ACCT 301: FINANCIAL ACCOUNTING (BLACK)



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ACCT 301: Financial Accounting (Black)

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Glossary

Glossary

Detailed Licensing

Licensing

*A detailed breakdown of this resource's licensing can be found in **Back Matter/Detailed Licensing**.*

CHAPTER OVERVIEW

1: Rules of the Game

Learning Objectives

- Explain the nature and purpose of United States generally accepted accounting principles (USGAAP) and International Financial Reporting Standards (IFRS)
- Explain and apply the components of the conceptual framework for financial accounting and reporting, including:
  - The qualitative characteristics of accounting information
  - The assumptions underlying accounting
  - The basic principles of financial accounting
  - The constraints and limitations on accounting information
  - Define and use accounting and business terminology

1.1: Accounting is the Language of Business
1.2: Internal and External Users
1.3: Users of Accounting Information
1.4: Ethics in Accounting
1.5: Describe Principles, Assumptions, and Concepts of Accounting and Their Relationship to Financial Statements

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1.1: Accounting is the Language of Business

Accounting is the Language of Business

Every profit-seeking business organization that has economic resources, such as money, machinery, and buildings, uses accounting information. For this reason, accounting is called the language of business. Accounting also serves as the language providing financial information about not-for-profit organizations such as governments, churches, charities, fraternities, and hospitals. However, these entities are not businesses because they do not operate in a for-profit manner. In this textbook, we will focus on accounting for business firms.

The accounting process provides financial data for a broad range of individuals whose objectives in studying the data vary widely. Bank officials, for example, may study a company's financial statements to evaluate the company's ability to repay a loan. Prospective investors may compare accounting data from several companies to decide which company represents the best investment. Accounting also supplies management with significant financial data useful for decision making.

Financial accounting information appears in financial statements that are intended primarily for external use (although management also uses them for certain internal decisions). Stockholders and creditors are two of the outside parties who need financial accounting information. These outside parties decide on matters pertaining to the entire company, such as whether to increase or decrease their investment in a company or to extend credit to a company. Consequently, financial accounting information relates to the company as a whole, while managerial accounting focuses on the parts or segments of the company.

Managerial accounting information is for internal use and provides special information for the managers of a company. The information managers use may range from broad, long-range planning data to detailed explanations of why actual costs varied from cost estimates. Management accountants in a company prepare the financial statements. Thus, management accountants must be knowledgeable concerning financial accounting and reporting. The financial statements are the representations of management, not the CPA firm that performs the audit.

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1.2: Internal and External Users

Internal and External Users

Users of accounting information are separated into two groups, internal and external. Internal users are the people within a business organization who use accounting information. External users are people outside the business entity that use accounting information. Accounting information is valuable because decision-makers both internally and externally can use it to evaluate the financial consequences of various alternatives. Accountants reduce uncertainty by using professional judgment to quantify the future financial impact of taking action or delaying action. Although accounting information plays a significant role in reducing uncertainty within an organization, it also provides financial data for persons outside the company.

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1.3: Users of Accounting Information

Users of Accounting Information

The accounting process provides financial data for a broad range of individuals whose objectives in studying the data vary widely. Three primary users of accounting information were previously identified, internal users, external users, and government/IRS. Each group uses accounting information differently and requires the information to be presented differently.

Internal Users

Accounting supplies managers and owners with significant financial data that is useful for decision making. This type of accounting is generally referred to as managerial accounting.

Some of the ways internal users employ accounting information include the following:

- Assessing how management has discharged its responsibility for protecting and managing the company's resources
- Shaping decisions about when to borrow or invest company resources
- Shaping decisions about expansion or downsizing

External Users

Typically called financial accounting, the record of a business' financial history for use by external entities is used for many purposes. The external users of accounting information fall into six groups; each has different interests in the company and wants answers to unique questions. The groups and some of their possible questions are:

- **Owners and prospective owners.** Has the company earned satisfactory income on its total investment? Should an investment be made in this company? Should the present investment be increased, decreased, or retained at the same level? Can the company install costly pollution control equipment and still be profitable?
- **Creditors and lenders.** Should a loan be granted to the company? Will the company be able to pay its debts as they become due?
- **Employees and their unions.** Does the company have the ability to pay increased wages? Is the company financially able to provide long-term employment for its workforce?
- **Customers.** Does the company offer useful products at fair prices? Will the company survive long enough to honor its product warranties?
- **Governmental units.** Is the company, such as a local public utility, charging a fair rate for its services?
- **General public.** Is the company providing useful products and gainful employment for citizens without causing serious environmental problems?

Some of the ways external users employ accounting information include the following:

- Stockholders have the right to know how a company is managing its investments
- Federal and State Governments require tax returns and other documents often prepared by accountants
- Banks or lending institutions may use accounting information to guide decisions such as whether to lend or how much to lend a business
- Investors will also use accounting information to guide investment decisions

General-purpose financial statements provide much of the information needed by external users of financial accounting. These financial statements are formal reports providing information on a company's financial position, cash inflows and outflows, and the results of operations. Many companies publish these statements in annual reports, also known as a 10-K or a 10-Q (quarterly report). The annual report contains the independent auditor's opinion as to the fairness of the financial statements, as well as information about the company's activities, products, and plans. Typically, the best place to find these reports for a public company can be on their website under the Investor relations section. Financial statements used by external entities are prepared using generally accepted accounting principles, or GAAP. We will discuss the language of GAAP further in later sections.

Government/IRS

Government agencies that track and use taxes are interested in the financial story of a business. They want to know whether the business is paying taxes according to current tax laws. The language in which tax-related financial statements are prepared is called IRC or Internal Revenue Code. Tax preparation will be outside the scope of this course.

Important Points to Remember

- **Internal users** are people within a business organization who use financial information. Examples of internal users are owners, managers, and employees.
- **External users** are people outside the business entity (organization) who use accounting information. Examples of external users are suppliers, banks, customers, investors, potential investors, and tax authorities.

