the items of that type that the company has a relationship to. In other words,

- ASSETS is the sum of the value of everything that the company owns;
- LIABILITIES is the sum of all the debt claims on the company (i.e., the sum of all the specific promises the company has made to pay monies to outsiders in the future); and
- EQUITY is the total value of the owners’ financial claim on the company.

The Accounting Equation

Thus, one way of looking at the accounting equation is that it is a representation of what the company OWNS on one side — total assets — and a representation of the total CLAIMS on those assets — total liabilities plus total equity — on the other.

To make the nature of this equality clearer in a way that emphasizes the residual nature of the owners' claim, rewrite the accounting equation by subtracting LIABILITIES from each side of the equation, so it reads as follows:

$$\text{ASSETS} - \text{LIABILITIES} = \text{EQUITY}$$

The left-hand side is net assets, the net value obtained after the total claims of the debt holders are subtracted from the total value of the assets. In fact, EQUITY is often referred to as NET ASSETS (assets – liabilities). If any transaction affects the valuation of total assets or total liabilities such that there is a difference between the two changes, then the valuation of equity *must* also be adjusted to maintain the accounting equation.

The income statement, the statement of changes in equity, and the cash flow statement are each summaries of changes in different parts of the accounting equation over a period of time, always respecting the rule that equity is adjusted to reflect changes in net assets. In addition to the accounting equation and the rules for deriving from it the different accounting statements, there are a number of other rules involved in the accounting process, which are collectively called Generally Accepted Accounting Principles (GAAP). These will be discussed throughout Section 1 of this book.

Subject to the limitations of GAAP, financial statements can answer such questions as the following:

- What is the value of the company's assets at the end of the most recent financial year?
- What are the liabilities of the company at the end of the most recent financial year?
- What is the equity (ownership claim) in the company, and how did it evolve in the year?
- How well did the company do this past year in its operations?
- How did the company get cash in the year, and how did it spend it?

Although these are independent questions, and the answers are found on different parts of different statement, they are connected through the accounting equation.

Let us examine some simple transactions to see how they are handled by the accounting equation.

When a company is first organized, it has no assets, no liabilities, and no equity. The accounting equation is satisfied since

$$\begin{array}{rcl} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$0 & = & \$0 + \$0 \end{array}$$

As the company engages in transactions, the accounting equation will be used to record the effect of those transactions on the assets, the liabilities, and the equity. In Appendix 2.1, the same transactions will be used to illustrate the

Chapter 2 The Financial Statements

mechanics of double-entry accounting. We will assume that the company buys and sells hardware and software for small businesses.

Transaction #1 The owners invested \$25,000 in the company.

- Assets have increased by \$25,000.
- Liabilities are unchanged.
- Equity has increased by \$25,000.

$$\begin{array}{rcl} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$25,000 & = & \$0 + \$25,000 \end{array}$$

There is only one transaction (the owners invested \$25,000 in the company). Note, however, that two separate aspects of the transaction have been recognized in the (revised) accounting equation. First, the company has recorded the fact that it now has \$25,000 of assets. Second, the company has recognized that the source of that \$25,000 was the owners' investment. The company not only has \$25,000, it also has an obligation to the owners to account for the \$25,000 they have invested.

It is this recording of the dual effect (on assets and equity, for example) that gives "double-entry" bookkeeping its name.

The nature of the obligation to the owners is subtle. It is not a debt that has to be repaid, but the company is responsible for using the resources for the long-term benefit of the owners.

Transaction #2 The company borrowed \$10,000 from a bank.

- Assets have increased by \$10,000.
- Liabilities have increased by \$10,000.
- Equity is unchanged.

$$\begin{array}{rcl} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$35,000 & = & \$10,000 + \$25,000 \end{array}$$

As with transaction #1, when transaction #2 was recorded, two aspects of the event were captured: (i) the assets were shown as increasing (they started at \$25,000; they increased by \$10,000; they became \$35,000), and (ii) the source of that increase was shown by way of a matching increase in the liabilities. Again, as with transaction #1, the transaction was recorded using the accounting equation, so the financial records of the company as a whole also continue to conform to the accounting equation.

Transaction #1 increased the equity because the owners parted with some resources, which they let the company have. Transaction #2 did not change the equity: assets increased, but liabilities increased by an equal amount; therefore, the equity (which is always equal to the net assets of the company) stayed the same.

Transaction #3 The corporation bought some inventory (goods for resale) for \$8,000, which they paid for in cash.

The Accounting Equation

- Assets (inventory) have increased by \$8,000.
- Assets (cash) have decreased by \$8,000.
- Liabilities are unchanged.
- Equity is unchanged.

$$\begin{array}{rcl} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$35,000 & = & \$10,000 + \$25,000 \end{array}$$

We recorded transaction #3 using the accounting equation, as we did with transactions #1 and #2. One asset has increased by \$8,000, and another has decreased by \$8,000. The total value of the assets has not changed, although the form of the assets has changed. As long as we accept that inventory that cost the company \$8,000 is worth \$8,000 (at least until we know something different), then the form in which the assets are held is far less important than their dollar total. There was no change in the liabilities; they remain at \$10,000. There was no change in the net worth of the company, so equity also remains unchanged.

Transaction #4 The company bought inventory (goods for resale) at a cost of \$5,000. The vendor allows 30 days' credit on the amount owing.

The accounting equation treatment of this transaction is as follows: assets (inventory) have increased by \$5,000; liabilities have increased by \$5,000. Once again, this is an exchange transaction where assets and liabilities of equal value are acquired, and equity remains unchanged.

$$\begin{array}{rcl} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$40,000 & = & \$15,000 + \$25,000 \end{array}$$

Transaction #5 The company sold computer software to a customer for \$7,000 in cash; the software had cost the company \$4,000 to develop.

This is an exchange transaction where the value received (\$7,000 in cash) is greater than the value surrendered (\$4,000 of software inventory). The difference represents an increase in the net assets of the business. This \$3,000 is added to the equity. Increases in net assets that arise from regular operations are, by definition, increases in the equity in the business. Also, adding the \$3,000 to equity is the only way that the accounting equation can be kept in balance.

$$\begin{array}{rcl} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$43,000 & = & \$15,000 + \$28,000 \end{array}$$

Transaction #6 The company sold rights to a domain name (included in inventory) to a customer on credit for \$9,000; the domain name had cost the company \$6,000.

Transaction #6 is similar to transaction #5, though not identical. In each case, an item has been sold; so in each case, the asset has to decrease. In transaction #5, the company clearly has the immediate benefit of the sale as it now has an additional \$7,000 of cash. In transaction #6, the \$9,000 sale is represented by money owed to the company by the customer. A decision has to be taken as to what point in time this sale will be recognized. GAAP will recognize

Chapter 2 The Financial Statements

this as a completed sale and so will recognize the \$3,000 increase in assets (or profit) at the time of the sale. This point will be developed more fully in Chapter 3, "The Income Statement". The \$3,000 profit will, as with transaction #5, be added to equity.

$$\begin{array}{lll} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$46,000 & = & \$15,000 + \$31,000 \end{array}$$

Transaction #7

The customer, who had bought the domain name for \$9,000 on credit in transaction #6, paid for them. What a relief! The worry and uncertainty of having that money owed to the company are now over. The debt has been collected. Is the company any better off, though? We would suggest that it is no better off than before. An asset (\$9,000 owed to the company by the customer) has been exchanged for an asset of the same monetary value (\$9,000 in cash). There is no increase in the net assets; therefore, there is no increase in the equity. The company had already recognized the \$3,000 increase in equity when the sale was made. Recognizing it again at this point would be double counting. As a general rule, the benefit of a sale is recognized when the sale is made, which is not necessarily when the money is received.

$$\begin{array}{lll} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$46,000 & = & \$15,000 + \$31,000 \end{array}$$

Transaction #8

The company paid for the inventory it bought on credit in transaction #4 (\$5,000).

Assets (cash) have decreased by \$5,000. Liabilities have decreased by \$5,000. There is no change in the equity because there is no change in the net assets.

$$\begin{array}{lll} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$41,000 & = & \$10,000 + \$31,000 \end{array}$$

Transaction #9

The company paid, in cash, interest of \$100 on the bank loan.

Assets (cash) have decreased by \$100, resulting in net assets having decreased by \$100. Equity has also fallen by \$100. This is because the outflow of \$100 has not resulted in the acquisition of an asset; rather, it measures an expense. An expense may be thought of as what happens when an asset expires and becomes worthless. There is, of course, a benefit. In this case, the benefit is that the company was allowed the use of a loan for a period of time. Expenses occur in many situations: payment of salaries and wages, rent of premises, fire insurance premiums, etc. In each case, the effect of incurring the expense is to reduce equity.

$$\begin{array}{lll} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$40,900 & = & \$10,000 + \$30,900 \end{array}$$

Transaction #10

The owners decided to declare themselves a dividend (a cash payment out of profits). They paid themselves \$1,000 in cash.

Types of Financial Statements

Assets (cash) have decreased by \$1,000, resulting in net assets having decreased by \$1,000. Equity has fallen by \$1,000.

$$\begin{array}{rcl} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$39,900 & = & \$10,000 + \$29,900 \end{array}$$

The 10 transactions above cover the principles behind a lot of the transactions that financial statements have to accommodate. Note the following general points:

- Transactions that involve an exchange of assets and/or liabilities of equal value do not change the net assets of the company and so do not alter equity.
- Transactions that result in an increase in the net assets of the company result in an equal increase in equity.
- Transactions that result in a decrease in the net assets of the company result in a matching decrease in equity.

Note, too, that all transactions are recorded using the accounting equation. Because each transaction conforms to the accounting equation, the overall records of the company conform to the accounting equation.

2.4

2.4.1

Types of Financial Statements

The Balance Sheet

The balance sheet is a list, at a point in time, of the company's assets, liabilities, and equity. (Yes, that is the same as the accounting equation.) The balance sheet is generally prepared once a year. Chapters 4 and 5 describe the balance sheet in detail. Because the balance sheet is a listing at a point in time, it has been compared to a snapshot or a still photograph of the company.

The balance sheet is used to get an idea of the type and value of the company assets, the amount and repayment dates of the company liabilities, and the net worth of the owners' equity investment.

2.4.2

The Income Statement

During the normal course of trade over a year, the company will probably engage in many transactions that affect the equity. Every time a sale is made or every time an expense is incurred, the equity either rises or falls. The income statement summarizes all of these transactions over a one-year reporting period and reports on their overall effect. The net difference between the sales revenue generated and the total of all expenses is the net income or profit of the company for the year.

Because the income statement reports on the events of a period of time, it has been compared to a movie of the company. Although the income statement measures past income, it is used by investors and creditors to make informed judgments about how much income the company is likely to make in future years.

The income statement is described more fully in Chapter 3.

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2.4.3

The Statement of Changes in Equity

This is a statement that helps link the balance sheet and the income statement. It provides information on how the equity changed on the balance sheet from the previous year to the current year. One of the items on the balance sheet, in the equity section, of any company is “retained earnings”. The retained earnings represent income made on behalf of the owners that has not been distributed to them by way of dividend. The retained earnings at the beginning of a year are increased by any net income (from the income statement) and decreased by any dividends paid that year. The remaining balance appears on the balance sheet at the end of the year. This information is reported in the statement of changes in equity. The statement of changes in equity is described more fully in Chapter 3.

CAPITAL STOCK is another section of EQUITY on the balance sheet. The statement of changes in equity shows the changes in the capital stock from the previous year to the current year, probably due to issuances or retirements of capital stock.

2.4.4

The Statement of Cash Flows

The statement of cash flows supplements the balance sheet and the income statement. It reports on the various sources of cash (cash from operations, cash from borrowing, cash from selling assets, cash from raising equity investment) and the various uses of cash (operating losses, repaying debt, buying assets, paying dividends). Because managing the organization’s cash resources is so critical to corporate survival, it is necessary to include this information for the use of investors and creditors.

The statement of cash flows is described more fully in Chapter 6.

2.4.5

Publication of the Financial Statements

Every year, at or before the company’s annual shareholders’ meeting, the shareholders must receive copies of the four financial statements. The directors are responsible for the preparation of the financial statements. At the shareholders’ meeting, the shareholders will vote on whether or not to accept the financial statements. This applies to all companies, whether they are small and privately held (i.e., just a few shareholders) or public corporations that have their shares listed and traded on a stock exchange.

Except for small, privately held companies, the financial statements must also be filed with the director of the *Canada Business Corporations Act*.

Companies that have their shares listed on a stock exchange will also have a responsibility to file their financial statements with the stock exchange and, probably, with a provincial securities commission.

Unless the company is closely held (i.e., no public trading of shares) and the shareholders choose not to have an auditor, the company will also have an obligation to have its financial statements audited — that is, checked by a qualified auditor.

See Appendix 2.2 for a sample financial statement for Lululemon Athletica Inc., a company with its head office in Vancouver, Canada. Lululemon is an athletic apparel retailer.

2.4.6

Using Financial Statements to Assess Profitability

The principal objective of most organizations is to make a profit. The dollar amounts of operating income and net profit after interest and taxes will be shown in the income statement. Judging whether or not these are adequate requires that they be compared to the assets. Large companies should produce large profits, whereas smaller companies need only produce modest amounts.

In reporting the income, it is quite normal to show operating income separately from net income. Operating income is the revenues less the operating expenses incurred in earning the revenues. It specifically excludes interest (which is a financing charge) and taxes (over which management has little control). Operating income is used to judge how well the assets of the business have been used. As such, it is a comment on management efficiency.

Net income is what is left after interest and taxes are deducted from operating income. Interest paid is an expense that largely depends on the company's capital structure. A company financed entirely from equity capital will have no interest payments, but a company that is financed with a large amount of debt will have a high level of interest expense. Taxes are then deducted, and what is left over is the profit available for the equity shareholders to enjoy. The net income is a measure of how well the company did for its shareholders.

There are two ways of comparing company income to the resources used to generate it.

The ratio of operating income to total assets, or "return on assets", as it is often called, is used to assess the extent to which the assets have been efficiently utilized by management.

The ratio of net income to shareholders' equity is used to assess the effectiveness of the company as an equity investment. It is referred to as the "return on equity". It is also sometimes referred to as the "return on capital employed" or the "return on investment".

Exhibit 2.1 shows how the return on assets and the return on equity ratios are calculated.

2.5

Characteristics of Useful Accounting Information

When preparing financial statements, we want the information to be useful. We might start by stating that the statements should be correct, but that, by itself, is not enough. There are several dimensions to the idea of correctness, and sometimes being correct in respect of one attribute means being somewhat less correct in respect of another attribute. The IFRS framework lists two fundamentally important characteristics — relevance and faithful representation — to which we might also add the principle of materiality.

IFRS also lists the following important qualitative characteristics:

- Comparability
- Verifiability
- Timeliness
- Understandability

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Exhibit 2.1: Profitability Ratios

Didier Corporation Ltd. has the following summarized financial statements for 2020:

Didier Corporation Ltd. Balance Sheet As at December 31, 2020			
Current assets	\$200,000	Current liabilities	\$110,000
Long-term assets	300,000	Long-term liabilities	<u>130,000</u>
Total assets	<u>\$500,000</u>	Total liabilities	\$240,000
Didier Corporation Ltd. Income Statement Year Ended December 31, 2020			
Sales revenue			\$900,000
Operating expenses			<u>800,000</u>
Operating income			100,000
Interest expense	\$13,000		
Income taxes	<u>22,000</u>		<u>35,000</u>
Net income			<u>\$ 65,000</u>

Return on assets (%):

$$\begin{aligned} &= (\text{operating income} \div \text{total assets}) \times 100\% \\ &= (\$100,000 \div \$500,000) \times 100\% \\ &= 20\% \end{aligned}$$

Return on equity (or Return on investment) (%):

$$\begin{aligned} &= (\text{net income} \div \text{equity}) \times 100\% \\ &= (\$65,000 \div \$260,000) \times 100\% \\ &= 25\% \end{aligned}$$

Because the rate of interest on the borrowed money is less than the return on assets, the return on investment has been leveraged up from 20% to 25%.