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1.4: Ethics in Accounting

Ethics in Accounting

Most of those who write about ethics do not make a clear distinction between ethics and morality. The question of what is “right” or “morally correct” or “ethically correct” or “morally desirable” in any situation is variously phrased, but all of the words and phrases are after the same thing: what act is “better” in a moral or ethical sense than some other act? People sometimes speak of morality as something personal but view ethics as having wider social implications. Others see morality as the subject of a field of study, that field being ethics. Ethics would be morality as applied to any number of subjects, including journalistic ethics, business ethics, or the ethics of professionals such as doctors, attorneys, and accountants. We will venture a definition of *ethics*, but for our purposes, *ethics* and *morality* will be used as equivalent terms.

People often speak about the ethics or morality of individuals and also about the morality or ethics of businesses. There are clearly differences in the kind of moral responsibility that we can fairly ascribe to businesses and accountants; we tend to see individuals as having a soul, or at least a conscience, but there is no general agreement that businesses have either. Still, our ordinary use of language does point to something significant: if we say that some businesses are “evil” and others are “corrupt,” then we make moral judgments about the quality of actions undertaken by the business. For example, if we conclude that WorldCom or Enron acted “unethically” in certain respects, then we are making judgments that their collective actions are morally deficient.

Why Should a Business or Accountant Be Ethical?

The usual answer is that good ethics is good business. In the long run, businesses that pay attention to ethics do better; they are viewed more favorably by customers. But this is a difficult claim to measure scientifically, because “the long run” is an indistinct period of time and because there are as yet no generally accepted criteria by which ethical excellence can be measured. In addition, life is still lived in the short run, and there are many occasions when something short of perfect conduct is a lot more *profitable*.

Several accounting organizations have codes of ethics governing the behavior of their members. For instance, both the American Institute of Certified Public Accountants and the Institute of Management Accountants have formulated such codes. It is important to maintain ethical behavior both personally and professionally in business, therefore many business firms have also developed codes of ethics for their employees to follow.

Ethical behavior involves more than merely making sure you are not violating a code of ethics. Most of us sense what is right and wrong. Yet get-rich-quick opportunities can tempt many of us. Almost any day, newspaper headlines reveal public officials and business leaders who did not do the right thing. *Greed* won out over their sense of right and wrong. These individuals followed slogans such as: “Get yours while the getting is good”; “Do unto others before they do unto you”; and “You have done wrong only if you get caught”. More appropriate slogans might be: “If it seems too good to be true, it usually is”; “There are no free lunches”; and the golden rule, “Do unto others as you would have them do unto you”.

An accountant’s most valuable asset is an honest reputation. Those who take the high road of ethical behavior receive praise and honor; they are sought out for their advice and services. They also like themselves and what they represent. Occasionally, accountants do take the low road and suffer the consequences. They sometimes find their names mentioned in *The Wall Street Journal* and news programs in an unfavorable light, and former friends and colleagues look down on them. Some of these individuals are removed from the profession. Fortunately, the accounting profession has many leaders who have taken the high road, gained the respect of friends and colleagues, and become role models for all of us to follow.

Case Study: The Sarbanes-Oxley Act

Sarbanes–Oxley was named after sponsors U.S. Senator Paul Sarbanes and U.S. Representative Michael G. Oxley. As a result of SOX, top management must individually certify the accuracy of financial information. In addition, penalties for fraudulent financial activity are much more severe. Also, SOX increased the oversight role of boards of directors and the independence of the outside auditors who review the accuracy of corporate financial statements.

The bill, which contains eleven sections, was enacted as a reaction to a number of major corporate and accounting scandals, including those affecting Enron, Tyco International, Adelphia, Peregrine Systems, and WorldCom. These scandals cost investors billions of dollars when the share prices of affected companies collapsed and shook public confidence in the US securities markets.

The act contains eleven titles, or sections, ranging from additional corporate board responsibilities to criminal penalties, and requires the Securities and Exchange Commission (SEC) to implement rulings on requirements to comply with the law. “The mission of the SEC is to protect investors, maintain fair orderly, and efficient markets, and facilitate capital formation.”[1]

Harvey Pitt, the 26th chairman of the SEC, led the SEC in the adoption of dozens of rules to implement the Sarbanes–Oxley Act. It created a new, quasi-public agency, the Public Company Accounting Oversight Board, or PCAOB, charged with overseeing, regulating, inspecting, and disciplining accounting firms in their roles as auditors of public companies. The act also covers issues such as auditor independence, corporate governance, internal control assessment, and enhanced financial disclosure. The nonprofit arm of Financial Executives International (FEI), Financial Executives Research Foundation (FERF), completed extensive research studies to help support the foundations of the act.

Debate continued as of 2007 over the perceived benefits and costs of SOX. Opponents of the bill have claimed it has reduced America’s international competitive edge against foreign financial service providers because it has introduced an overly complex regulatory environment into US financial markets. A study commissioned by NYC Mayor Michael Bloomberg and US Sen. Charles Schumer cited this as one reason America’s financial sector is losing market share to other financial centers worldwide. Proponents of the measure said that SOX has been a “godsend” for improving the confidence of fund managers and other investors with regard to the veracity of corporate financial statements.

This information about the Sarbanes-Oxley Act was taken from Wikipedia, where you can learn more about it if you are interested.

Important Points to Remember

- **Business ethics** can be described as a set of moral behaviors that influence principles within a business or organizational environment.
- **The Sarbanes-Oxley Act** was created to prevent and limit corporate accounting scandals after Enron financial crimes were revealed in 2001

1. The US Securities and Exchange Commission, http://www.sec.gov/about/whatwedo.shtml

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1.5: Describe Principles, Assumptions, and Concepts of Accounting and Their Relationship to Financial Statements

Accounting Principles, Assumptions, and Concepts

The Financial Accounting Standards Board (FASB) is an independent, nonprofit organization that sets the standards for financial accounting and reporting, including generally accepted accounting principles (GAAP), for both public- and private-sector businesses in the United States.

GAAP are the concepts, standards, and rules that guide the preparation and presentation of financial statements. If US accounting rules are followed, the accounting rules are called US GAAP. International accounting rules are called International Financial Reporting Standards (IFRS). Publicly traded companies (those that offer their shares for sale on exchanges in the United States) have the reporting of their financial operations regulated by the Securities and Exchange Commission (SEC).

The SEC is an independent federal agency that is charged with protecting the interests of investors, regulating stock markets, and ensuring companies adhere to GAAP requirements. By having proper accounting standards such as US GAAP or IFRS, information presented publicly is considered comparable and reliable. As a result, financial statement users are more informed when making decisions. The SEC not only enforces the accounting rules but also delegates the process of setting standards for US GAAP to the FASB.

Some companies that operate on a global scale may be able to report their financial statements using IFRS. The SEC regulates the financial reporting of companies selling their shares in the United States, whether US GAAP or IFRS are used. The basics of accounting discussed in this chapter are the same under either set of guidelines.

Ethical Considerations: Auditing of Publicly Traded Companies

When a publicly-traded company in the United States issues its financial statements, the financial statements have been audited by a Public Company Accounting Oversight Board (PCAOB) approved auditor. The PCAOB is the organization that sets the auditing standards, after approval by the SEC. It is important to remember that auditing is not the same as accounting. The role of the Auditor is to examine and provide assurance that financial statements are reasonably stated under the rules of appropriate accounting principles. The auditor conducts the audit under a set of standards known as Generally Accepted Auditing Standards. The accounting department of a company and its auditors are employees of two different companies. The auditors of a company are required to be employed by a different company so that there is independence.

The nonprofit Center for Audit Quality explains auditor independence: “Auditors’ independence from company management is essential for a successful audit because it enables them to approach the audit with the necessary professional skepticism.”[1] The center goes on to identify a key practice to protect independence by which an external auditor reports not to a company’s management, which could make it more difficult to maintain independence, but to a company’s audit committee. The audit committee oversees the auditors’ work and monitors disagreements between management and the auditor about financial reporting. Internal auditors of a company are not the auditors that provide an opinion on the financial statements of a company. According to the Center for Audit Quality, “By law, public companies’ annual financial statements are audited each year by independent auditors—accountants who examine the data for conformity with U.S. Generally Accepted Accounting Principles (GAAP).”[2] The opinion from the independent auditors regarding a publicly-traded company is filed for public inspection, along with the financial statements of the publicly-traded company.

The Conceptual Framework

The FASB uses a **conceptual framework**, which is a set of concepts that guide financial reporting. These concepts can help ensure information is comparable and reliable to stakeholders. Guidance may be given on how to report transactions, measurement requirements, and application on financial statements, among other things.[3]

The conceptual framework sets the basis for accounting standards set by rule-making bodies that govern how the financial statements are prepared. Here are a few of the principles, assumptions, and concepts that provide guidance in developing GAAP.

Revenue Recognition Principle

The **revenue recognition principle** directs a company to recognize revenue in the period in which it is earned; revenue is not considered earned until a product or service has been provided. This means the period of time in which you performed the service or gave the customer the product is the period in which revenue is recognized.

There also does not have to be a correlation between when cash is collected and when revenue is recognized. A customer may not pay for the service on the day it was provided. Even though the customer has not yet paid cash, there is a reasonable expectation that the customer will pay in the future. Since the company has provided the service, it would recognize the revenue as earned, even though cash has yet to be collected.

For example, Lynn Sanders owns a small printing company, Printing Plus. She completed a print job for a customer on August 10. The customer did not pay cash for the service at that time and was billed for the service, paying at a later date. When should Lynn recognize the revenue, on August 10 or at the later payment date? Lynn should record revenue as earned on August 10. She provided the service to the customer, and there is a reasonable expectation that the customer will pay at the later date.

Expense Recognition (Matching) Principle

The **expense recognition principle** (also referred to as the matching principle) states that we must match expenses with associated revenues in the period in which the revenues were earned. A mismatch in expenses and revenues could be an understated net income in one period with an overstated net income in another period. There would be no reliability in statements if expenses were recorded separately from the revenues generated.

For example, if Lynn earned printing revenue in April, then any associated expenses to the revenue generation (such as paying an employee) should be recorded on the same income statement. The employee worked for Lynn in April, helping her earn revenue in April, so Lynn must match the expense with the revenue by showing both on the April income statement.

Cost Principle

The **cost principle**, also known as the historical cost principle, states that virtually everything the company owns or controls (*assets*) must be recorded at its value at the date of acquisition. For most assets, this value is easy to determine as it is the price agreed to when buying the asset from the vendor. There are some exceptions to this rule but always apply the cost principle unless FASB has specifically stated that a different valuation method should be used in a given circumstance.

The primary exceptions to this historical cost treatment, at this time, are financial instruments, such as stocks and bonds, which might be recorded at their fair market value. This is called mark-to-market accounting or fair value accounting and is more advanced than the general basic concepts underlying the introduction to basic accounting concepts; therefore, it is addressed in more advanced accounting courses.

Once an asset is recorded on the books, the value of that asset must remain at its historical cost, even if its value in the market changes. For example, Lynn Sanders purchases a piece of equipment for $40,000. She believes this is a bargain and perceives the value to be more at $60,000 in the current market. Even though Lynn feels the equipment is worth $60,000, she may only record the cost she paid for the equipment of $40,000.

Full Disclosure Principle

The **full disclosure principle** states that a business must report any business activities that could affect what is reported on the financial statements. These activities could be nonfinancial in nature or be supplemental details not readily available on the main financial statement. Some examples of this include any pending litigation, acquisition information, methods used to calculate certain figures, or stock options. These disclosures are usually recorded in footnotes on the statements, or in addenda to the statements.

Separate Entity Concept

The **separate entity concept** prescribes that a business may only report activities on financial statements that are specifically related to company operations, not those activities that affect the owner personally. This concept is called the separate entity concept because the business is considered an entity separate and apart from its owner(s).

For example, Lynn Sanders purchases two cars; one is used for personal use only, and the other is used for business use only. According to the separate entity concept, Lynn may record the purchase of the car used by the company in the company's accounting records, but not the car for personal use.

Conservatism

This concept is important when valuing a transaction for which the dollar value cannot be as clearly determined, as when using the cost principle. **Conservatism** states that if there is uncertainty in a potential financial estimate, a company should err on the side of caution and report the most conservative amount. This would mean that any uncertain or estimated expenses/losses should be recorded, but uncertain or estimated revenues/gains should not. This understates net income, therefore reducing profit. This gives stakeholders a more reliable view of the company's financial position and does not overstate income.