2.5.1 Relevance

To be relevant, information has to be able to influence a decision or a belief.

Information that causes a bank to decide whether or not to grant a loan would be relevant to that lending decision. Suppose that a bank looks at the financial statements of a company and discovers that there is already an excessive amount of borrowing and that profits are relatively low. As a result, the

Characteristics of Useful Accounting Information

bank considers that the prospects of the loan being repaid are not good, so they refuse to lend to the company. The financial statements have provided useful information. This is sometimes referred to as predictive value.

By contrast, suppose that you happen to have a set of financial statements for a major online retailer, and at the same time you want to buy a coat that is being sold. You are in possession of information (the financial statements), but it is not relevant to your purchasing decision. The decision to buy the coat is based on factors such as the coat's style and price but not on the financial health of the online retailer.

Suppose that an investor has shares in a company. At the end of the year, the directors of the company send him the financial statements, and the investor is pleased to see that the company has made a reasonable net income, has adequate cash and other resources, and, in general, shows every sign of being well managed and successful. The financial statements were relevant to the investor in support of his belief that the directors were exercising good stewardship over the assets with which they had been entrusted. This is sometimes referred to as feedback value.

By contrast, suppose that you have the financial statements of a major high-tech company. You do not own any shares in the company, nor do you have any spare cash to buy such shares. It does not matter to you whether the company is doing well or doing badly as the information cannot influence either a decision to sell shares (you do not have any) or to buy shares (you do not have the capability to do so). The information is irrelevant to you.

2.5.2

Faithful Representation

The intention of financial statements is to represent events (in particular, economic events) in terms of their effect on the company in terms of monetary values. The information would have three characteristics: it would be complete, neutral, and free from error.

Information should be neither excessively optimistic nor excessively pessimistic. However, if a choice has to be made, accounting information should be expressed prudently. The practical application of this is that revenues are not recognized as realized until the company is sure of them, whereas expenses are fully recognized whenever they are likely.

Suppose that a company buys a new 3D printer, paying \$25,000 in cash. If that were the whole of the transaction, it would be representationally faithful. However, if the company had "traded in" an old printer as part of the transaction, and that old printer had a resale value of \$10,000, it would be representationally more faithful to record the cost of the new printer as \$35,000 and the sale of the old printer for \$10,000.

2.5.3

Materiality

Only those transactions that are economically meaningful need to be reported; the trivial ones can be safely ignored.

The IFRS framework lists the following aspects that enhance the usefulness of the information presented in the financial statements.

Chapter 2 The Financial Statements

2.5.4

Comparability

In preparing financial statements, the way it is done should be consistent over time so that performance in different years can be meaningfully compared.

So, if the way in which inventory has been valued has changed from one year to the next, the effect of the change in accounting policy on profits and assets should be fully disclosed.

2.5.5

Verifiability

Financial statements are verifiable when complete records of the underlying transactions are maintained and when two competent experts, looking at the data, would agree on the accounting conclusions.

For example, a transaction might involve the purchase of some software. The invoice, the payment, and the physical existence of the software would be enough to make the experts agree as to the existence, the cost, and the ownership of the asset. That is verifiable. On the other hand, experts may legitimately disagree about the period of years over which the asset should be depreciated or amortized (both terms mean the same thing: the allocation of the asset's cost to expense over its useful life). There could be a range of possible amortization periods because this is a judgment call: it is less verifiable.

2.5.6

Timeliness

If information is to be useful, it has to be presented in a timely way. It is no good getting information after the date when a decision has to be made.

2.5.7

Understandability

If information is to be useful, it is necessary that it be presented in such a way that the user can understand it. The assumption made under IFRS is that the user has a reasonable knowledge of business and economic activities and will review and analyze the information diligently. The use of highly technical terms should be avoided.

2.5.8

Cost Constraint, Going Concern, and Boundary of a Reporting Entity

IFRS also recognizes that any reporting exercise would be operated under a *cost constraint*, and the cost of preparing information should not exceed its usefulness.

Reporting is done under an assumption of *going concern* and a concept of the *boundary of a reporting entity*. A going concern would be one that is liquid and profitable. As a result, its assets are likely to be used in the normal course of business. The cost of the assets is likely to be a good indication (even a somewhat conservative estimate) of their value to the business. By contrast, a company that has become insufficiently liquid (perhaps because of a lack of profitability) may have its assets seized and sold to satisfy the demands of its creditors. Such a "fire-sale" situation could easily lead to the assets being sold

for less than their cost. The entity concept treats company assets and liabilities as existing within the company's boundaries and makes sure that other assets (e.g., assets and liabilities of shareholders and directors) are kept separate and are not treated as company assets or liabilities.

2.5.9

Measurement

The IFRS framework allows for assets and liabilities to be measured at either historical cost (the amount that the entity originally paid for the item) or current value (the value of the asset or liability today). The measurement decision is based on the needs of the user of the financial statement. It is also assumed that amounts expressed in dollars in one year are equivalent to dollars of any other year.

2.5.10

Accrual Accounting

Accrual is the process whereby the timing of receipts and payments is correctly located in the reporting period that is relevant to the transaction, not to the timing of the cash flow. This is important because information about a company's assets and liabilities and changes in its net assets during a year provides a better basis for assessing the company's past and future performance than information that only reflects cash receipts and disbursements during that year.

2.6

Published Financial Statements and the Manager

The published financial statements that are covered in this first section of the book are mainly intended for the attention of external users, such as investors and creditors. They have less use for internal managers, such as production, marketing, and human resources managers.

Those internal managers will receive internal reports on the financial dimension of their areas of responsibility. These internal reports will be different from the general-purpose financial statements in two respects: first, they will cover only the items that are under the direct control of those managers; second, they will be in much greater detail.

It would be unusual for internal managers to receive balance sheet or cash flow statements. It is more likely that they would receive a detailed statement of the expenses they had incurred and, where appropriate, the revenue they had generated. These internal management reports are covered in greater detail in Section 2 of this book.

2.7

Summary

The company is required by law to publish financial statements consisting of the balance sheet, the income statement, the statement of changes in equity, and the statement of cash flows.

Chapter 2 The Financial Statements

The objectives of publishing the financial statements are to assist investors and creditors in their investing and lending decisions and to demonstrate good stewardship of the company assets by the directors.

The accounting equation ($\text{assets} = \text{liabilities} + \text{equity}$) is the fundamental model used for recording all transactions and for reporting in financial statements.

Accounting information should be useful to decision making. Accounting information should be relevant and representationally faithful. Information; i.e., comparable, verifiable, timely, and understandable enhances the quality of the information.

Accounting concepts used in the preparation of accounting reports include accrual, business entity, historical cost, current value, going concern, periodicity, disclosure, recognition, materiality, and constant dollars.



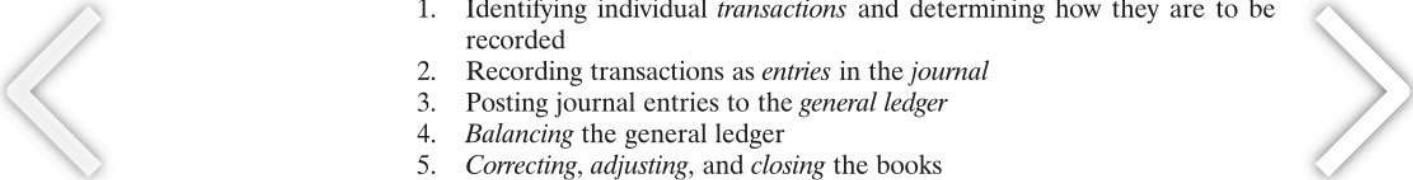
Appendix 2.1

The Mechanics of Accounting: The Basics

This appendix and corresponding appendices to Chapters 3, 5, and 6 present the mechanics of double-entry accounting. This is a six-step process carried out over a company's reporting period. The reporting period is typically one year, called the financial year, but it can be as short as one month for a large company. The process is referred to as the *accounting cycle*, and the records it generates are the journal and general ledger, informally called the *books* of the company. This process is generally done with an accounting software.

The Accounting Cycle

The six steps in the accounting cycle are as follows:

- 
1. Identifying individual *transactions* and determining how they are to be recorded
 2. Recording transactions as *entries* in the *journal*
 3. Posting journal entries to the *general ledger*
 4. *Balancing* the general ledger
 5. *Correcting, adjusting, and closing* the books
 6. *Preparing the financial statements* from the ledger balances

Note: If using a software, only the first two steps and step 5 are normally performed by the individual. Steps 4 and 6 are generated by the software. In fact, more sophisticated software packages can perform many of the transactions in step 2 as well. From the managers' perspective, the primary role has now become determining the nature of the transaction.

1. **Identifying Individual Transactions and Determining How They Are to Be Recorded**

This step is the most important one in the accounting cycle. The rules of accounting, *generally accepted accounting principles* (GAAP),¹ determine what is an accounting transaction and what is not, and they also specify how transactions are to be accounted for. Getting these right requires both expertise and experience.

Although a business is engaged in numerous activities every day — both in internal operations and in exchanges with those outside the company, such as

¹ In Canada, GAAP for public companies are International Financial Accounting Standards (IFRS). See section 2.2 above.

Chapter 2 The Financial Statements

customers, suppliers, owners, governments, etc. — only some of these events are considered transactions by the rules of accounting. A *transaction* is an event that is recorded in the books of the company. For example, a typical sequence of events in a business is taking an order from a customer, shipping the order, invoicing the customer, and finally receiving a cheque from the customer in payment. Although each of these is a distinct and important step in making a sale, GAAP recognizes only the invoicing, shipping, and cheque receipt. As fundamental as getting the customer's order is to the sales process, it is *not* considered a transaction according to GAAP and is thus *not* recorded in the accounting system.

The manner in which a transaction is recorded is also subject to the rules of GAAP. Continuing the same example, if the sale of the goods is on normal commercial terms, the price will be agreed upon when the order is made. An invoice will be prepared and sent when the goods are shipped, specifying when payment is expected — typically within 30 days. However, not all sales transactions follow normal commercial terms. Variations include conditions on the selling price that could lead to adjustment of the price depending on market conditions on the date of shipment; payment in advance, delivery later; and allowing the seller a very long time to pay. If special terms of sale apply, the accounting for the transaction may have to be adapted. For example, a software company advertises a radical improvement in one of its popular programs. The upgrade may be just what the market is waiting for, and orders flow in from enthusiastic customers with cheques enclosed. As often happens in this business, programming difficulties delay shipments. Despite the difficulties, management will boast of the high rate of new "sales" (they have the orders and the money in hand, have they not?). According to GAAP, however, there is no revenue to record since the goods have not yet been delivered. (In Appendix 3.5, we will see how such transactions are properly recorded.²)

2. Recording Transactions as Entries in the Journal

In a traditional accounting system, transactions are first recorded as entries in chronological order in the journal. The *journal entry* highlights the individual transaction and allows us to analyze it to ensure that it has been recorded in accordance with GAAP.

3. Posting Journal Entries to the General Ledger

The *account* is the basic building block of the accounting system. The complete set of all accounts for a company is called the *general ledger*. On a regular basis, the journal entries are *posted to* (copied into) these accounts. The general ledger is the core of the accounting system and the basis for the preparation of the financial statements.

For the purposes of understanding the double-entry method, it is helpful for us to begin with a very simple framework. Accordingly, in this appendix, we will start with a *one-write* system — in essence, the system used by computerized

² When accounting problems are uncovered in a company's financial statements, they are often related to the inappropriate recording of revenue.

Appendix 2.1 The Mechanics of Accounting: The Basics

accounting systems, one that combines the journal entry and the posting to the general ledger. After we have established the basic framework, we will expand the system to include debits, credits, and journal entries.

4. Balancing the General Ledger

Periodically, the general ledger must be balanced. In a computerized system, this is done with each transaction. In a manual system, balancing will be done less frequently but must be done before the books are closed at the end of the accounting period. Balancing the general ledger is a purely mechanical exercise, but as an integral part of double-entry accounting, it protects against arithmetic bookkeeping errors.

By not permitting unbalanced entries, balancing is automatic in computerized systems. For this reason, the topic of balancing is not given much attention today. Still, understanding the nature of out-of-balance error is helpful in understanding how double-entry accounting works.

A balanced ledger is not necessarily correct, but being out of balance is a clear indication of error. The accounting significance of a single error is related to its size. For example, assume that a company receives an invoice from its online advertising agency for advertising services on Instagram in the amount of \$80,000. An e-Transfer for the correct amount is sent and recorded correctly. The expense, however, is incorrectly recorded as only \$8,000. If independent records of cash and expense were maintained — what is known as a single-entry system — the discrepancy might never be discovered. The Cash account will be correct, and it will correspond to the bank statement. On the other hand, the advertising expense itself and total expenses on the income statement will be understated by \$72,000. In a small company, this could give a very misleading impression of profitability. The strength of the double-entry accounting system is that the recording of the cash payment — the e-Transfer — and the recording of the corresponding expense must be done together *and* must balance. If they do not, the periodic totalling of all the ledger balances will reveal the discrepancy. Knowing that an error exists is a necessary condition for correcting it.

If there is a single unbalanced entry in the books, the out-of-balance discrepancy is a measure of the magnitude of the error. However, the converse is not necessarily true: an out-of-balance discrepancy does not always mean that there is a single error of that magnitude. The error — actually, errors — could be much larger. If there are two or more out-of-balance errors, large errors can partially offset each other, obscuring their significance. For example, assume that there are two independent errors in an accounting system: the asset account, Buildings, is overstated by \$500,000, and the revenue account, Sales, is overstated by \$498,300. These two errors act in different directions, and they almost cancel each other out, leaving only the small difference between the two of \$1,700 as the observed error. Of course, we don't observe the underlying errors, so someone unfamiliar with accounting might conclude that the observed discrepancy of \$1,700 was the full extent of the error. If the company had total assets close to \$10 million, \$1,700 would not be considered material, and it would be reasonable to disregard the error. That would be a serious mistake: one error of half a million dollars would most certainly be considered

Chapter 2 The Financial Statements

material, and two independent errors of that magnitude would mean that the financial statements were seriously misleading.

5. Correcting, Adjusting, and Closing the Books

Apart from bringing an out-of-balance ledger into balance, there are other reasons why the ledger might need adjustment. One reason is to correct errors of valuation. Such errors usually arise at the identification or recording stage (step 1 or 2 of the cycle). Errors of valuation do not violate the accounting equation, but they are mistakes all the same and can result in material misstatement in the financial statements. For example, if a credit sale is recorded, in error, as \$150,000 instead of the correct \$50,000, both the entry to revenue and the entry to accounts receivable will be overstated by \$100,000. The error would normally be picked up when the customer remits a cheque in the correct amount of \$50,000 and the discrepancy is investigated. However, if the transaction takes place late in the financial year and the receivable is not due until early in the next financial year, the current year's financial statements will be wrong: both sales revenue (on the income statement) and accounts receivable (on the balance sheet) will be overstated by \$100,000. There are, of course, audit techniques that will find such errors since the balance owing from the customer (the account receivable) can be checked independently of the revenue. (This emphasizes the role and importance of the internal and external *audits* in ensuring the correctness of the accounts and the financial statements that are prepared from them.)