Monetary Measurement Concept

In order to record a transaction, we need a system of **monetary measurement** or a *monetary unit* by which to value the transaction. In the United States, this monetary unit is the US dollar. Without a dollar amount, it would be impossible to record information in the financial records. It also would leave stakeholders unable to make financial decisions, because there is no comparability measurement between companies. This concept ignores any change in the purchasing power of the dollar due to inflation.

Going Concern Assumption

The **going concern assumption** assumes a business will continue to operate in the foreseeable future. A common time frame might be twelve months. However, one should presume the business is doing well enough to continue operations unless there is evidence to the contrary. For example, a business might have certain expenses that are paid off (or reduced) over several time periods. If the business will stay operational in the foreseeable future, the company can continue to recognize these long-term expenses over several time periods. Some red flags that a business may no longer be a going concern are defaults on loans or a sequence of losses.

Time Period Assumption

The **time period assumption** states that a company can present useful information in shorter time periods, such as years, quarters, or months. The information is broken into time frames to make comparisons and evaluations easier. The information will be timely and current and will give a meaningful picture of how the company is operating.

For example, a school year is broken down into semesters or quarters. After each semester or quarter, your grade point average (GPA) is updated with new information on your performance in the classes you completed. This gives you timely grading information with which to make decisions about your schooling.

A potential or existing investor wants timely information by which to measure the performance of the company and to help decide whether to invest. Because of the time period assumption, we need to be sure to recognize revenues and expenses in the proper period. This might mean allocating costs over more than one accounting or reporting period.

The use of the principles, assumptions, and concepts in relation to the preparation of financial statements is better understood when looking at the full accounting cycle and its relation to the detailed process required to record business activities (Figure 1.5.1).

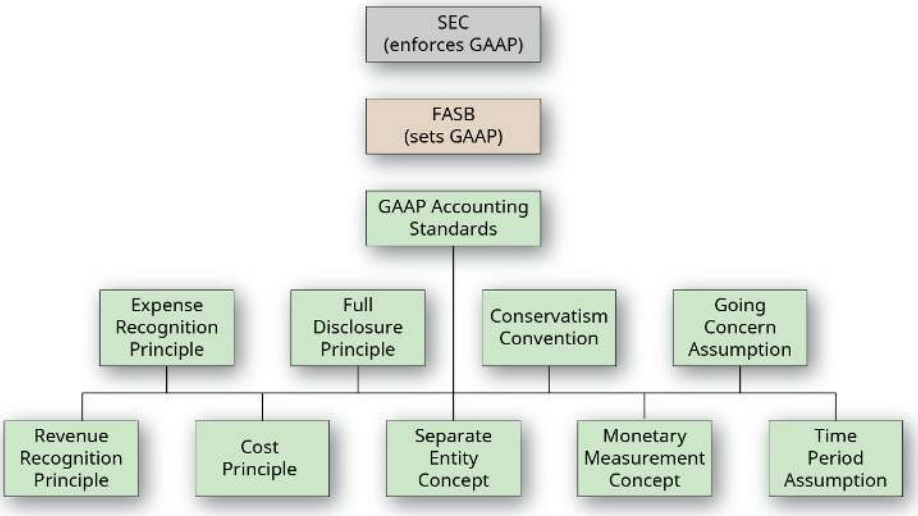


Figure 1.5.1: GAAP Accounting Standards Connection Tree. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The Accounting Equation

The accounting equation is important to the study of accounting because it shows what the organization owns and the sources of (or claims against) those resources. The accounting equation is expressed as follows:

Assets = Liabilities + Owner's Equity

The accounting equation can be thought of from a "sources and claims" perspective; that is, the assets (items owned by the organization) were obtained by incurring liabilities or were provided by owners. Stated differently, everything a company owns must equal everything the company owes to creditors (lenders) and owners (individuals for sole proprietors or stockholders for companies or corporations).

You may recall from mathematics courses that an equation must always be in balance. Therefore, we must ensure that the two sides of the accounting equation are always equal. We explore the components of the accounting equation in more detail shortly. First, we need to examine several underlying concepts that form the foundation for the accounting equation: the double-entry accounting system, debits and credits, and the "normal" balance for each account that is part of a formal accounting system.

Footnotes

- 1 Center for Audit Quality. *Guide to Public Company Auditing*. https://www.iasplus.com/en/binary/us...auditguide.pdf
- 2 Center for Audit Quality. *Guide to Public Company Auditing*. https://www.iasplus.com/en/binary/us...auditguide.pdf
- 3 Financial Accounting Standards Board. "The Conceptual Framework." http://www.fasb.org/jsp/FASB/Page/Br...=1176168367774

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CHAPTER OVERVIEW

2: Business Transactions

Learning Objectives

- Define and use accounting and business terminology

2.1: Reviewing and Analyzing Transactions
2.2: Describe Principles, Assumptions, and Concepts of Accounting and Their Relationship to Financial Statements
2.3: Define and Describe the Expanded Accounting Equation and Its Relationship to Analyzing Transactions
2.4: General Rules for Debits and Credits
2.5: Debit and Credit Review

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2.1: Reviewing and Analyzing Transactions

Reviewing and Analyzing Transactions

Let us assume our business is a service-based company. We use Lynn Sanders' small printing company, Printing Plus, as our example. Please notice that since Printing Plus is a corporation, we are using the Common Stock account, instead of Owner's Equity. The following are several transactions from this business's current month:

1. Issues $20,000 shares of common stock for cash.
2. Purchases equipment on account for $3,500, payment due within the month.
3. Receives $4,000 cash in advance from a customer for services not yet rendered.
4. Provides $5,500 in services to a customer who asks to be billed for the services.
5. Pays a $300 utility bill with cash.
6. Distributed $100 cash in dividends to stockholders.

We now analyze each of these transactions, paying attention to how they impact the accounting equation and corresponding financial statements.

Transaction 1: Issues $20,000 shares of common stock for cash.

Assets	=	Liabilities	+	Equity
Cash +$20,000				Common Stock +$20,000

Analysis: Looking at the accounting equation, we know cash is an asset and common stock is stockholder's equity. When a company collects cash, this will increase assets because cash is coming into the business. When a company issues common stock, this will increase a stockholder's equity because he or she is receiving investments from owners.