Books of account are permanent records, so when an incorrect entry is discovered, the original entry is not written over, erased, or removed. Rather, a second, *correcting entry* is made in the journal and then posted to the general ledger. This was the practice when all books were kept in pen and ink, and it continues with computerized systems. Erasures in handwritten books were considered evidence of tampering. For the same reason, most computerized accounting systems do not permit an entry to be changed after it has been fully entered. The correction must be made as a new entry with a full explanation. The objective is to maintain an audit trail to ensure that all entries, even incorrect ones, can be traced. If all valuation corrections and other changes are entered as adjusting journal entries, they are open to examination by the auditor.

At the end of each accounting period, there is another class of adjusting journal entries to be made. These are not designed to correct errors, but they are non-routine. In most accounting systems, routine entries, including all transactions involving cash, all credit purchases and sales, and, in more sophisticated systems, the cost of goods sold, are made when some transaction takes place with a third party. Certain transactions, however, such as depreciation, are a function of time only, and there is no event to trigger recognition; these are recorded periodically — at the end of the month or at the end of the financial year rather than on a day-to-day basis. In addition, in small companies, the cost of goods sold is not recorded for each sale. Instead, at the end of the accounting period, the inventory is counted and valued, and only then is the cost of goods sold calculated. All of these periodic transactions are entered into the accounts only at the end of each accounting period by means of *adjusting journal entries*.

Appendix 2.1 The Mechanics of Accounting: The Basics

After the adjusting journal entries are made, the general ledger is balanced again, and the accounts are *closed*.

6. Preparing the Financial Statements from the Ledger Balances

At the end of an accounting period, the balances in the general ledger are used to prepare the financial statements: the balance sheet, the income statement, the statement of changes in equity, and the statement of cash flows.

Summary

The accounting cycle is the process of recording transactions in the company's books. A transaction is a single business event that is recorded in the accounting system. On a regular basis, journal entries are posted to the accounts in the general ledger. At the end of each accounting period, the general ledger is brought up to date with adjusting journal entries, balanced, and then closed. GAAP is the name for the set of rules that govern this process.

In the next section, the basics of double-entry accounting will be presented and illustrated using the 10 transactions presented in section 2.3 of this chapter. For the first three transactions, we will use a simplified double-entry system. We will then introduce the standard debit-credit method of double-entry accounting and use it to complete the remaining transactions.

Initially, we will focus on steps 1 to 4:

- 
- 
1. Identifying individual transactions and determining how they are to be recorded
 2. Recording transactions as entries in the journal
 3. Posting journal entries in the general ledger
 4. Balancing the general ledger

After all 10 illustrative transactions are recorded, we will show how end-of-period adjustments are made and how the books are closed (step 5) and, to complete the accounting cycle, how the financial statements are prepared from the ledger balances (step 6). In appendices to subsequent chapters, we will use this framework to deal with the more complex transactions presented in those chapters.

A Simplified Double-Entry Accounting System

As we have seen, the accounting equation

$$\text{ASSETS} = \text{LIABILITIES} + \text{EQUITY}$$

forms the structure of the balance sheet. In fact, this equation underlies the entire accounting system. For example, the general ledger, just as the balance

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sheet, has the same form as the accounting equation. When we speak of a “balanced ledger”, we mean that the sum of the amounts in the asset accounts equals the sum of the amounts in the liability accounts plus the sum of the amounts in the owners’ equity accounts. Moreover, to maintain this balance, each new transaction, which is to say each journal entry, must also be balanced in the terms of the same equation.

In traditional bookkeeping, transactions are first recorded in the journal in chronological order and are then posted (copied) one by one to the accounts in the general ledger. This method has certain advantages for division of labour and for filing, particularly in large, manual systems. However, for the purposes of demonstrating how the system works, it is more useful initially to combine these two steps and write the transactions directly into the accounts arrayed in the form of the accounting equation.³ After the basic principle is established using this framework, we will move to the standard format of journal entries followed by postings to accounts in the general ledger.

We will begin by defining the basic accounts. There is an account for every class of *asset*, *liability*, and *equity*. In this appendix, account names will be indicated by the use of initial capital letters — for example, Cash, Accounts Receivable. We will start with a skeleton set of accounts and expand it as necessary. The first accounts are the main *asset* accounts:

Account	Description
Cash	Primarily money on deposit at a bank; also includes cash on hand
Inventory	Goods purchased for resale
Accounts Receivable	Amounts due from customers for goods they have purchased from the company on credit
Fixed Assets	Assets — e.g., furniture, machines, cars and trucks, building, land — that are purchased for use over several years rather than for resale

Similarly, there are accounts for each different type of *liability*, or debt, such as the following:

Account	Description
Bank Loan	The obligation to repay a loan taken from the bank
Accounts Payable	The obligation to pay money in the future to suppliers from whom the company has purchased goods on credit

A *sole proprietorship* will normally have only one *equity* account on the balance sheet. However, in a *partnership* or an *incorporated company*, equity is divided into different accounts, representing differing legal or accounting

³ This, essentially, is how a computerized accounting system works. Even in a computerized system, however, the information is typically printed in journal entry form or in ledger account form for internal analysis and reporting purposes.

Appendix 2.1 The Mechanics of Accounting: The Basics

aspects of the claims. The example in section 2.3 did not make these distinctions, but now that we are demonstrating actual accounting procedures, they will be necessary. Since most business organizations are incorporated, this will be the form we will use. In an incorporated company, a distinction is made between invested capital and earned capital; thus, there are always at least these two equity accounts, usually called, respectively, *Share Capital* and *Retained Earnings*.

Account	Description
Share Capital	The portion of the equity (the claim of shareholders) that arises when new investment is made — i.e., when shares are issued by the company in exchange for assets, usually cash, paid in by the shareholders. Share capital is reduced only in the rare circumstance that shares are cancelled or redeemed. This can happen when a company is reorganized after seeking bankruptcy protection or when it is wound up.
Retained Earnings	That portion of the claim of shareholders that increases as the company operates profitably and is reduced when dividends are paid as losses are incurred.

An important objective of financial accounting is the measurement of the company's operating success, its profitability, in the period. Rather than measure profit directly, transaction by transaction, it is more convenient and informative to measure separately the components of profit, namely, *revenue* and *expense*, for each transaction throughout the accounting period, using accounts with the same names, and then calculate profit (or, as accountants prefer to call it, *net income* or *earnings*) only at the end of the accounting period. Looked at in terms of the basic accounting equation, revenue and expense, like net income, are measures of *change* in retained earnings. *Revenue* is defined as the gross increase in retained earnings from operations — for example, the period's sales at the selling price. *Expense* is the gross decrease in retained earnings necessary to generate revenue; an example would be all the costs incurred necessary to make the period's sales. Netting these two basic gross measures of operations — revenue less expense — gives *net income* (assuming that revenue exceeds expense; if expense exceeds revenue, the net of the two is called *net loss* or, more simply, *loss*).⁴

Account	Description
Revenue	The gross increase in retained earnings from operations
Expense	The gross decrease in retained earnings from operations

⁴ *Net income* and *net loss* are simply the names for the difference between revenue and expense. One or the other will appear as the bottom line on the income statement, but neither exists as an account in the general ledger. (In some traditional accounting books, a single account called Profit and Loss was used as part of the process of closing the books.)

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There are several things to note about Revenue and Expense. First, although Revenue and Expense are treated as individual accounts in this appendix, in practice they each represent *sets* of accounts. A company will normally have one or more particular kinds of revenue depending on what it actually does to generate it: for example, if the company generates its revenue by selling goods, it is called *Sales Revenue* (or, more simply, *Sales*); revenue from selling a service would be either *Service Fees* or *Consulting Fees* depending on its nature; revenue from real estate is *Rental Revenue*; and revenue from lending money is called *Interest Revenue*.⁵ Accounting for revenue, both by line of activity and in total, allows us to keep track of different aspects of the company's business.

All companies will have a number of expense accounts, such as *Salaries*, *Cost of Goods Sold*, and *Depreciation*. Keeping separate accounts of expenses, measures of the various costs incurred to earn revenue of the period, is a prerequisite for gauging the efficiency of operations.

Second, although revenue and expense accounts do not appear on the balance sheet, they are nonetheless ledger accounts, sub-accounts of Retained Earnings. Since these accounts are part of the balance in the Retained Earnings account, they have a direct effect on the balance sheet.

The third point is important for understanding how the financial statements are linked. Because revenue and expense are defined in the context of double-entry accounting, there is a corresponding change in an asset or a liability each time revenue or expense is recognized. We will call these changes in assets or liabilities *resource flows*. Resource flows occur in a business for different reasons. Some are simple exchanges — one asset is exchanged for another (buy a building for cash) or an asset is acquired in exchange for debt (take a bank loan). Revenue and expense transactions are different. They are not resource flows themselves; rather, they indicate that the particular resource flow represents a change in the ownership claim — a change in retained earnings — from business operations. We can illustrate this distinction as follows.

A merchandising company sells goods for cash. In double-entry terms, this is cash inflow/revenue. Calling this particular cash inflow *revenue* is how the accounting system tags it as an operating resource flow — a resource flow that affects retained earnings. As well, there is another resource flow in a sales transaction — the outflow of the goods that are transferred to the customer. This is the expense part of this transaction. In double-entry terms, this is an inventory outflow/cost of goods sold expense. Calling this asset outflow *expense* is how the accounting system tags the transfer of goods to the customer as an operating resource flow. The goods were transferred for the purpose of earning revenue — hence the name of the expense: cost of goods sold. Other expenses are not tied to particular revenue transactions, but they are expenses of the period nonetheless. Office supplies and labour, for example, are measures of resources used to earn revenue. In the former, a particular asset is used up (office expense); in the latter, a flow of services is used up. We can think of the

⁵ Sometimes you will see such revenue accounts referred to as *Income* — for example, “Rental Income” or “Interest Income”. This can be confusing. In business accounting uses, *income* is properly a net concept (revenue less expense), and you should avoid using it as an alternative term for *revenue*.

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asset Labour being created and used instantaneously, but because the company buys it as it is used, we measure the implicit liability to pay the wages as the labour service is used. This is the resource flow tagged as expense. In double-entry terms, this is wages payable/wage expense. (There will be a cash outflow when the wages are paid later. This is illustrated in the next paragraph.)

Non-operating resource flows are transactions that involve only assets and liabilities. For example, if a company buys a building for cash, there is an outflow of the asset, cash, in exchange for the inflow of another asset, the building. There is no effect on equity. Another example is the cash inflow that would result if the company were to borrow money: cash is received in exchange for the issuance of debt (the promise to repay the loan with interest in the future); there is again no immediate effect on equity. (Interest expense, the operating cost of borrowing, will be a reduction of equity [i.e., an expense], but only as it accrues in the future.) In the wage example above, the operating transaction is the use of the labour (the expense) and recognition of the wages payable (the operating resource flow). When the workers are paid subsequently, there are non-operating resource flows: cash is transferred to the workers, and the liability (the obligation to pay them) is extinguished.

Dividends is a single account in a class of its own. Dividends (the account name is often written in the plural) is the reduction of retained earnings that occurs when assets — normally cash — are distributed to owners *as a result of successful operations* (i.e., after income has been earned). Dividends must not be confused with expenses. Although dividends, like expenses, reduce retained earnings, dividends are not a measure of the cost of earning revenue and therefore are *not* an expense.

Account	Description
Dividends	The decrease in retained earnings when profits are distributed as cash (or other assets) to shareholders

Like the Revenue and Expense accounts, the Dividends account is a sub-account of Retained Earnings. All the sub-accounts — Revenue, Expense, and Dividends — are temporary accounts, and they are closed at the end of each accounting period to Retained Earnings.

There are other features of accounts that we will need, but we will introduce them as required.

As we proceed, there are three important points to bear in mind:

1. **Money.** All transactions are recorded in money terms; in Canada, that usually means in Canadian dollars. We must be careful to distinguish between the asset Money — which we call *cash* to minimize confusion — and money as a measure of value. It is important to remember that, in accounting, the dollar is being used primarily as a unit of *value*. Thus, money valuation is a feature of all accounting transactions, but money as cash is part of a recorded transaction *only* if cash actually changes hands. To avoid the mistakes that many beginners make, think twice before concluding that because every transaction is measured in money terms, one-half of every double-entry transaction must involve cash. The account

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Cash is involved in a transaction only if the asset Cash has increased or decreased.

Because the term *money* has so many meanings in business discourse, it is best to avoid the use of the word as much as possible except in a clear valuation sense, as in the phrase “money measurement”. Finally, because all figures in the accounts are in dollar terms, by convention the dollar sign is not used in the journal or the general ledger.

2. **Balancing entries involving more than two accounts.** Because of the double-entry nature of accounting, each transaction must affect at least two accounts, and the entry must be *balanced*. What this usually means is that an entry of the same dollar value amount will be made in each of two accounts. If three accounts are affected, the sum of the dollar value of the entries in two accounts must equal the dollar value of the entry in the third account (and similarly in the rare case that four or more accounts are affected). Examples given below will make this clear.
3. **Chronology.** In accounting, chronology is important. In these examples, we will identify each transaction with a transaction number in the first column to indicate chronological order. If these were actual transactions, each one would be dated instead. All the transactions illustrated in this appendix are assumed to have taken place over the month of December 2020. The identification of the period is necessary for the preparation of the financial statements (see pages 66 and 67).

Entering the Transactions

For the next step, we construct the general ledger in the form of a spreadsheet, reflecting the underlying accounting equation. The accounts are placed under the appropriate section heading of the accounting equation. Asset accounts are on the left-hand side of the spreadsheet, liability and equity accounts are on the right-hand side. In Table 2A.1, there are four accounts. (The two that are named Cash and Share Capital are needed for the first transaction; others will be added as we proceed.) Each account is divided into two columns, one representing *increases* to the account, the other representing *decreases*. Note the difference in the labelling of increases and decreases in these two accounts. *If the account is an asset, increases are on the left side of the account, and decreases are on the right side.* For accounts on the other side of the accounting equation, the convention is reversed. *If the account is a liability or equity, increases are on the right side, and decreases are on the left.* These conventions are maintained in all accounting systems.

Normally, the transaction would be written up first in the journal on an entry-by-entry basis. This is the procedure we will follow starting with transaction #4 on page 49; for now, however, since we are familiar with the basic accounting equation that the general ledger in a spreadsheet form reproduces, it is more convenient to write each transaction directly into the ledger. Although they are not in the standard journal form, each line in the spreadsheet can be read as a journal entry.

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Table 2A.1

#	Assets				Liabilities		Equity	
	Cash						Share Capital	
	increase	decrease			increase	decrease	decrease	increase

Transaction #1

Having set up the ledger in this form, we can now make the first entry into the accounts. To set the stage, recall that initially there are no assets, no liabilities, and no equity; the basic accounting equation is satisfied since both sides are equal to zero. In the first transaction, the owners contribute \$25,000, which we will assume to be cash. The increase in the asset Cash is evident, but double-entry accounting means that there must be a corresponding change elsewhere — a change that, together with the increase in cash, maintains the equality of the accounting equation. If we saw only \$25,000 cash being received by a company without knowing the reason, we would not know if this was the result of (1) a *decrease* of another asset (an exchange), (2) an *increase* in a liability (borrowing of money), or (3) an *increase* in equity (revenue or share issue). In this particular case, we know that the cash is being received because the shareholders are making their initial capital contribution; therefore, we can identify the balancing change as an increase in equity, specifically, an issue of shares that represents the shareholders' claim.⁶

We can summarize the transaction as follows:

The asset account, Cash, increases by \$25,000.

The equity account, Share Capital, increases by \$25,000.

This being the first entry, it is written on the first line following the account headings, as shown in Table 2A.2. There are, of course, two parts to the entry. Taking the cash part first, we note that Cash is an asset account, so the increase in cash is represented by a sub-entry in the Cash account. For the other part of the entry, we see that Share Capital is an equity account, so the increase in share capital, the issuance of shares, is written on the right side of that account.

Table 2A.2

#	Assets				Liabilities		Equity	
	Cash						Share Capital	
	increase	decrease			increase	decrease	decrease	increase
1	25000							25000

⁶ In an incorporated company, *shares* represent the owners' claims. The number of shares issued when the company is first organized is essentially arbitrary. What is important is the *relative* number of shares each owner holds. It will be proportional to his or her investment.

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After the two parts of the entry are made, there is a positive balance of \$25,000 in the asset account, Cash, and a positive balance of \$25,000 in the equity account, Share Capital. The ledger balances: total assets are \$25,000, and total liabilities and equity are also \$25,000. Although the general ledger is not a balance sheet as such — a balance sheet is a formal document that must show the company name, statement title, and date and satisfy certain other requirements — it is easy to see how a balance sheet could be drawn up from the information we have in the general ledger at this point. Normally, a balance sheet is drawn up only at the end of an accounting period. Still, if the entries for the period are complete and correct, drawing up the balance sheet and the other financial statements at any time is a relatively straightforward exercise.

Transaction #2

The company has raised its initial capital from its shareholders. This is a short-hand way of saying that it acquired assets in the form of cash by issuing shares. (The cash will be used to buy other assets.) Having done this, it is now in a position to raise the additional funds necessary to begin operations by taking a loan from the bank. Again, the asset acquired is assumed to be in the form of cash, but the corresponding claim is a liability — an obligation to repay the principal amount of the loan as well as interest at agreed-upon rates and times⁷ — rather than a permanent ownership claim, such as share capital. We need to create a new account, Bank Loan, as shown in Table 2A.3.

We can summarize the transaction as follows:

The asset account, Cash, increases by \$10,000.

The liability account, Bank Loan, increases by \$10,000.

The entry for transaction #2 is written on the line following transaction #1. Again, this being double-entry accounting, there are two parts. As in transaction #1, the increase in cash is represented by a sub-entry of \$10,000 in the Cash account. For the other half of the entry, we know that Bank Loan is a liability account, so the increase in the liability, Bank Loan, is written on the right side of that account.

Table 2A.3

#	Assets				Liabilities		Equity	
	Cash				Bank Loan		Share Capital	
	increase	decrease		increase	decrease		decrease	increase
1	25000							
2	10000							
account balances	35000						10000	25000

The entry itself is balanced: a \$10,000 increase in assets balances a \$10,000 increase in liabilities and equity (although in this entry only a liability account

⁷ These details, as important as they are, are not shown here, but a record of the terms of the loan would, of course, be kept.

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was affected). Moreover, even though two account balances have changed, the general ledger itself remains balanced. In the third row, we confirm this by taking an interim balance of the ledger. (To distinguish balances from entries, balances are written in italics and the row is shaded.) Balancing involves the following steps:

- (i) Finding the balance in each account (if there were decreases in any of the accounts, the decreases would be netted against the increases to come to the account balance)
 - (ii) Adding up the balances in the asset accounts (there is just one such balance here)
 - (iii) Adding up the balances in the liability and shareholders' equity accounts
 - (iv) Comparing the totals in (ii) and (iii) to ensure that they are equal

In this case, the asset side of the ledger totals \$35,000 (cash only), which is equal to the \$35,000 in liabilities and equity (\$10,000 and \$25,000, bank loan and share capital, respectively).

Transaction #3 In transaction #3, the company uses \$8,000 of its cash to buy inventory. We need to add another account, Inventory, as shown in Table 2A.4.

The asset account Cash *decreases* by \$8,000. This is the first example of a reduction of an account.

The asset account Inventory increases by \$8,000.

This entry is written on the line immediately below the interim balance that we took after transaction #2. In this case, since the asset account Cash is being decreased, there is a right-side entry in this account. Inventory is increased, so the entry is on the left side.

Table 2A.4

#	Assets				Liabilities		Equity	
	Cash		Inventory		Bank Loan		Share Capital	
	increase	decrease	increase	decrease	decrease	increase	decrease	increase
1	25000							25000
2	10000					10000		
account balances	35000					10000		25000
3		8000		8000				
column subtotals	35000	8000						
account balances	27000			8000		10000		25000

Because there are entries on both sides of the Cash account, when we strike a balance, we need to do it in two steps. First, each column is subtotalled (\$35,000 and \$8,000); then the two columns are netted against each other, with the difference (\$27,000) being placed as the account balance in the column with the larger subtotal. Since there were more increases to the Cash account than

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decreases, the balance in this case is a net increase. There is an equal and opposite change in the Inventory account, so total assets have not changed. There is, of course, no change at all on the other side of the ledger; thus, the entry is balanced. (If you compare the balancing that followed transaction #1 with the balancing that followed transaction #2, you will see that there is no particular relationship between the changes in the account balances following a transaction and the overall balance in the ledger [total assets, total liability, and equity], which may or may not change. The overall account groups totals have no special significance here; all that matters is that the general ledger remains balanced.)

Debits and Credits

At this point, we generalize what we have learned so far and then make a change in terminology. This will allow us to formalize the process of balancing the ledger accounts and, more important, to write journal entries.

The division of accounts into a left side and a right side and its connection to balanced entries is an extension of the basic accounting equation. As we have seen, a left-side entry in an asset account *increases* it, but a left-side entry *decreases* a liability or shareholders' equity account. The effect is the opposite for a right-side entry. We also see that a full entry — the representation of a complete transaction that maintains the equality of the basic accounting equation — involves both a left-side entry *and* a right-side entry of equal value. Thus, in transaction #1, an increase in the asset Cash, which is a left-side entry, is paired with an increase in equity, which is a right-side entry. Both have the same value. Transaction #2 is similar, but the right-side entry represents an increase in a liability rather than equity. Transaction #3 affects only asset accounts. The left-side entry is the increase in the asset Inventory, and the right-side entry represents the *decrease* in the asset Cash. Again, both have the same value.

We can summarize this graphically. On the left in Figure 2A.1 we list the significance of left-side entries in different accounts, and on the right, the significance of right-side entries. To keep things uncluttered, we show only account groups, assets (A), and liabilities or equities (L/E).

A left-side entry can represent an increase in an asset (+A) or a decrease in a liability or an equity (including an expense and dividends) (-L/E).⁸

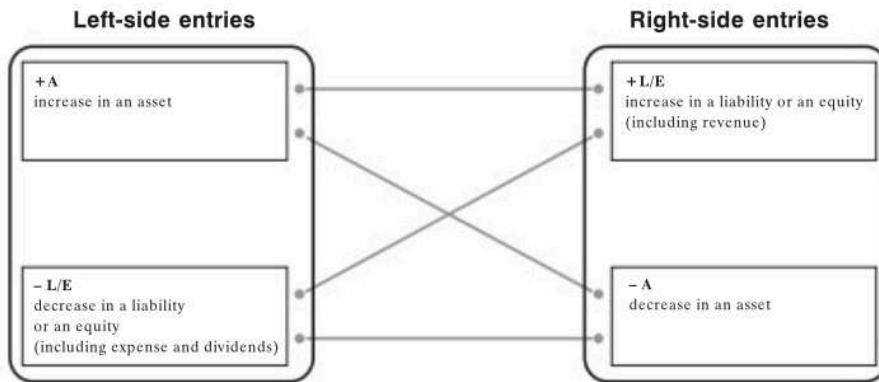
A right-side entry can represent an increase in a liability or an equity (including revenue) (+L/E) or a decrease in an asset (-A).

Bars connect all possible combinations of a left-side entry and a right-side entry, such as {+A •——• + L/E} and {+A •——• -A}. These combinations, and *only* these combinations, of equal value entries satisfy the basic accounting equation. Combinations of entries listed on the same side of the figure, such as {+A and -L/E} in the left-hand column or {+L/E with -A} in the right-hand column, do *not* satisfy the equation. Similarly, a pair of two identical entries, such as {+A and +A} on the left or {+L/E and +L/E} on the right, do not satisfy the basic accounting equation. Put another way, every possible transaction that satisfies the basic accounting equation involving two accounts can be described by one of the four linked combinations.

⁸ We haven't seen an example of the latter yet, but if you guessed that a liability or equity is *reduced* by a left-side entry, you are correct.

Appendix 2.1 The Mechanics of Accounting: The Basics

Figure 2A.1



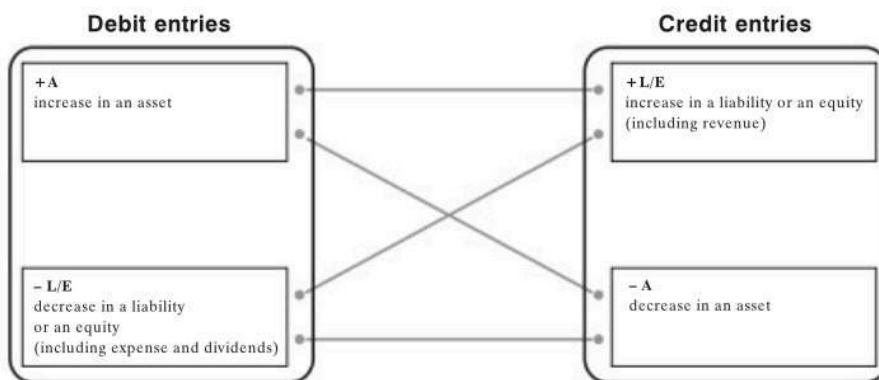
We can illustrate this framework using the three transactions we studied above. Transactions #1 and #2 are both examples of the first combination represented by the top bar: the increase in the asset Cash is combined with an increase in equity (#1) or with an increase in the liability Bank Loan (#2). Transaction #3 is an example of the second combination represented by the bar sloping down to the right: the increase in the asset Inventory matches a reduction of another asset. We will see examples of the other combinations following.

The rule, then, for recording transactions is as follows:

To maintain the basic accounting equation, every accounting transaction must have a left-side entry and a right-side entry of equal value.

There is one more step, and this is purely terminological. Instead of referring to left-side entries and right-side entries, accountants use the terms *debit* entries and *credit* entries, respectively. We can redo the figure using the debit–credit terminology, as shown in Figure 2A.2:

Figure 2A.2



The rule is now written as follows:

To maintain the basic accounting equation, each accounting transaction must have a *debit entry* and a *credit entry* of equal value.

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As shown in Table 2A.5, instead of writing *increase/decrease* for each set of asset account columns or *decrease/increase* for each set of liability and shareholders' equity account columns, *every* account will be labelled in the same way: *debit* (abbreviated *Dr*) for the left-hand column and *credit* (abbreviated *Cr*) for the right-hand column. If we redo the general ledger up to transaction #3 using debits and credits, we see that nothing has changed except the headings of the columns, which are now identical for each account: *debit* for the left column, *credit* for the right column.

The process of balancing is unchanged, except that now the account balances are labelled *debit* and *credit*, as the case may be, rather than *net increase* and *net decrease*. In a balanced general ledger, total debit balances equal total credit balances, as we can verify in Table 2A.5: total debit balances, all in the asset section, are \$35,000; total credit balances, all in the liabilities and equity section, are also \$35,000. You should note, however, that debit account balances will not always be associated with assets or credit balances with liabilities. (We will see examples following.) All that is required for a balanced ledger is that total debit balances equal total credit balances. You can satisfy yourself that even though debit balances do not all correspond only to asset accounts or credit balances only to liability and shareholders' accounts, if total debit balances equal total credit balances, this is equivalent to saying that total assets equal total liabilities and equity from a balancing point of view.

Table 2A.5

#	Assets				Liabilities		Equity	
	Cash		Inventory		Bank Loan		Share Capital	
	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr
1	25000							25000
2	10000							
account balances	35000							25000
3		8000		8000				
column subtotals	35000	8000						
account balances	27000			8000				25000

The Language of Debits and Credits

The word *debit* means simply “an entry on the left side of the ledger”; *credit* means, similarly, “an entry on the right side of the ledger”. In addition to being the technical terms used in standard accounting systems, the terms *debit* and *credit* offer us a convenient shorthand method of expression. Instead of saying “there is an entry of 25,000 on the left side of the account Cash” that recorded an increase of cash, we say simply “there is debit to cash of 25,000”. The words can also be used even more concisely as verbs: “Cash is debited by 25,000”, or

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the bookkeeper might be told to “debit cash 25,000”. (The word *dollars* or the dollar sign is always understood.)

By extension, *debit* and *credit* refer to balances as well as entries. As we have seen, an asset account normally has its *balance* on the left side; a liability or shareholders’ equity account normally has its balance on the right side. Thus, we call a balance on the left side a *debit balance* and a balance on the right side a *credit balance*. Bear in mind that if an account has a balance on an unexpected side, it may have to be reinterpreted. Thus, if Cash (the company’s record of its bank account) has a credit balance (normally, Cash has a debit balance), the company does not have “money in the bank”; rather, it owes the bank money — it has an overdraft.

We will now show how debits and credits allow us to record transactions as standard journal entries. We will also introduce revenue and expense accounts using the language of debits and credits. After we have done this, we will explore why we use debits and credits, along with other related questions. We begin by recording transaction #4.

Transaction #4

In transaction #4, the company purchases an additional \$5,000 worth of inventory. In this case, however, payment is not made in cash, but instead the company agrees to pay the supplier in 30 days. The deferred payment is called *buying on credit* by the buyer and *selling on credit* by the seller, and the particulars of the arrangement — quite a common one in business transactions — are called *credit terms*.

The word *credit* derives from the Latin *credere*, “to believe or to trust”; the Latin word is the source of both the bookkeeping term and the name of the business transaction. In this case, the buyer, the company for which we are keeping the books, will record the liability as a credit in the ledger to the account Accounts Payable, but we should resist using this as a mnemonic device; if the company were to “sell on credit”, it would record the expected future receipt as a *debit* to the asset account Accounts Receivable (which is exactly what the supplier in this particular example is doing). Thus, two uses of the term *credit* are closely related, but their meanings are quite distinct, and they should not be confused.

To summarize:

The asset account, Inventory, increases by \$5,000.

The liability account, Accounts Payable, increases by \$5,000.

We need to add a new account — Accounts Payable, a liability account, as shown in Table 2A.6.

Now that we know that the asset increase is called a debit and that the liability increase is called a credit, we can write this transaction as a standard journal entry:

Date		[Dr]	[Cr]
	[Dr] Inventory {asset}		5,000
	[Cr] Accounts Payable {liability}		5,000

Transaction #4: Purchase from X Co. Ltd., terms, 30 days

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Leaving aside the date and the narrative (the detailed description of the transaction) at the end, this is read,

“Debit Inventory 5,000; credit Accounts Payable 5,000”

The important pieces of information in the journal entry are the date, the account names and amounts, and the positions of the account names and amounts. The indenting indicates whether an account is being debited or credited. The abbreviations in brackets, [Dr] and [Cr], in the first column under the date and at the top of the debit and credit columns, are optional. The account types {asset, liability, etc.} in curly brackets are included in these appendices for teaching purposes only. They do not appear in regular journal entries.

The journal is a chronological record of transactions. As the name implies, journal entries are written up daily as they occur. The information in the journal is subsequently posted to the relevant accounts in the general ledger. These postings are not necessarily made daily, but all the period's journal entries must be posted before financial statements are prepared. Of course, in computerized systems, the initial entry is made in real time, and the posting is done simultaneously.

Table 2A.6

#	Assets				Liabilities				Equity	
	Cash		Inventory		Bank Loan		Accounts Payable		Share Capital	
	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr
1	25000									25000
2	10000						10000			
3		8000		8000					5000	
4				5000			10000		5000	
column subtotals	35000	8000	13000				10000			25000
account balances	27000		13000				10000		5000	
										25000

Notice again that the general ledger remains in balance: debit account balances total 40,000 ($27,000 + 13,000$); credit account balances total 40,000 ($10,000 + 5,000 + 25,000$).