Remember that the accounting equation must remain balanced, and assets need to equal liabilities plus equity. On the asset side of the equation, we show an increase of $20,000. On the liabilities and equity side of the equation, there is also an increase of $20,000, keeping the equation balanced. Changes to assets, specifically cash, will increase assets on the balance sheet and increase cash on the statement of cash flows. Changes to stockholder's equity, specifically common stock, will increase stockholder's equity on the balance sheet.

Transaction 2: Purchases equipment on account for $3,500, payment due within the month.

Assets	=	Liabilities	+	Equity
Equipment +$3,500		Accounts Payable +$3,500		

Analysis: We know that the company purchased equipment, which is an asset. We also know that the company purchased the equipment on account, meaning it did not pay for the equipment immediately and asked for payment to be billed instead and paid later. Since the company owes money and has not yet paid, this is a liability, specifically labeled as *accounts payable*. There is an increase to assets because the company has equipment it did not have before. There is also an increase to liabilities because the company now owes money. The more money the company owes, the more that liability will increase.

The accounting equation remains balanced because there is a $3,500 increase on the asset side, and a $3,500 increase on the liability and equity side. This change to assets will increase assets on the balance sheet. The change to liabilities will increase liabilities on the balance sheet.

Transaction 3: Receives $4,000 cash in advance from a customer for services not yet rendered.

Assets	=	Liabilities	+	Equity
Cash +$4,000		Unearned Revenue +$4,000		

Analysis: We know that the company collected cash, which is an asset. This collection of $4,000 increases assets because money is coming into the business.

The company has yet to provide the service. According to the revenue recognition principle, the company cannot recognize that revenue until it provides the service. Therefore, the company has a liability to the customer to provide the service and must record the liability as unearned revenue. The liability of $4,000 worth of services increases because the company has more unearned revenue than previously.

The equation remains balanced, as assets and liabilities increase. The balance sheet would experience an increase in assets and an increase in liabilities.

Transaction 4: Provides $5,500 in services to a customer who asks to be billed for the services.

Assets	=	Liabilities	+	Equity
Accounts Receivable +$5,500				Revenue +$5,500

Analysis: The customer asked to be billed for the service, meaning the customer did not pay with cash immediately. The customer owes money and has not yet paid, signaling an accounts receivable. Accounts receivable is an asset that is increasing in this case. This customer obligation of $5,500 adds to the balance in accounts receivable.

The company did provide the services. As a result, the revenue recognition principle requires recognition as revenue, which increases equity for $5,500. The increase to assets would be reflected on the balance sheet. The increase to equity would affect three statements. The income statement would see an increase to revenues, changing net income (loss). Net income (loss) is computed into retained earnings on the statement of retained earnings. This change to retained earnings is shown on the balance sheet under stockholder's equity.

Transaction 5: Pays a $300 utility bill with cash.

Assets	=	Liabilities	+	Equity
Cash –$300				Expense –$300

Analysis: The company paid with cash, an asset. Assets are decreasing by $300 since cash was used to pay for this utility bill. The company no longer has that money.

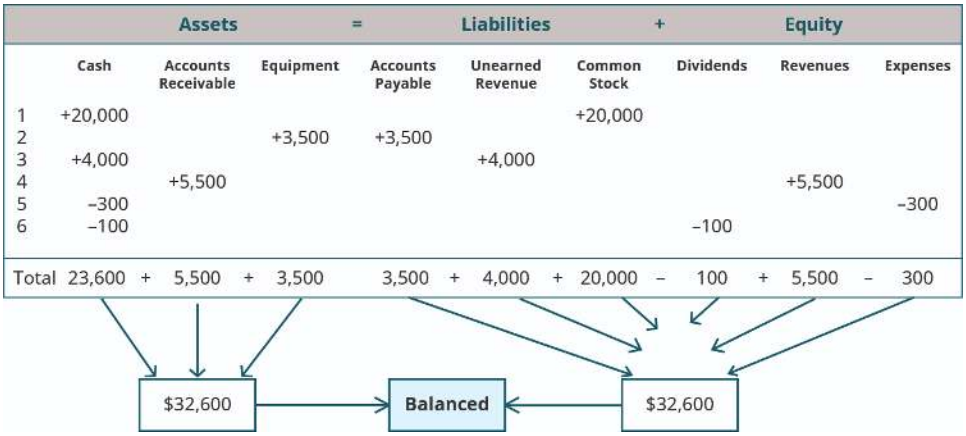
Utility payments are generated from bills for services that were used and paid for within the accounting period, thus recognized as an expense. The expense decreases equity by $300. The decrease to assets, specifically cash, affects the balance sheet and statement of cash flows. The decrease to equity as a result of the expense affects three statements. The income statement would see a change to expenses, changing net income (loss). Net income (loss) is computed into retained earnings on the statement of retained earnings. This change to retained earnings is shown on the balance sheet under stockholder's equity.

Transaction 6: Distributed $100 cash in dividends to stockholders.

Assets	=	Liabilities	+	Equity
Cash –$100				Dividends –$100

Analysis: The company paid the distribution with cash, an asset. Assets decrease by $100 as a result. Dividends affect equity and, in this case, decrease equity by $100. The decrease to assets, specifically cash, affects the balance sheet and statement of cash flows. The decrease to equity because of the dividend payout affects the statement of retained earnings by reducing ending retained earnings, and the balance sheet by reducing stockholder's equity.

Let's summarize the transactions and make sure the accounting equation has remained balanced. Shown are each of the transactions.



	Assets				= Liabilities		+ Equity		
	Cash	Accounts Receivable	Equipment	Accounts Payable	Unearned Revenue	Common Stock	Dividends	Revenues	Expenses
1	+20,000					+20,000			
2			+3,500	+3,500					
3	+4,000				+4,000				
4		+5,500						+5,500	
5	−300								−300
6	−100						−100		
Total	23,600	+ 5,500	+ 3,500	3,500	+ 4,000	+ 20,000	− 100	+ 5,500	− 300

As you can see, assets total $32,600, while liabilities added to equity also equal $32,600. Our accounting equation remains balanced.

Your Turn: Debbie's Dairy Farm

Debbie's Dairy Farm had the following transactions:

1. Debbie ordered shelving worth $750.
2. Debbie's selling price on a gallon of milk is $3.00. She finds out that most local stores are charging $3.50. Based on this information, she decides to increase her price to $3.25. She has an employee put a new price sticker on each gallon.
3. A customer buys a gallon of milk paying cash.
4. The shelving is delivered with an invoice for $750.