(To keep the ledger uncluttered, we have deleted the balances we struck after transaction #2. These were for information only at that time, and their removal now changes nothing. This practice will be continued as we proceed.)

Transaction #5 Up to this point, all transactions have involved only accounts that appear on the balance sheet. Transaction #5 is what is called a *revenue transaction*. It involves activities through which the company earns a profit. In this transaction, as shown in Table 2A.7 on page 52, we see an example of *revenue* (i.e., the company sells goods for \$7,000) and *expense* (i.e., the goods sold cost the company \$4,000).

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In the description in section 2.3, transaction #5 was presented as an increase in net assets of \$3,000, representing a corresponding increase in equity. In terms of the simplified accounting equation used in section 2.3, this is correct. In terms of debits, credits, and ledger accounts, the story is a little more involved. This net increase in equity represents increases in components of profit: revenue and expense. However, since there will probably be other revenues and expenses of the business before the end of the accounting period, it would be inappropriate to label the \$3,000 as a profit just yet. (As it happens, there is both revenue and expense in transaction #6, as well as additional expenses in subsequent transactions.) Profit is the difference between *all* the revenues and *all* the expenses of the period. In fact, the accounting process acknowledges that the measurement of profit is tentative until we have come to the end of the accounting period. Until we close the books, there is no explicit measure of profit in the general ledger. All we see now are some of its components — in this case, just sales revenue and cost of goods sold expense (COGS). The process of calculating and recording profit must wait until the accounting period is over and all the other revenues and expenses have been recorded.

A sales transaction is typically recorded in two separate steps: in the first step, the revenue is recorded (5a); in the second, the associated expense is recorded (5b).

Transaction #5a — Sales Revenue

This is a simple cash sale. Revenue, the gross increase in equity from operations, is represented by an inflow of cash.

To summarize:

The asset account, Cash, increases by \$7,000.

The revenue account, Sales Revenue, increases by \$7,000.

An increase in the asset Cash is recorded by a debit of \$7,000. The increase in the revenue account Sales Revenue is recorded by a credit of \$7,000.

We represent this transaction in journal entry form as follows:

Date	[Dr]	Cash {asset}	7,000	[Cr]
	[Cr]	Sales Revenue {E — revenue}		7,000
Transaction #5a: Sale of goods to Y Co. Ltd., for \$7,000 cash				

To emphasize that revenue accounts are sub-accounts of retained earnings and therefore part of equity, these entries will be labelled {E — revenue} in the journal entries. Similarly, expense entries will be labelled {E — expense}.

Transaction 5b — Cost of Goods Sold

This transaction records the *direct* expense of this particular sale. The cost is the using up (transfer out to the customer) of the goods that have been sold. Whereas the sale is recorded at the selling price, the cost of the goods sold is recorded at the cost price, which will normally be lower. Establishing the actual cost of the goods sold can become a little complicated; we will look at it in more detail below. In this case, we will accept that the cost of this particular sale is



Table 2A.7

Appendix 2.1 The Mechanics of Accounting: The Basics

\$4,000 and leave until later the discussion of the techniques for establishing the cost of goods sold.

To summarize:

The asset account, Inventory, decreases by \$4,000.

The expense account, Cost of Goods Sold, increases by \$4,000.

An expense, even though it is read as a positive number, is a *reduction* of equity. A reduction of equity is represented by a debit. The other side of the transaction is the actual reduction of the asset Inventory. This is the credit.

We represent this transaction in journal entry form as follows:

Date	[Dr]	Cost of Goods Sold {E — expense}	4,000	[Cr]
	[Cr]	Inventory {asset}		4,000

Transaction #5b: Cost of goods sold to Y Co. Ltd. (Transaction #5a)

We can now post both entries to the general ledger and then check the balance. We need to create new accounts in the ledger. These are sub-accounts within Retained Earnings: Revenue — Sales, and Expense — Cost of Goods Sold. (See Table 2A.7.)

Having struck a balance in each account, we can balance the general ledger. Debit account balances — now found on both sides of the ledger — total 47,000 (i.e., 34,000 + 9,000 + 4,000). Credit account balances also total 47,000 (i.e., 10,000 + 5,000 + 7,000 + 25,000). Notice that we have left the two sub-accounts of Retained Earnings, Revenue — Sales and Expense — Cost of Goods Sold, with credit and debit balances, respectively. The process of profit measurement is as yet incomplete. Only when the books are finally closed at the end of the period will all the revenue and expense accounts (there would normally be a number of them) be closed, and net income — that is, profit — calculated. We will demonstrate this procedure at the end of this appendix.

It is worth pausing at this point to consider the meaning and importance of using debits and credits.

What Do Debit and Credit Mean?

In accounting, the words *debit* and *credit* are just shorthand terms — they have no significance other than “left side of the ledger” and “right side of the ledger”. In everyday language, however, these words have other connotations. It is important not to confuse these usages. Although the words *debit* and *credit* are often used in an evaluative way in everyday language, in accounting they have a purely technical meaning. Debits are not bad, nor are credits good. If a building is purchased, the asset account must be increased; this is done by “debiting” the account Building, which will normally have a debit balance. Debits are what increase asset accounts, and an asset account with a positive balance has a debit balance. But with every debit, there is a credit; if the building is purchased for cash, then at the same time that Building is debited, the account Cash is credited, which is simply another way of saying that the account Cash was reduced. None of these transactions imply in any way that the company is worse off. In fact, the transactions simply record trading of assets — cash for building.

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Consider a different situation. If the building had been purchased entirely “on credit” — in other words, the money to purchase the building was borrowed — the debit entry would be the same as before, but now, instead of crediting Cash, we would credit Mortgage Loan Payable. *Credit* in this case means the recognition of a liability. It is a different way of financing the purchase and has different implications for future cash management, but in itself, the credit has no moral or judgmental significance.⁹ A third method of financing the purchase of the building might be (if the seller would accept it) to pay for the building by issuing new shares. Issuing shares involves a credit entry simply because an increase in equity is recorded by a right-side entry. In none of these cases can we say that the company is *ipso facto* better or worse off because of what the debits or credits record. In fact, in every recorded transaction, total debits equal total credits: that is the nature of double-entry accounting.

Why Should Non-Accountants Learn about Debits and Credits?

Why should non-accountants learn double-entry accounting using debits and credits? The short answer is that double-entry accounting underlies all business accounting, and understanding double entry means that you will be less intimidated by financial reports. All standard systems, including all accounting software designed for business use, use standard double entry. Although it is true that you don’t need to understand double-entry accounting to read a set of financial statements, familiarity with the system has undoubtedly advantages. Understanding debits and credits is a large part of understanding the language of accounting. Modern financial statements are increasingly complex. A basic accounting course is not going to make us experts; but even if we don’t understand a particular transaction or some aspect of statement presentation, a familiarity with basic debits and credits puts us in a better position to follow the explanations of accountants and make intelligent interpretations.

We can now complete the remaining transactions in section 2.3, balance and close the ledger, and show how the financial statements are prepared.

Transaction #6

As noted in section 2.3 of the text, transaction #6 is very similar to transaction #5. The amounts are different, of course; moreover, transaction #5 is a cash sale, and this sale has been made on credit. In practical accounting terms, the difference in the terms of sale is reflected solely in the asset account debited: it was Cash in transaction #5 and will be Accounts Receivable in this transaction. As explained in section 2.3, under GAAP, credit sales are normally recognized as completed sales, and we will follow that convention here. This question is explored in more detail in Chapter 3.

Again, this sales transaction is recorded in two separate steps, as illustrated in Table 2A.8 on page 56: in the first step, the revenue is recorded (6a); in the second, the associated expense is recorded (6b).

⁹ Of course, these other meanings of *debit* and *credit* have some relationship to the accounting terms. Still, strictly speaking, in accounting *debit* and *credit* mean no more than “left side” and “right side”.

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Transaction 6a — Sales Revenue

This sale is a credit sale, a sale “on account”. The increase in shareholders’ equity is represented by a claim on the customer for a *future* payment of cash. It is not a receipt of cash now, so it is *not* an increase in the account Cash. The account representing a claim for a future payment is Accounts Receivable.

To summarize:

The asset account, Accounts Receivable, increases by \$9,000.

The revenue account, Sales Revenue, increases by \$9,000.

An increase in the asset, Accounts Receivable, is represented by a debit of \$9,000. The increase in the revenue account, Sales Revenue, is represented by a credit of \$9,000.

The journal entry is as follows:

Date		[Dr]	[Cr]
	[Dr] Accounts Receivable {asset}		9,000
	[Cr] Sales Revenue {E — revenue}		9,000

Transaction #6a: Sale of goods to Z Co. Ltd., for \$9,000 on account, terms, 30 days

Transaction 6b — Cost of Goods Sold

As in transaction #5b, transaction #6b records the *direct* expense of the revenue earned in transaction #6a. The expense is the expired cost of the asset transferred to the customer — the cost of the goods that have been sold.

To summarize:

The asset account, Inventory, decreases by \$6,000.

The expense account, Cost of Goods Sold, increases by \$6,000.

We represent this transaction in journal entry form as follows:

Date		[Dr]	[Cr]
	[Dr] Cost of Goods Sold {E — expense}		6,000
	[Cr] Inventory {asset}		6,000

Transaction #6b: Cost of goods sold to Z Co. Ltd. (Transaction #6a)

We can now post entries #6a and 6b to the general ledger. We need to create one new account in the ledger: Accounts Receivable. (Accounts Receivable is an asset account. The account name is written in the plural since we normally have more than one account receivable. At this point, of course, there is just one.) We have not verified that the general ledger balances, but you should do that yourself as an exercise. (See Table 2A.8.)

We will write the journal entries for transactions #7 through #10 before posting them to the general ledger in Table 2A.9 on page 59.

- Transaction #7** This is the collection of the receivable created when we made the sale in transaction #6a.

Table 2A.8

#	Assets						Liabilities						Equity								
	Cash			Accounts Receivable			Inventory			Bank Loan			Accounts Payable			Retained Earnings			Share Capital		
	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Revenue — Sales	Expense — COGS	Dr	Cr	Dr	Cr
1	25000																				
2	10000																				25000
3		8000																			
4														5000							
5a		7000															7000				
5b																		4000			
6a																		9000			
6b																		6000			

Appendix 2.1 The Mechanics of Accounting: The Basics

To summarize:

The asset account, Cash, increases by \$9,000.

The asset account, Accounts Receivable, decreases by \$9,000.

An increase in the asset Cash is represented by a debit of \$9,000. The decrease in the asset account Accounts Receivable is represented by a credit of \$9,000.

The journal entry is as follows:

Date	[Dr]	Cash {asset}	9,000	[Cr]
	[Cr]	Accounts Receivable {asset}		9,000
Transaction #7: Collection of accounts receivable from Z Co. Ltd. (Transaction #6a)				

Transaction #8 This is the settlement of the liability (Accounts Payable) incurred in transaction #4: purchase of inventory on account.

To summarize:

The liability account, Accounts Payable, decreases by \$5,000.

The asset account, Cash, decreases by \$5,000.

A decrease in the liability Accounts Payable is represented by a debit of \$5,000. The decrease in the asset account Cash is represented by a credit of \$5,000.

The journal entry is as follows:

Date	[Dr]	Accounts Payable {liability}	5,000	[Cr]
	[Cr]	Cash {asset}		5,000
Transaction #8: Settlement of account payable to X Co. Ltd. (Transaction #4)				

Transaction #9 This is the payment of bank loan interest. As explained in section 2.3, interest is an expense. The account is called Interest Expense to distinguish it from Interest Revenue, which doesn't appear here but can arise.

To summarize:

The expense account, Interest Expense, increases by \$100.

The asset account, Cash, decreases by \$100.

An increase in the expense Interest Expense is represented by a debit of \$100. (Remember, an expense represents a *decrease* in Retained Earnings.) The decrease in the asset account Cash is represented by a credit of \$100.

The journal entry is as follows:

Date	[Dr]	Interest Expense {E — expense}	100	[Cr]
	[Cr]	Cash {asset}		100
Transaction #9: Interest on bank loan for the period				

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Transaction #10 The company has had a period of profitable operations, and the directors have decided to pay the owners a cash dividend. There are two stages to this transaction: the declaration of the dividend by the board of directors and later, after the list of shareholders is updated, the payment. In this case, both stages are recorded as one transaction.

To summarize:

The dividend account, Dividends, increases by \$1,000.

The asset account, Cash, decreases by \$1,000.

An increase in the dividends account Dividends is represented by a debit of \$1,000. (Remember, dividends reduce retained earnings.) The decrease in the asset account Cash is represented by a credit of \$1,000.

The journal entry is as follows:

Date		[Dr]	[Cr]
[Dr]	Dividends {E — dividends}		1,000
[Cr]	Cash {asset}		1,000

Transaction #10: Declaration and payment of a dividend of \$1,000.

Now we can post the four last transactions and balance the ledger. We need to create two new accounts in the ledger: Interest Expense and Dividends. Interest Expense is another sub-account within Retained Earnings, and it will be included here in the column headed Expenses. (See Table 2A.9.)

In balancing the ledger, notice that two of the accounts have fallen to zero: the Account Receivable was collected and the Account Payable paid. You can verify that the ledger balances: total debits = total credits = \$51,000.

At this point, we will make one additional entry, one that was not made in section 2.3 but that is the type of entry that would normally be made at the end of the period.

A standard accounting system is designed to recognize and record, as they take place on a day-to-day basis, all transactions involving cash; most systems will record credit purchases and credit sales as well. In general, any standard business transaction that involves an organization or individual outside the company will trigger an accounting entry. Transactions #1 through #10 are good examples of the sorts of entries that a standard accounting system will capture as they occur.

When we come to the end of the accounting period, however, any event that is deemed to affect the balance sheet or income statement according to GAAP must be recorded. This includes events that have not yet triggered an accounting entry because cash has not been involved and no invoice has been received or sent. For example, imagine that the period covered by transactions #1 to #10 is one month, and the books must now be closed. At the beginning of this period, we hired an office assistant on a part-time basis. The agreement was that she was to be paid a monthly salary of \$900 for this work, to be paid to her one week after the end of each month. At the end of this accounting period, she has worked for one month but will not be paid until another week has passed. According to GAAP, the cost of the work she did — \$900 — is an expense of the past month. No payment has been made (an invoice would not normally be



Table 2A.9

#	Assets						Liabilities						Equity							
	Cash			Accounts Receivable			Inventory			Bank Loan			Accounts Payable			Retained Earnings			Share Capital	
	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr
1	25000																			25000
2	10000																			
3		8000																		
4																				
5a	7000																			
5b																				
6a			9000																	
6b																				
7	9000																			
8		5000																		
9			100																	
10			1000																	
column subtotals	51000	14100	9000	9000	13000	10000							5000	5000						25000
account balances	36900		0		3000								10000						1000	25000

Chapter 2 The Financial Statements

sent by the employee in a salary relationship), so there has been no event to trigger an entry. Standard accounting practice provides for such time-based transactions through the use of *adjusting journal entries* (AJEs). The following are some examples of transactions that would be handled by adjusting journal entries:

- Recognizing an expense for part of a billing period that covers two accounting periods (this is called an *accrued expense*, or simply *an accrual*). The salary example above is an example of such an accrual.
- Recognizing revenue for part of a billing period that covers two accounting periods (another *accrual* — in this case, an *accrued revenue*).
- Recognizing that a payment made for something that is of the nature of an expense and was so accounted for when paid, but that is not an expense *this period*, is *deferred* to the next period. (An example would be a payment for six months' rent paid two months before the end of the accounting period. The whole payment is often charged to expense at the time of payment, which is a common practice since the payment is of the nature of an expense. However, this treatment is correct only if the part of the payment that will be an expense in the next period is removed from this period's expense by means of an AJE.)
- Recognizing that a payment received for something that we will deliver in the next period is not counted as revenue this period but is *deferred* to the next period. (An example was described on page 34.)
- Cost of goods sold for any business that does not record inventory change for each transaction.
- Depreciation.