Which events will be recorded in the accounting system?

Answer

1. Debbie did not yet receive the shelving—it has only been ordered. As of now, there is no new asset owned by the company. Since the shelving has not yet been delivered, Debbie does not owe any money to the other company. Debbie will not record the transaction.
2. Changing prices does not have an impact on the company at the time the price is changed. All that happened was that a new price sticker was placed on the milk. Debbie still has all the milk and has not received any money. Debbie will not record the transaction.
3. Debbie now has a transaction to record. She has received cash and the customer has taken some of her inventory of milk. She has an increase in one asset (cash) and a decrease in another asset (inventory.) She also has earned revenue.
4. Debbie has taken possession of the shelving and is the legal owner. She also has an increase in her liabilities as she accepted delivery of the shelving but has not paid for it. Debbie will record this transaction.

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2.2: Describe Principles, Assumptions, and Concepts of Accounting and Their Relationship to Financial Statements

Double-Entry Bookkeeping

The basic components of even the simplest accounting system are *accounts* and a *general ledger*. An **account** is a record showing increases and decreases to assets, liabilities, and equity—the basic components found in the accounting equation. Each of these categories, in turn, includes many individual accounts, all of which a company maintains in its general ledger. A **general ledger** is a comprehensive listing of all of a company's accounts with their individual balances.

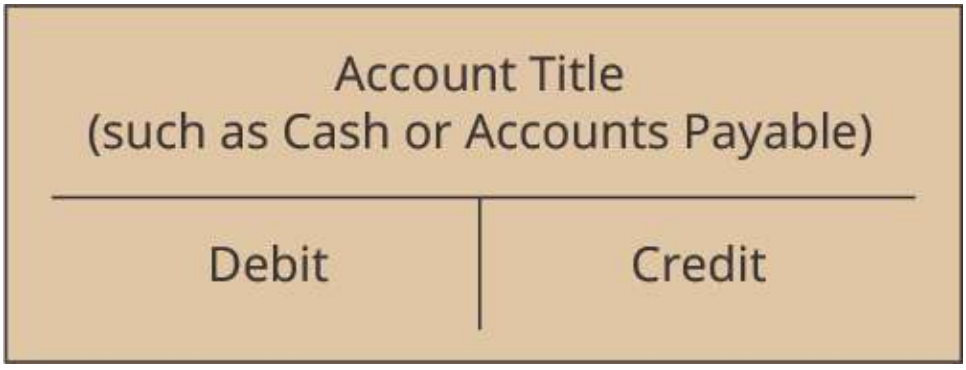
Accounting is based on what we call a **double-entry accounting system**, which requires the following:

- Each time we record a transaction, we must record a change in at least two different accounts. Having two or more accounts change will allow us to keep the accounting equation in balance.
- Not only will at least two accounts change, but there must also be at least one debit and one credit side impacted.
- The sum of the debits must equal the sum of the credits for each transaction.

In order for companies to record the myriad of transactions they have each year, there is a need for a simple but detailed system. Journals are useful tools to meet this need.

Debits and Credits

Each account can be represented visually by splitting the account into left and right sides as shown. This graphic representation of a general ledger account is known as a **T-account**. A T-account is called a "T-account" because it looks like a "T," as you can see with the T-account shown here.



A **debit** records financial information on the left side of each account. A **credit** records financial information on the right side of an account. One side of each account will increase and the other side will decrease. The **ending account balance** is found by calculating the difference between debits and credits for each account. You will often see the terms *debit* and *credit* represented in shorthand, written as *DR* or *dr* and *CR* or *cr*, respectively. Depending on the account type, the sides that increase and decrease may vary. We can illustrate each account type and its corresponding debit and credit effects in the form of an *expanded accounting equation*.

						Equity											
Assets		=	Liabilities		+	Common Stock		–	Dividends		+	Revenues		–	Expenses		
Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit	
Increase	Decrease		Decrease	Increase		Decrease	Increase		Increase	Decrease		Decrease	Increase		Increase	Decrease	

As we can see from this expanded accounting equation, Assets accounts increase on the debit side and decrease on the credit side. This is also true of Dividends and Expenses accounts. Liabilities increase on the credit side and decrease on the debit side. This is also true of Common Stock and Revenues accounts. This becomes easier to understand as you become familiar with the *normal balance* of an account.

Normal Balance of an Account

The **normal balance** is the expected balance each account type maintains, which is the side that increases. As assets and expenses increase on the debit side, their normal balance is a debit. Dividends paid to shareholders also have a normal balance that is a debit entry. Since liabilities, equity (such as common stock), and revenues increase with a credit, their "normal" balance is a credit. Table 2.2.1 shows the normal balances and increases for each account type.

Account Normal Balances and Increases

Type of account	Increases with	Normal balance
Asset	Debit	Debit
Liability	Credit	Credit
Common Stock	Credit	Credit
Dividends	Debit	Debit
Revenue	Credit	Credit
Expense	Debit	Debit

Table 2.2.1

When an account produces a balance that is contrary to what the expected normal balance of that account is, this account has an **abnormal balance**. Let's consider the following example to better understand abnormal balances.

Let's say there was a credit of $4,000 and a debit of $6,000 in the Accounts Payable account. Since Accounts Payable increases on the credit side, one would expect a normal balance on the credit side. However, the difference between the two figures, in this case, would be a debit balance of $2,000, which is an abnormal balance. This situation could possibly occur with an overpayment to a supplier or an error in recording.

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2.3: Define and Describe the Expanded Accounting Equation and Its Relationship to Analyzing Transactions

Before we explore how to analyze transactions, we first need to understand what governs the way transactions are recorded.

As you have learned, the accounting equation represents the idea that a company needs assets to operate, and there are two major sources that contribute to operations: liabilities and equity. The company borrows the funds, creating liabilities, or the company can take the funds provided by the profits generated in the current or past periods, creating retained earnings or some other form of stockholder's equity. Recall the accounting equation's basic form.

Assets = Liabilities + Equity

Expanded Accounting Equation

The **expanded accounting equation** breaks down the equity portion of the accounting equation into more detail. This expansion of the equity section allows a company to see the impact to equity from changes to revenues and expenses, and to owner investments and payouts. It is important to have more detail in this equity category to understand the effect on financial statements from period to period. For example, an increase in revenue can increase net income on the income statement, increase retained earnings on the statement of retained earnings, and change the distribution of stockholder's equity on the balance sheet. This may be difficult to understand where these changes have occurred without revenue recognized individually in this expanded equation.

The expanded accounting equation is shown here.

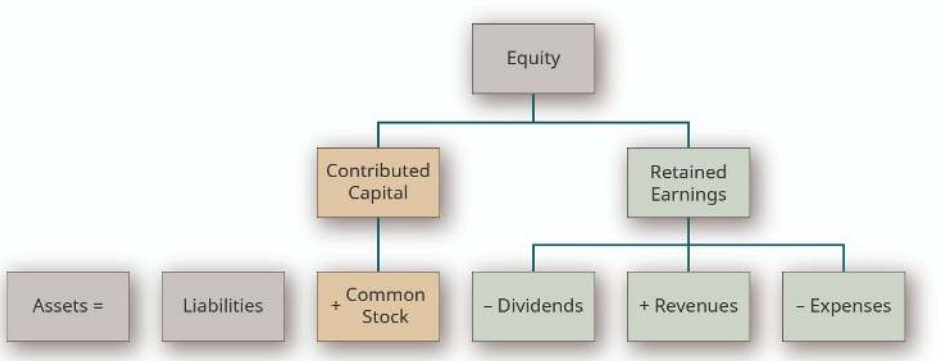


Figure 2.3.1: Expanded Accounting Equation. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Note that this expanded accounting equation breaks down Equity into four categories: common stock, dividends, revenues, and expenses. This considers each element of contributed capital and retained earnings individually to better illustrate each one's impact on changes in equity.

A business can now use this equation to analyze transactions in more detail. But first, it may help to examine the many accounts that can fall under each of the main categories of Assets, Liabilities, and Equity, in terms of their relationship to the expanded accounting equation. We can begin this discussion by looking at the *chart of accounts*.

Chart of Accounts

Recall that the basic components of even the simplest accounting system are accounts and a general ledger. Accounts shows all the changes made to assets, liabilities, and equity—the three main categories in the accounting equation. Each of these categories, in turn, includes many individual accounts, all of which a company maintains in its general ledger.

When a company first starts the analysis process, it will make a list of all the accounts used in day-to-day transactions. For example, a company may have accounts such as cash, accounts receivable, supplies, accounts payable, unearned revenues, common

stock, dividends, revenues, and expenses. Each company will make a list that works for its business type, and the transactions it expects to engage in. The accounts may receive numbers using the system presented in Table 2.3.1.

Account Numbering System

Account category	Assigned account number will start with	Account numbers for a small company	Account numbers for a large company
Assets	1	100–199	1000–1999
Liabilities	2	200–299	2000–2999
Stockholders' equity	3	300–399	3000–3999
Revenues	4	400–499	4000–4999
Expenses	5	500–599	5000–5999

Table 2.3.1

We call this account numbering system a **chart of accounts**. The accounts are presented in the chart of accounts in the order in which they appear on the financial statements, beginning with the balance sheet accounts and then the income statement accounts. Additional numbers starting with six and continuing might be used in large merchandising and manufacturing companies. The information in the chart of accounts is the foundation of a well-organized accounting system.

Breaking Down the Expanded Accounting Equation

Refer to the expanded accounting equation (Figure 2.3.1). We begin with the left side of the equation, the assets, and work toward the right side of the equation to liabilities and equity.

Assets and the Expanded Accounting Equation

On the left side of the equation are assets. Assets are resources a company owns that have an economic value. Assets are represented on the balance sheet financial statement. Some common examples of assets are cash, accounts receivable, inventory, supplies, prepaid expenses, notes receivable, equipment, buildings, machinery, and land.

Cash includes paper currency as well as coins, checks, bank accounts, and money orders. Anything that can be quickly liquidated into cash is considered cash. Cash activities are a large part of any business, and the flow of cash in and out of the company is reported on the statement of cash flows.

Accounts receivable is money that is owed to the company, usually from a customer. The customer has not yet paid with cash for the provided good or service but will do so in the future. Common phrasing to describe this situation is that a customer purchased something "on account," meaning that the customer has asked to be billed and will pay at a later date: "Account" because a customer has not paid us yet but instead has asked to be billed; "Receivable" because we will receive the money in the future.

Inventory refers to the goods available for sale. Service companies do not have goods for sale and would thus not have inventory. Merchandising and manufacturing businesses do have inventory.

Examples of supplies (office supplies) include pens, paper, and pencils. Supplies are considered assets until an employee uses them. At the point they are used, they no longer have an economic value to the organization, and their cost is now an expense to the business.

Prepaid expenses are items paid for in advance of their use. They are considered assets until used. Some examples can include insurance and rent. Insurance, for example, is usually purchased for more than one month at a time (six months typically). The company does not use all six months of the insurance at once, it uses it one month at a time. However, the company prepays for all of it upfront. As each month passes, the company will adjust its records to reflect the cost of one month of insurance usage.

Notes receivable is similar to accounts receivable in that it is money owed to the company by a customer or other entity. The difference here is that a note typically includes interest and specific contract terms, and the amount may be due in more than one accounting period.

Equipment examples include desks, chairs, and computers; anything that has a long-term value to the company that is used in the office. Equipment is considered a long-term asset, meaning you can use it for more than one accounting period (a year for example). Equipment will lose value over time, in a process called *depreciation*.

Buildings, machinery, and land are all considered long-term assets. Machinery is usually specific to a manufacturing company that has a factory producing goods. Machinery and buildings also depreciate. Unlike other long-term assets such as machinery, buildings, and equipment, land is not depreciated. The process to calculate the loss on land value could be very cumbersome, speculative, and unreliable; therefore, the treatment in accounting is for land to *not* be depreciated over time.