All of these periodic transactions are identified at the end of each accounting period following a review of operations, contracts, and policies and then entered into the accounts by means of an AJE.

We will make the AJE for the *salary accrual*.

Adjusting Journal Entry — Accrual of Salary Expense

The assistant's salary has been earned by her for work done in the past month even though it has yet to be paid. The value of her labour has been used up in the month; so, like interest in transaction #10, it is an expense for the period. It is normally called salary expense.

To summarize:

The expense account, Salary Expense, increases by \$900.

The liability account, Salary Payable, increases by \$900.

An increase in the expense salary expense is represented by a debit of \$900. The corresponding increase in the liability account, Salary Payable, is represented by a credit of \$900. Salary Payable is very similar to Accounts Payable; for this reason, the two liabilities will be combined and the account simply renamed Payable.

Appendix 2.1 The Mechanics of Accounting: The Basics

The AJE is as follows:

Date		[Dr]	[Cr]
[Dr]	Salary Expense {E — expense}	900	
[Cr]	Payable {liability}		900
Adjusting journal entry: accrual of unpaid salary expense			

See Table 2A.10.

Closing the Books

We assume now that the one AJE was all that was necessary and that the books are thus up to date and in accordance with GAAP. We begin the closing process by balancing the accounts. These balances will be used to draw up the financial statements. Before continuing, you should confirm that the general ledger itself is balanced. (See Table 2A.11.)

Closing the books does three interrelated things:

1. It calculates the profit or loss for the period and carries it to retained earnings.
2. It sums the dividends for the period and carries that number to retained earnings.
3. It leaves all the temporary accounts — Revenue(s), Expense(s), and Dividends — with zero balances, ready to begin the next period.

The method we use records two closing journal entries — one for revenues and expenses and one for dividends — which are then posted to the general ledger.

Closing Journal Entry — Revenue and Expense Accounts

We have opened one revenue account, Sales Revenue, and three expense accounts, Cost of Goods Sold, Interest Expense, and Salary Expense. The entry to close the revenue and expense accounts is purely mechanical: the Sales Revenue account is simply debited with the amount of its final balance of 16,000, and each of the expense accounts is credited with the amount of its final balance: 11,000 in all. Since revenue exceeds expenses — the company has made a profit for the period — the balancing entry to Retained Earnings is a credit of 5,000. Had there been a loss, expenses would exceed revenue, and the balancing amount would have been a debit.¹⁰

¹⁰ In this particular case, this is the first month of operations for the company, and the opening balance of Retained Earnings is zero. After closing the books, Retained Earnings would have a debit balance. Negative retained earnings is called deficit. If an incorporated company has a deficit, it is normally illegal to declare a dividend.



Table 2A.10



Table 2A.11

Chapter 2 The Financial Statements

The closing journal entry is as follows:

Date		[Dr]	[Cr]
[Dr]	Sales Revenue {E — revenue}	16,000	
[Cr]	Cost of Goods Sold {E — expense}		10,000
[Cr]	Interest Expense {E — expense}		100
[Cr]	Salary Expense {E — expense}		900
[Cr]	Retained Earnings {E — R/E}		5,000

Closing journal entry: revenue and expense

Closing Journal Entry — Dividends Account

The balance in the Dividends account is closed to retained earnings in the same way as the revenue and expense accounts. In this case, there was only one dividend declared; but in practice, there might be up to four declared in the year. The closing entry transfers the final debit balance in the Dividends account to Retained Earnings, which has the effect of reducing its balance.

The closing journal entry is as follows:

Date		[Dr]	[Cr]
[Dr]	Retained Earnings {E — R/E}	1,000	
[Cr]	Dividends {E — dividends}		1,000

Closing journal entry: dividends

Once the closing entries are posted, the general ledger is balanced for the last time. This *post-closing trial balance*, the closing entries, and other information in the ledger are used to prepare the financial statements. (See Table 2A.12.)

Table 2A.12

#	Assets						Liabilities		
	Cash			Accounts Receivable		Inventory		Bank Loan Payables	
	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr	Cr
1	25000								
2	10000						10000		
3		8000			8000				
4					5000				5000
5a	7000								
5b					4000				
6a				9000					
6b					6000				
7	9000			9000					
8			5000				5000		
9			100						
10			1000						
AIE									
Balances	51000	14100	9000	9000	13000	10000			
Trial Bal.	36900		0		3000		10000		900
Close RE									
Close Div.									
Post-closing Trial Bal.	36900						10000		900

Chapter 2 The Financial Statements

Preparing the Financial Statements

To complete the accounting cycle, we prepare financial statements: income statement, statement of changes in equity, balance sheet, and statement of cash flows. Further discussion, including the interpretation of these statements, will be the subject of the next four chapters and Chapter 7. What is important to note now is the importance of form. Even though all of the information contained in the financial statements can be found in the ledger and journal, these last, the “books”, are the internal records of the company. These four financial statements constitute the only *formal* financial record of a company’s operations and its financial position.

**Example Co. Ltd.
Income Statement
for Month Ended December 31, 2020**

Revenue	
Sales	\$16,000
Expense	
Cost of goods sold	\$10,000
Interest	100
Salary	900
Net income	<u>\$ 11,000</u> <u>\$ 5,000</u>

**Example Co. Ltd.
Statement of Changes in Equity
for Month Ended December 31, 2020**

Retained earnings beginning balance	\$ 0
Net income	5,000
Less: dividends	1,000
Retained earnings closing balance	<u>\$ 4,000</u>
Capital stock beginning balance	\$ 0
Issuance of capital stock	25,000
Capital stock closing balance	<u>25,000</u>

**Example Co. Ltd.
Balance Sheet
as at December 31, 2020**

Assets	
Cash	\$36,900
Inventory	<u>3,000</u>
	<u><u>\$39,900</u></u>
Liabilities & Equity	
Liabilities	
Salary payable	\$ 900
Bank loan	<u>10,000</u>
Total liabilities	\$10,900
Equity	
Share capital	\$25,000
Retained earnings	<u>4,000</u>
Total equity	<u>29,000</u>
	<u><u>\$39,900</u></u>

Appendix 2.1 The Mechanics of Accounting: The Basics

Example Co. Ltd.
Statement of Cash Flows
for Month Ended December 31, 2020

Cash from operations	
Net income	\$ 5,000
Add: decrease in non-cash working capital	<u>7,900</u>
	<u><u>\$12,900</u></u>
Cash from financing activities	
Cash from issuing shares	\$25,000
Cash used for dividends	<u>(1,000)</u>
	<u><u>\$24,000</u></u>
Change in cash balance	<u><u>\$36,900</u></u>

You should satisfy yourself that you understand how the information in the general ledger at the end of the period (Table 2A.12) has been used to prepare the first three financial statements shown above. (The balances in the revenue and expense accounts [before closing] are used to draw up the income statement. The net income figure from the income statement and the balances in the Dividend, Retained Earnings accounts, and Capital Stock account are used to create the statement of changes in equity. The post-closing trial balance provides the figures for the balance sheet.) The fourth financial statement, the statement of cash flows, is also based on information from the general ledger, but the relationship is not so simply described. In Appendix 6.2, we will learn a technique for taking information from the books — or, more directly, from the first three financial statements — to construct the statement of cash flows for the period.

Appendix 2.2

Sample Financial Statement

This appendix contains the financial statements of Lululemon Athletica Inc. for 2018, taken from pages 44–48 of the company's 2019 annual report (see Exhibit 2A2.1).

The company's complete published financial statements are available on the Web at <<https://shop.lululemon.com/>>. (Follow the links: About Us | Investors | Financial Information.).



Appendix 2.2 Sample Financial Statement

Exhibit 2A2.1

lululemon athletica inc. CONSOLIDATED BALANCE SHEETS <i>(Amounts in thousands, except per share amounts)</i>			
	February 3, 2019	January 28, 2018	
ASSETS			
Current assets			
Cash and cash equivalents	\$ 881,320	\$ 990,501	
Accounts receivable	35,786	19,173	
Inventories	404,842	329,562	
Prepaid and receivable income taxes	49,385	48,948	
Other prepaid expenses and other current assets	57,949	48,098	
	1,429,282	1,436,282	
Property and equipment, net	567,237	473,642	
Goodwill and intangible assets, net	24,239	24,679	
Deferred income tax assets	26,549	32,491	
Other non-current assets	37,404	31,389	
	\$ 2,084,711	\$ 1,998,483	
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities			
Accounts payable	\$ 95,533	\$ 24,646	
Accrued inventory liabilities	16,241	13,027	
Accrued compensation and related expenses	109,181	70,141	
Current income taxes payable	67,412	15,700	
Unredeemed gift card liability	99,412	82,668	
Other current liabilities	112,698	86,416	
	500,477	292,598	
Non-current income taxes payable	42,099	48,268	
Deferred income tax liabilities	14,249	1,336	
Other non-current liabilities	81,911	59,321	
	638,736	401,523	
Commitments and contingencies			
Stockholders' equity			
Undesignated preferred stock, \$0.01 par value: 5,000 shares authorized; none issued and outstanding	—	—	
Exchangeable stock, no par value: 60,000 shares authorized; 9,332 and 9,781 issued and outstanding	—	—	
Special voting stock, \$0.000005 par value: 60,000 shares authorized; 9,332 and 9,781 issued and outstanding	—	—	
Common stock, \$0.005 par value: 400,000 shares authorized; 121,600 and 125,650 issued and outstanding	608	628	
Additional paid-in capital	315,285	284,253	
Retained earnings	1,346,890	1,455,002	
Accumulated other comprehensive loss	(216,808)	(142,923)	
	1,445,975	1,596,960	
	\$ 2,084,711	\$ 1,998,483	

See accompanying notes to the consolidated financial statements

Chapter 2 The Financial Statements

Exhibit 2A2.1 (continued)

Iululemon athletica inc.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
(Amounts in thousands, except per share amounts)

	Fiscal Year Ended		
	February 3, 2019	January 28, 2018	January 29, 2017
Net revenue	\$ 3,288,319	\$ 2,649,181	\$ 2,344,392
Cost of goods sold	1,472,032	1,250,391	1,144,775
Gross profit	1,816,287	1,398,790	1,199,617
Selling, general and administrative expenses	1,110,451	904,264	778,465
Asset impairment and restructuring costs	—	38,525	—
Income from operations	705,836	456,001	421,152
Other income (expense), net	9,414	3,997	1,577
Income before income tax expense	715,250	459,998	422,729
Income tax expense	231,449	201,336	119,348
Net income	\$ 483,801	\$ 258,662	\$ 303,381
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustment	(73,885)	58,577	36,703
Comprehensive income	\$ 409,916	\$ 317,239	\$ 340,084
Basic earnings per share	\$ 3.63	\$ 1.90	\$ 2.21
Diluted earnings per share	\$ 3.61	\$ 1.90	\$ 2.21
Basic weighted-average number of shares outstanding	133,413	135,988	137,086
Diluted weighted-average number of shares outstanding	133,971	136,198	137,302

See accompanying notes to the consolidated financial statements

Appendix 2.2 Sample Financial Statement

Exhibit 2A2.1 (continued)

lululemon athletica inc.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Amounts in thousands)

	Exchangeable Stock		Special Voting Stock		Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss		Total
	Shares	Shares	Par Value	Shares	Par Value						
Balance at January 31, 2016	9,804	9,804	\$ —	127,482	\$ 637	\$ 245,533	\$ 1,019,515	\$ (238,203)	\$ 1,027,482		
Net income								303,381			303,381
Foreign currency translation adjustment									36,703		36,703
Common stock issued upon exchange of exchangeable shares	(23)	(23)	—	23	—	—					—
Stock-based compensation expense							16,822				16,822
Tax benefits from stock-based compensation							1,273				1,273
Common stock issued upon settlement of stock-based compensation				304	2	6,905					6,907
Shares withheld related to net share settlement of stock-based compensation				(50)	—	(3,268)					(3,268)
Repurchase of common stock				(455)	(2)	(643)	(28,682)				(29,327)
Balance at January 29, 2017	9,781	9,781	\$ —	127,304	\$ 637	\$ 266,622	\$ 1,294,214	\$ (201,500)	\$ 1,359,973		
Net income								258,662			258,662
Foreign currency translation adjustment									58,577		58,577
Stock-based compensation expense							17,610				17,610
Common stock issued upon settlement of stock-based compensation				267	1	5,627					5,628
Shares withheld related to net share settlement of stock-based compensation				(60)	—	(3,229)					(3,229)
Repurchase of common stock				(1,861)	(10)	(2,377)	(97,874)				(100,261)
Balance at January 28, 2018	9,781	9,781	\$ —	125,650	\$ 628	\$ 284,253	\$ 1,455,002	\$ (142,923)	\$ 1,596,960		

Chapter 2 The Financial Statements

Exhibit 2A2.1 (continued)

	Exchangeable Stock		Special Voting Stock		Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss		Total
	Shares	Shares	Par Value	Shares	Par Value	(2)			(73,885)	(73,885)	
Net income							483,801				483,801
Foreign currency translation adjustment									(73,885)	(73,885)	
Common stock issued upon exchange of exchangeable shares	(449)	(449)	—	449	2	(2)					—
Stock-based compensation expense							28,568				28,568
Common stock issued upon settlement of stock-based compensation				535	3	17,647					17,650
Shares withheld related to net share settlement of stock-based compensation				(94)	—	(8,779)					(8,779)
Repurchase of common stock				(4,940)	(25)	(6,402)	(591,913)				(598,340)
Balance at February 3, 2019	9,332	9,332	\$ —	121,600	\$ 608	\$ 315,285	\$ 1,346,890	\$ (216,808)	\$ 1,445,975		

See accompanying notes to the consolidated financial statements

Appendix 2.2 Sample Financial Statement

Exhibit 2A2.1 (continued)

lululemon athletica inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in thousands)

	Fiscal Year Ended		
	February 3, 2019	January 28, 2018	January 29, 2017
Cash flows from operating activities			
Net income	\$ 483,801	\$ 258,662	\$ 303,381
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	122,484	108,235	87,697
Stock-based compensation expense	28,568	17,610	16,822
Derecognition of unredeemed gift card liability	(6,859)	(6,202)	(4,548)
Asset impairment for ivivva restructuring	—	11,593	—
Settlement of derivatives not designated in a hedging relationship	(14,876)	6,227	—
Deferred income taxes	16,786	(11,416)	(17,563)
Changes in operating assets and liabilities:			
Inventories	(85,942)	(21,178)	(5,403)
Prepaid and receivable income taxes	(437)	32,242	11,537
Other prepaid expenses and other current and non-current assets	(30,653)	(7,755)	(15,688)
Accounts payable	71,962	(1,551)	14,080
Accrued inventory liabilities	4,312	3,680	(18,900)
Accrued compensation and related expenses	41,600	12,873	9,943
Current income taxes payable	52,597	(16,470)	(10,020)
Unredeemed gift card liability	24,885	17,282	16,010
Lease termination liabilities	(3,860)	6,427	—
Non-current income taxes payable	(6,169)	48,268	—
Other current and non-current liabilities	44,580	30,810	(956)
Net cash provided by operating activities	742,779	489,337	386,392
Cash flows from investing activities			
Purchase of property and equipment	(225,807)	(157,864)	(149,511)
Settlement of net investment hedges	(16,216)	(7,203)	—
Other investing activities	(771)	(8,325)	—
Net cash used in investing activities	(242,794)	(173,392)	(149,511)
Cash flows from financing activities			
Proceeds from settlement of stock-based compensation	17,650	5,628	6,907
Taxes paid related to net share settlement of stock-based compensation	(8,779)	(3,229)	(3,268)
Repurchase of common stock	(598,340)	(100,261)	(29,327)
Other financing activities	(745)	—	(923)
Net cash used in financing activities	(590,214)	(97,862)	(26,611)
Effect of exchange rate changes on cash	(18,952)	37,572	23,094
(Decrease) increase in cash and cash equivalents	(109,181)	255,655	233,364
Cash and cash equivalents, beginning of period	\$ 990,501	\$ 734,846	\$ 501,482
Cash and cash equivalents, end of period	\$ 881,320	\$ 990,501	\$ 734,846

See accompanying notes to the consolidated financial statements.

Chapter 2 The Financial Statements

Self-Study Problems

1. Charley Farley went into business on October 1, 2020, by opening an online doughnut delivery shop. He carried on the business in a rented bakery in Orillia. At the end of December, he realized that he would have to pay income tax on the business profits, but he had no idea how much profit he had made. He has asked you to advise him on how much income to report for the three months he has been in business.

He has presented you with his bank statements and a pile of invoices and receipts. The following is a summarized list of payments and receipts for the three months.

Receipts paid into bank account:

1.	Equity	\$ 50,000
2.	Bank loan	\$ 55,000
3.	Cash sales	\$146,500

Payments made out of bank account:

4.	Suppliers	\$104,500
5.	Wages	\$ 12,000
6.	Rent	\$ 20,000
7.	Utilities	\$ 5,000
8.	Insurance	\$ 4,000
9.	Equipment	\$ 99,000
10.	Repayment of bank loan	\$ 4,000

Required

- (a) Enter the summarized transactions into the accounting equation and show the balance of assets, liabilities, and equities after each transaction. Assume, for now, that transactions 4, 5, 6, 7, and 8 all reduce equity.
 - (b) As at December 31, 2020, the assets total \$102,000 according to the accounting equation. What are those assets?
2. The financial statements of Ozark Outfitters show an operating income of \$100,000 and a net income of \$75,000. Total assets are \$1 million, liabilities are \$500,000, equity is \$500,000.

Required

- (a) What is the return on assets?
 - (b) What is the return on equity?
3. Jamieson Wellness Inc. is engaged primarily in the manufacturing and sales of health products for humans, including vitamins, herbal and mineral nutritional supplements. Jamieson reported operating income of \$55,449,000 and net income of \$31,657,000 for the year ended December 31, 2019. The company's total assets were \$561,775,000, and equity was \$259,168,000 as at December 31, 2019.

Required

- (a) How much were the total liabilities as at December 31, 2019?
- (b) What was the return on assets for the year?
- (c) What was the return on equity for the year?

Self-Study Problems

4. Continue with Problem #3: for the year to December 31, 2020, the operating income for Jamieson Wellness Inc. was \$47,157,000, and there was net income of \$26,673,000. Total assets were \$549,021,000, and liabilities totalled \$308,299,000.

Required

- (a) How much was the equity as at December 31, 2020?
- (b) What was the return on assets for the year?
- (c) What was the return on equity for the year?

5. After successfully completing her auto mechanics course at Humber College and an apprenticeship at Downtown Honda, Clara Culloden decided to go into business herself as “Her Car Repairs”. She recorded the following transactions in her first month of business:

- (i) Opened a company bank account and banked the \$5,000 she had saved from her earlier career as a dog walker.
- (ii) Borrowed \$1,000 from her grandma and put it in the bank.
- (iii) Paid \$1,300 to her workshop landlord. The rent is \$1,200 per month, and the extra \$100 is a returnable security deposit.
- (iv) Bought workshop tools and machinery for \$250 in cash. At the end of the month, she decided that these had depreciated by \$50.
- (v) Bought car parts at an invoiced price of \$4,200. She paid \$3,750 in cash but still owed the supplier \$450. At the end of the month, she had inventory of parts that had cost \$200.
- (vi) Paid her workshop assistant \$450.
- (vii) Paid utilities of \$250. At the end of the month, she still owed an estimated \$50 for utilities used but not yet billed.
- (viii) Collected \$7,500 from customers for work done on their cars. One customer still owed \$500, and Clara was pretty sure she would collect it early the following month.
- (ix) Paid herself \$1,000 for living expenses.

Required

- (a) Use the accounting equation to show how each of the above cash receipt and cash payment transactions would be recorded in the company's accounting record books. Indicate the effect on assets, liabilities, and equity.
- (b) Use the information to prepare the following financial statements for the first month of the company's business.
 - Income statement
 - Statement of changes in equity
 - Balance sheet
- (c) Multiply the first month's net income by 12 to get an annual figure and calculate the return on assets for the business. Explain whether or not you think that this return-on-assets figure would be a useful piece of information.

Chapter 2 The Financial Statements

Solutions

	Assets	=	Liabilities	+	Equity
1. (a)					
1.	\$ 50,000	=		+	\$ 50,000
2.	<u>55,000</u>	=	<u>\$55,000</u>	+	nil
3.	<u>\$105,000</u>	=	<u>\$55,000</u>	+	\$ 50,000
4.	<u>146,500</u>	=	<u>nil</u>	+	146,500
5.	<u>\$251,500</u>	=	<u>\$55,000</u>	+	\$196,500
6.	<u>-104,500</u>	=	<u>nil</u>	+	-104,500
7.	<u>\$147,000</u>	=	<u>\$55,000</u>	+	\$ 92,000
8.	<u>- 12,000</u>	=	<u>nil</u>	+	- 12,000
9.	<u>135,000</u>	=	<u>\$55,000</u>	+	\$ 80,000
10.	<u>- 20,000</u>	=	<u>nil</u>	+	- 20,000
	<u>\$115,000</u>	=	<u>\$55,000</u>	+	\$ 60,000
	<u>- 5,000</u>	=	<u>nil</u>	+	- 5,000
	<u>\$110,000</u>	=	<u>\$55,000</u>	+	\$ 55,000
	<u>- 4,000</u>	=	<u>nil</u>	+	- 4,000
	<u>\$106,000</u>	=	<u>\$55,000</u>	+	\$ 51,000
	<u>-99,000 + 99,000</u>	=	<u>nil</u>	+	nil
	<u>\$106,000</u>	=	<u>\$55,000</u>	+	\$ 51,000
	<u>- 4,000</u>	=	<u>- 4,000</u>	+	nil
	<u><u>\$102,000</u></u>	=	<u><u>\$51,000</u></u>	+	<u><u>\$ 51,000</u></u>

- (b) The assets consist of:

Cash at bank	\$ 3,000
Equipment	<u>99,000</u>
Total	<u><u>\$102,000</u></u>

2. (a) Return on assets:

$$\begin{aligned} &= \text{operating income} \div \text{total assets} \\ &= \$100,000 \div \$1,000,000 \\ &= 0.1 \text{ (or } 10\%) \end{aligned}$$

- (b) Return on equity:

$$\begin{aligned} &= \text{net income} \div \text{equity} \\ &= \$75,000 \div \$500,000 \\ &= 0.15 \text{ (or } 15\%) \end{aligned}$$

3. (a) Accounting equation:

$$\begin{aligned} \text{Assets} &= \text{Liabilities} + \text{Equity} \\ \$561,775,000 &= \text{Liabilities} + \$259,168,000 \\ \text{Liabilities} &= \$561,775,000 - \$259,168,000 \\ \text{Total liabilities were } &\$302,607,000. \end{aligned}$$

- (b) Return on assets:

$$\begin{aligned} &= (\text{operating income} \div \text{total assets}) \times 100\% \\ &= ((\$55,449,000 \div \$561,775,000) \times 100\% \\ &= 9.87\% \end{aligned}$$

- (c) Return on equity:

$$\begin{aligned} &= (\text{net income} \div \text{equity}) \times 100\% \\ &= (\$31,657,000 \div \$259,168,000) \times 100\% \\ &= 12.21\% \end{aligned}$$

Self-Study Problems

4. (a) Accounting equation:

$$\begin{aligned}\text{Assets} &= \text{Liabilities} + \text{Equity} \\ \$549,021 &= \$308,299,000 + \text{Equity} \\ \text{Equity} &= (\$549,021,000 - \$308,299,000) \\ \text{Equity was } &\$240,722,000.\end{aligned}$$

- (b) Return on assets:

$$\begin{aligned}&= (\text{operating income} \div \text{total assets}) \times 100\% \\ &= (\$47,157,000 \div \$549,021,000) \times 100\% \\ &= 8.59\%\end{aligned}$$

- (c) Return on equity (or Return on investment):

$$\begin{aligned}&= (\text{net income} \div \text{equity}) \times 100\% \\ &= (\$26,673,000 \div \$240,722,000) \times 100\% \\ &= 11.08\%\end{aligned}$$

As there was a net loss, this is not a meaningful calculation.

5. (a) (i) Opened a company bank account and banked the \$500 she had saved from her earlier career as a dog walker.

	Assets	=	Liabilities	+	Equity
Before	\$ 0	=	\$ 0	+	\$ 0
Transaction	+ \$ 5,000	=	\$ 0	+	\$ 5,000
After	\$ 5,000	=	\$ 0	+	\$ 5,000

- (ii) Borrowed \$1,000 from her grandma and put it in the bank.

	Assets	=	Liabilities	+	Equity
Before	\$ 5,000	=	\$ 0	+	\$ 5,000
Transaction	+ \$ 1,000	=	+ \$ 1,000	+	\$ 0
After	\$ 6,000	=	\$ 1,000	+	\$ 5,000

- (iii) Paid \$1,300 to her workshop landlord. The rent is \$1,200 per month, and the extra \$100 is a returnable security deposit.

	Assets	=	Liabilities	+	Equity
Before	\$ 6,000	=	\$ 1,000	+	\$ 5,000
Transaction	- \$ 1,300	=	\$ 0	+	- \$ 1,300
After	\$ 4,700	=	\$ 1,000	+	\$ 3,700

- (iv) Bought workshop tools and machinery for \$250 in cash. At the end of the month, she decided that these had depreciated by \$50.

	Assets	=	Liabilities	+	Equity
Before	\$ 4,700	=	\$ 1,000	+	\$ 3,700
Transaction	- \$ 250 [†]	=	\$ 0	+	\$ 0
	+ \$ 250 [‡]	=	\$ 0	+	\$ 0
After	\$ 4,700*	=	\$ 1,000	+	\$ 3,700

[†] Cash out: This asset cost \$250.

[‡] Value of machinery: For now, it will be shown at historic cost.

* Assets now consist of cash \$4,450 and plant assets \$250.

Chapter 2 The Financial Statements

- (v) Bought car parts at an invoiced price of \$4,200. She paid \$3,750 in cash but still owed the supplier \$450. At the end of the month, she had inventory of parts that had cost \$200.

	Assets	=	Liabilities	+	Equity
Before	\$ 4,700	=	\$ 1,000	+	\$ 3,700
Transaction	- \$ 3,750†	=	+ \$ 450	+	- \$ 4,200
After	\$ 950*	=	\$ 1,450	-	\$ 500

† For this exercise, record this as an “expense”. When we prepare the financial statements, we will recognize that not all the parts are used up as some remain in inventory. An alternative treatment (which would be more normal) would be to record the \$2,400 initially as inventory and then recognize the part that had been used (\$4,000) and the part that remained in inventory (\$200) when preparing the financial statements.

* The assets now consist of cash of \$700, plant assets of \$250.

- (vi) Paid her workshop assistant \$450.

	Assets	=	Liabilities	+	Equity
Before	\$ 950	=	\$ 1,450	+	- \$ 500
Transaction	- \$ 450	=	+ \$ 0	+	- \$ 450
After	\$ 500*	=	\$ 1,450	-	\$ 950

* The assets now consist of cash of \$250 and plant assets of \$250.

- (vii) Paid utilities of \$250. At the end of the month, she still owed an estimated \$50 for utilities used but not yet billed.

	Assets	=	Liabilities	+	Equity
Before	\$ 500	=	\$ 1,450	+	- \$ 950
Transaction	- \$ 250	=	+ \$ 0	+	- \$ 250
After	\$ 250*	=	\$ 1,450	-	\$ 1,200

* The assets now consist of zero cash and plant assets of \$250 only.

- (viii) Collected \$7,500 from customers for work done on their cars. One customer still owed \$500, and Clara was pretty sure she would collect it early the following month.

	Assets	=	Liabilities	+	Equity
Before	\$ 250	=	\$ 1,450	+	- \$ 1,200
Transaction	+ \$ 7,500	=	+ \$ 0	+	\$ 7,500
After	\$ 7,750*	=	\$ 1,450	+	\$ 6,300

* The assets now consist of cash \$7,500 and plant assets of \$250.

- (ix) Paid herself \$1,000 for living expenses.

	Assets	=	Liabilities	+	Equity
Before	\$ 7,750	=	\$ 1,450	+	\$ 6,300
Transaction	- \$ 1,000	=	+ \$ 0	+	\$ 1,000
After	\$ 6,750*	=	\$ 1,450	+	\$ 5,300

* The assets now consist of cash \$6,500 and plant assets of \$250.

Self-Study Problems

Final adjustments necessary to recognize the following:

Owed by a customer:	\$ 500
Owed for utilities:	\$ 50
Use of inventory:	
Purchase	\$ 4,200
Less: Ending inventory	<u>200</u>
	\$ 4,000

(b) **Her Car Repairs
Income Statement for the Month**

Sales revenue (\$7,500 + \$500)	\$ 8,000
Cost of goods sold (\$3,750 + \$450 - \$200)	<u>4,000</u>
Gross profit	\$ 4,000
Less: Expenses	
Rent (\$1,300 - \$100)	\$ 1,200
Salaries	450
Utilities (\$250 + \$50)	300
Depreciation	<u>50</u>
Total expenses	<u>2,000</u>
Net income	<u>\$ 2,000</u>

**Her Car Repairs
Statement of Changes in Equity**

Capital introduced	\$ 5,000
Add: Net income for the month	2,000
Less: Withdrawal paid to owner	<u>(1,000)</u>
Equity at end of month	<u>\$ 6,000</u>

**Her Car Repairs
Balance Sheet at the End of the Month**

Assets	
Current assets	
Cash	\$ 6,500
Accounts receivable	500
Inventory	200
Deposit	<u>100</u>
Total	\$ 7,300
Long-term assets	\$ 250
Less: Depreciation	<u>50</u>
Total assets	<u>\$ 7,500</u>
Liabilities & owner's equity	
Liabilities	
Current liabilities	\$ 500
Long-term liability	<u>1,000</u>
Total liabilities	\$ 1,500
Equity	6,000
Total liabilities and owner's equity	<u>\$ 7,500</u>

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(c)	Net income for the month	\$ 2,000
		× 12
		\$24,000
	Total assets	\$ 7,500
	Return on assets = \$24,000 ÷ \$7,500	320%

This is a very healthy return on assets, but its meaning is flawed in at least two respects.

- (i) It is the first month of activities, and it is probably an underestimate of the longer-term profit capability of the company.
- (ii) It fails to recognize the contribution of Clara Culloden herself, and that is an omitted “opportunity cost”. If she were not working in this business, we can presume that she would be working elsewhere for wages.

Discussion Questions and Problems

Discussion Questions

1. It is 2020, and you are thinking about investing in Rio Tinto Alcan Inc., a Canadian mining and resource company that, in 2018, launched ELYSIS, a partnership with Alcoa, supported by Apple and the governments of Canada and Quebec. ELYSIS is developing breakthrough technology that eliminates direct greenhouse gas emissions from the aluminum smelting process, replacing them with pure, clean oxygen. List the information available to you as a potential investor, its source, and its degree of usefulness to your investment decision.
2. As a shareholder of Canfor Pulp Ltd., a global leader in producing sustainable wood-building solutions, Canfor is driving the demand for green building products around the world. List the information the company will give to you and assess its relevance and reliability.
3. For some time, you have been concerned about the environment. In January of the current year, your uncle died and left you 500 shares of WestJet Airlines. What can you do to make yourself more comfortable about the relationship between WestJet Airlines, you, and the environment?
4. Banks and trust companies regularly provide mortgage loans to home buyers. What financial information do they require before making their lending decisions? What additional steps do they take to make sure their loans are safe?
5. Equity is described as the residual in the accounting equation. Explain what this means in terms of assets and liabilities. If you are the owner of 10 shares in BCE (Bell Canada Enterprises Inc.), what is your entitlement to the equity on the balance sheet?
6. When an asset is acquired, it may be valued at cost because of the historical cost accounting principle. Under what circumstances would this be inaccurate, and what steps should be taken to make the balance sheet show the correct value?
7. The accrual concept requires that expenses be reported in the period that received the benefit of the expense, not in the period when the cash was paid out. Where in the balance sheet would the effect of this be reported?
8. Where in the financial reports would the financial outcome of an ongoing litigation be reported?
9. Does an audit improve the relevance, or the reliability, of financial reports?
10. What does the term *residual interest* mean when it is applied to common shares?
11. You are considering investing in shares of Le Chateau Inc., a Canadian retail store chain. What information would you use to make your decision whether to invest?

Appendix 2.1

12. What is a transaction? How does a transaction differ from an event?

Chapter 2 The Financial Statements

13. What is a journal entry? What is the relationship between a journal entry and a transaction? Between a journal entry and an event?
14. What is an account?
15. What is the general ledger?
16. What is a debit?
17. What is a credit?
18. Are debits better than credits?

Problems

1. You are a shareholder of Canadian Tire Corp., a company that is listed on the Toronto Stock Exchange. The company recently sent you its annual financial statements.

Required

- (a) Why has the company done this?
- (b) When would you expect to receive the statements?
- (c) What information would you expect to get from the income statement?
- (d) What information would you expect to get from the statement of changes in equity?
- (e) What information would you expect to get from the balance sheet?
- (f) What information would you expect to get from the cash flow statement?
- (g) In what ways could you use this information to make an informed choice about your investing and lending decisions?

2. You have just won the lottery, and you now have \$250,000 cash available. You intend to use this to buy your first house. Your best estimate of the legal fees and closing fees is \$25,000. You want to keep a further \$25,000 available to buy furniture and appliances. You expect the bank to ask you for a 20% down payment. With current (2020) interest rates being very low, you expect that your salary plus your wife's salary will be seen as sufficient to qualify for a pretty large monthly mortgage payment. As of 2020, the average price of a house in Toronto is \$1 million.

Required

What is the most expensive house you could consider buying within the limits described above?

3. You have just won the lottery, and you now have \$250,000 cash available. You intend to use this to buy your first house. Your best estimate of the legal fees and closing fees is \$25,000. You want to keep a further \$25,000 available to buy furniture and appliances. You expect the bank to ask you for a 20% down payment.

Required

Which of the following documents could you use to support a request for a mortgage of \$800,000?

Discussion Questions and Problems

- A list of your RRSP investments
- A list of the shares you own in companies listed on the Toronto Stock Exchange
- Your university transcript showing that you are a solid B+ student
- A professional valuation of your car for \$50,000
- A letter from your employer showing that your last year's earnings were \$125,000
- A list of your clothes and other personal property, with your estimate of their cost as being \$10,000
- Your bank statements for the last six months
- The names and addresses of your grandparents, who intend to leave you something in their wills.

Scenario #1

The following information pertains to Problems #4 to #9.

Annie and Jocasta decide to go into business together providing gourmet catering services to the rich and famous. Their intention is that by doing this they themselves will become rich and famous so that they can get someone to provide gourmet catering services for them.

In the first month of business, they have the following transactions:

- (i) Annie has \$15,000 of savings. Jocasta gets a personal loan of \$15,000 from her grandmother. They put this \$30,000 into a partnership bank account to start off the business.
- (ii) They leased kitchen premises in a lock-up store near where they live for \$2,000 per month. The two-year rental agreement calls for payment of first and last month's rent in advance.
- (iii) They bought a small delivery van for \$5,000.
- (iv) They spent \$10,000 equipping the food preparation and cooking area and buying serving dishes.
- (v) At this point, the bank balance is reduced to \$11,000.
- (vi) They arranged with their bank to get a credit card in the name of the partnership with a limit of \$25,000. To do this, they both have to sign a personal guarantee.
- (vii) During their first month of business, they spent \$15,000 on food ingredients, van fuel, and sundry expenses, all of which were charged to the credit card. All of these items were used up in the normal course of business in the month.
- (viii) Customers paid a total of \$10,000 for food provided. A further \$15,000 was owed by customers who had received food but had not yet paid for it.
- (ix) One corporate customer paid them a \$2,000 deposit for catering a reception in the next month.
- (x) By the end of the first month, they had not yet paid the credit card balance, but they intended to pay it down to zero early next month.
- (xi) At the end of the first month, they estimated that there was about \$1,500 owed by them for utilities and water.

Chapter 2 The Financial Statements

- (xii) At the end of the first month, they each took \$2,000 out of the bank account as a personal withdrawal.
- (xiii) Their best estimate of depreciation on the van and the catering equipment was \$500 for the month.
4. Use the accounting equation to show how each of the above transactions would be recorded in the partnership's accounting records. Indicate the effect of each one on assets, liabilities, and equity.
5. Use the information provided to prepare the following financial statements for the first month of the partnership:
- An income statement
 - A balance sheet
6. For Annie and Jocasta, they can estimate their business's income for the first year by multiplying the first month's income by 12 and then use that to calculate their return on assets.
- In what ways is multiplying the first month's income by 12 a reasonable way of estimating their annual income, and why might it be suspect?
 - In what ways does this return on assets represent a useful measure of profitability?

Scenario #2

The following information pertains to Problems #7 to #9.

Below is Tom & Jerry's landscaping company's balance sheet at the beginning of April:

Assets	
Cash	\$12,000
Inventory	1,000
Owed by customers	10,000
Rent deposit	<u>2,000</u>
	\$25,000
Vehicles and equipment	<u>10,000</u>
Total assets	<u><u>\$35,000</u></u>
Liabilities	
	\$ 5,000
Equity	
	<u>30,000</u>
Total liabilities and equity	<u><u>\$35,000</u></u>

During April, the following transactions took place:

- Collected \$5,000 of the money owed by customers.
- Provided landscape services to customers for \$4,000 and received payment in cash.
- Provided landscape services to customers on credit for \$10,000.
- Incurred operating expenses paid in cash for \$5,000.
- Incurred operating expenses on credit for \$2,000.

Discussion Questions and Problems

- (vi) Paid \$5,000 to settle the liabilities owed at the beginning of the period.
 - (vii) Discovered that a customer who owed them \$1,000 has just declared bankruptcy, and they did not expect to recover the amount owed.
 - (viii) At the end of the month, Tom and Jerry each took \$2,500 out of the company for personal living expenses.
 - (ix) At the end of the month, they owed a further \$1,000 for utilities.
7. Show the accounting equation at the beginning of the month and after each of the transactions that took place during the month.
8. Use the information provided to prepare an income statement and a balance sheet for the month.
9. For Tom and Jerry's business, they can multiply the first month's income by 12 to get an estimate of this year's income and then calculate their return on assets.
In what ways is multiplying the first month's income by 12 a reasonable way of estimating their annual income, and why might it be suspect?

- 
- 
10. Plastic Extrusions Inc. had total assets of \$1,000,000 at the end of December. Liabilities were \$250,000, and owners' equity was \$750,000. During the year, sales totalled \$5,000,000, operating income was \$100,000, interest payments and taxes were \$25,000, and net income was \$75,000.

Required

Calculate the following:

- (a) The return on assets
- (b) The return on owners' equity

11. Gerry's Superette had sales of \$5,000,000 in the most recent year. Operating expenses were \$3,500,000. Interest and taxes totalled \$500,000. Total liabilities were \$200,000, and owners' equity was \$800,000.

Required

Calculate the following:

- (a) The return on assets
- (b) The return on owners' equity

12. Return on assets and return on equity are both measures of profitability. Explain the differences between the two, and explain to which users each would be more useful.

13. Martha and Hannah are equal partners in an Internet-based retail store. Total equity in the online platform is \$800,000, so they own \$400,000 each. Based on their expectations about opportunity cost, they both

Chapter 2 The Financial Statements

expect to earn a 10% return on their invested capital plus \$75,000 each in lieu of the salary they could be earning if they had a regular job. Ignoring taxes, how much operating profit are they expecting to make?

14. Below is an excerpt of the financial Statement of Goodfoods Market Corp. as at August 1, 2019, a public company operating an online grocery business of providing meal kits to individuals. Goodfoods is considered to be in the start-up phase of the business, having been recently incorporated. The net loss in 2018 was \$9,434,000 and in 2019 was \$20,937,000.

Consolidated Statements of Financial Position

August 31, 2019 and 2018

(In thousands of Canadian dollars)

	2019	2018
Assets	<u>\$80,783</u>	<u>\$34,309</u>
Liabilities	\$63,382	\$17,853
Shareholders' equity	<u>17,401</u>	<u>16,456</u>
Liabilities and Shareholders' equity	<u>\$80,783</u>	<u>\$34,309</u>

Required

- (a) How much were the total liabilities as at August 1, 2019?
- (b) What was the return on assets for the year?
- (c) What was the return on equity for the year?
- (d) How much was the equity as at August 31, 2018?
- (e) If you were thinking of investing in Goodfoods Market Corp., what concerns would you have?

15. Jane and Lila run a retail knitting store. For each of the following situations, state the accounting concepts that apply (there may be more than one concept in any given situation):
- (a) They keep a careful record of wool used in store projects and the wool they take home to knit clothes for their grandchildren.
 - (b) Their accountant prepares a detailed income statement and a balance sheet every year.
 - (c) At the end of each year, they check what inventory is on hand and record its actual cost. Where the stock is slow moving, they reduce the cost to zero.
 - (d) Their store premises are owned outright. Each year, they depreciate (amortize) the cost of store equipment over its useful life.
 - (e) Customers normally pay in cash when goods are sold, but the store sometimes takes deposits for future sales. Customers also sometimes take goods on credit.
 - (f) At the end of the year, they deduct 5% from the balance owing to them in case the debt turns into a bad debt.
16. (a) What is the relationship between the accounting equation and the income statement?

Discussion Questions and Problems

- (b) What is the relationship between the accounting equation and the balance sheet?
17. You are given the following information for Jane and Lila's knitting store at the end of the year:

Return on assets	25%
Return on equity	50%
Income tax and interest	\$5,000
Total assets	\$100,000

Required

Calculate the \$ amount of the liabilities.

18. Comprehensive Problem — Part 1

The following are the transactions that occurred for the year ending December 31, 2020 for a newly formed company, Alpha Ltd.

- Jan. 1 Received \$400,000 cash from investors in exchange for 10,000 common shares.
- Jan. 1 Borrowed \$200,000 cash from The Big Bank and signed a five-year note. The annual interest rate is 5%. Interest is payable annually on December 31, and principal must be repaid on December 31, 2024.
- Apr. 1 Acquired equipment for \$55,000 cash. The equipment has an estimated useful life of 10 years and an estimated residual (terminal) value of \$5,000.
- Apr. 15 Purchased inventory for \$200,000 on credit from ordinary suppliers.
- May 1 Billed customers \$250,000 for sales. The cost of the inventory was \$140,000 for these sales.
- June 1 Collected \$230,000 cash from customers for the sales made on May 1.
- July 1 Paid cash for the amount owing to suppliers of inventory.
- Aug. 1 Received land valued at \$40,000 from an investor in exchange for 1,000 common shares.
- Oct. 1 Made cash sales of \$50,000. The cost of the inventory was \$28,000 for these sales.
- Nov. 1 Purchased inventory for \$100,000 cash from ordinary suppliers.
- Dec. 1 Received an invoice for \$4,000 from an electrician for work done during the year. The invoice will be paid in January.
- Dec. 15 Collected \$15,000 cash from customers for the sales made on May 1.
- Dec. 20 Paid a cash dividend of \$5,000 to shareholders.
- Dec. 30 Paid cash of \$100,000 for various operating expenses in 2020.
- Dec. 31 Paid cash of \$10,000 for interest on the bank loan.
- Dec. 31 Recorded depreciation expense of \$3,750 for the equipment.
- Dec. 31 Paid cash of \$2,000 for income taxes.

Chapter 2 The Financial Statements

Required

- (a) Using the transactions-based approach (tabular analysis), record the above transactions and events for 2020. Determine the ending balances for all accounts that are included in the tabular analysis.
- (b) Prepare an income statement for the year 2020.
- (c) Prepare a statement of changes in equity (statement of retained earnings) for the year 2020.
- (d) Prepare a balance sheet as at December 31, 2020.
- (e) Using the financial statements you prepared, calculate the return on assets ratio and the return on equity ratio.

Appendix 2.1

19. Prepare journal entries for each of the events described below:
 - (a) In December, Harriet, an architect, designs a building for a client and bills the client \$55,000.
 - (b) In December, Harriet pays her helper, Judy, one month's wages of \$2,500.
 - (c) In June, Thomasina, a computer consultant, carries out a system upgrade for a client. She bills the client \$15,000 to be paid the following month; she had bought software for \$8,000 and employed a helper for the month for \$2,000.
 - (d) In November, Dick, a food retailer, buys goods for resale at a cost of \$50,000. He sets his selling price by marking up his cost by 80%.
 - (e) In December, Dick realizes that \$9,000 worth of food (at retail price) was discoloured, and he is able to sell it only by marking it down to half-price.
20. Using the information provided in Scenario #1 for Problems #4–#6, complete the six-step accounting cycle for Annie and Jocasta's gourmet catering services for its first month of business. Use debits and credits and organize your answer in the following three stages:
 - (a) Identify and record the transactions as journal entries (steps 1 and 2 of the accounting cycle).
 - (b) Post the journal to the general ledger. Prepare a spreadsheet along the lines of the one used in the appendix, making the appropriate adjustments for the names of the assets and liabilities. Note that there will be Partners' Equity (one account for each partner) instead of Equity. There will be revenue and expense columns but no retained earnings as net income is divided directly between the partners. There are no dividends in partnership, but partners make withdrawals, as agreed. Withdrawals are not necessarily equal in any period. Add as many columns as are necessary to accommodate the accounts and as many rows as necessary to complete the post-closing trial balance.
 - (c) Use the information from the completed spreadsheet to prepare (i) an income statement for the month, and (ii) a balance sheet as at the end of the month, both in good form.

Discussion Questions and Problems

21. Using the information in Scenario #2 for Problems #7–#9, complete the accounting cycle for Tom & Jerry's landscaping company for April 20XX in the same manner as you did for Annie and Jocasta's gourmet catering services in Problem #20.
 - (a) Identify and record the transactions as journal entries.
 - (b) Post the journal to the general ledger. Lay out the general ledger in spreadsheet form and complete it up to the post-closing trial balance.
 - (c) Use the information from the spreadsheet to prepare (i) an income statement for the month and (ii) a balance sheet as at the end of the month, both in good form.
22. Comprehensive Problem — Part 1A
 - (a) Answer Problem #18 using journal entries and T-accounts.
 - (b) Complete your answer by closing the revenue, expense, and dividends accounts.