Figure 2.3.2: Assets. Cash, buildings, inventory, and equipment are all types of assets. (credit clockwise from top left: modification of "Cash money! 140606-A-CA521-021" by Sgt. Michael Selvage/Wikimedia Commons, Public Domain; modification of "41 Cherry Orchard Road" by "Pafcool2"/Wikimedia Commons, Public Domain; modification of "ASM-e1516805109201" by Jeff Green, Rethink Robotics/ Wikimedia Commons, CC BY 4.0; modification of "Gfp-inventory-space" by Yinan Chen/Wikimedia Commons, CC0)

Liabilities and the Expanded Accounting Equation

The accounting equation emphasizes a basic idea in business; that is, businesses need assets in order to operate. There are two ways a business can finance the purchase of assets. First, it can sell shares of its stock to the public to raise money to purchase the assets, or it can use profits earned by the business to finance its activities. Second, it can borrow the money from a lender such as a financial institution. You will learn about other assets as you progress through the book. Let's now take a look at the right side of the accounting equation.

Liabilities are obligations to pay an amount owed to a lender (creditor) based on a past transaction. Liabilities are reported on the balance sheet. It is important to understand that when we talk about liabilities, we are not just talking about loans. Money collected for gift cards, subscriptions, or as advance deposits from customers could also be liabilities. Essentially, anything a company owes and has yet to pay within a period is considered a liability, such as salaries, utilities, and taxes.

For example, a company uses $400 worth of utilities in May but is not billed for the usage, or asked to pay for the usage, until June. Even though the company does not have to pay the bill until June, the company owed money for the usage that occurred in May. Therefore, the company must record the usage of electricity, as well as the liability to pay the utility bill, in May.

Eventually, that debt must be repaid by performing the service, fulfilling the subscription, or providing an asset such as merchandise or cash. Some common examples of liabilities include accounts payable, notes payable, and unearned revenue.

Accounts payable recognizes that the company owes money and has not paid. Remember, when a customer purchases something "on account" it means the customer has asked to be billed and will pay at a later date. In this case, the purchasing company is the "customer." The company will have to pay the money due in the future, so we use the word "payable." The debt owed is usually paid off in less than one accounting period (less than a year typically) if it is classified as an account payable.

A notes payable is similar to accounts payable in that the company owes money and has not yet paid. Some key differences are that the contract terms are usually longer than one accounting period, interest is included, and there is typically a more formalized contract that dictates the terms of the transaction.

Unearned revenue represents a customer's advanced payment for a product or service that has yet to be provided by the company. Since the company has not yet provided the product or service, it cannot recognize the customer's payment as revenue, according to the revenue recognition principle. Thus, the account is called unearned revenue. The company owing the product or service creates the liability to the customer.

Equity and the Expanded Accounting Equation

Stockholder's equity refers to the owner's (stockholders) investments in the business and earnings. These two components are contributed capital and retained earnings.

The owner's investments in the business typically come in the form of common stock and are called **contributed capital**. There is a hybrid owner's investment labeled as preferred stock that is a combination of debt and equity (a concept covered in more advanced accounting courses). The company will issue shares of common stock to represent stockholder ownership.

Another component of stockholder's equity is company earnings. These retained earnings are what the company holds onto at the end of a period to reinvest in the business, after any distributions to ownership occur. Stated more technically, retained earnings are a company's cumulative earnings since the creation of the company minus any dividends that it has declared or paid since its creation. One tricky point to remember is that retained earnings are not classified as assets. Instead, they are a component of the stockholder's equity account, placing it on the right side of the accounting equation.

Distribution of earnings to ownership is called a dividend. The dividend could be paid with cash or be a distribution of more company stock to current shareholders. Either way, dividends will decrease retained earnings.

Also affecting retained earnings are revenues and expenses, by way of net income or net loss. Revenues are earnings from the sale of goods and services. An increase in revenues will also contribute to an increase in retained earnings. Expenses are the cost of resources associated with earning revenues. An increase in expenses will contribute to a decrease in retained earnings. Recall that this concept of recognizing expenses associated with revenues is the expense recognition principle. Some examples of expenses include bill payments for utilities, employee salaries, and loan interest expense. A business does not have an expense until it is "incurred." Incurred means the resource is used or consumed. For example, you will not recognize utilities as an expense until you have used the utilities. The difference between revenues earned and expenses incurred is called net income (loss) and can be found on the income statement.

Net income reported on the income statement flows into the statement of retained earnings. If a business has net income (earnings) for the period, then this will increase its retained earnings for the period. This means that revenues exceeded expenses for the period, thus increasing retained earnings. If a business has net loss for the period, this decreases retained earnings for the period. This means that the expenses exceeded the revenues for the period, thus decreasing retained earnings.

You will notice that stockholder's equity increases with common stock issuance and revenues, and decreases from dividend payouts and expenses. Stockholder's equity is reported on the balance sheet in the form of contributed capital (common stock) and retained earnings. The statement of retained earnings computes the retained earnings balance at the beginning of the period, adds net income or subtracts net loss from the income statement, and subtracts dividends declared, to result in an ending retained earnings balance reported on the balance sheet.

Now that you have a basic understanding of the accounting equation, and examples of assets, liabilities, and stockholder's equity, you will be able to analyze the many transactions a business may encounter and determine how each transaction affects the accounting equation and corresponding financial statements.

Link to Learning

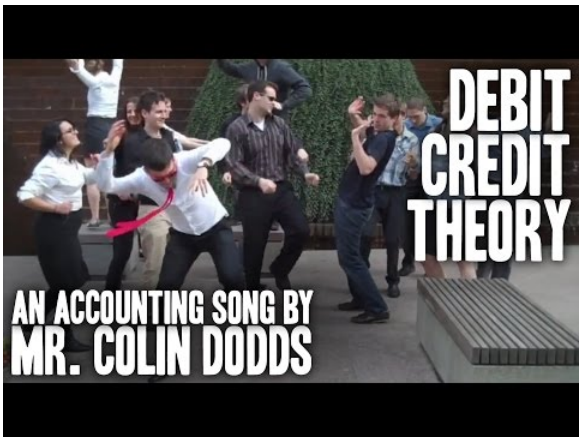
The Financial Accounting Standards Board had a policy that allowed companies to reduce their tax liability from share-based compensation deductions. This led companies to create what some call the “contentious debit,” to defer tax liability and increase tax expense in a current period. See the article “The contentious debit—seriously” on continuous debt for further discussion of this practice.

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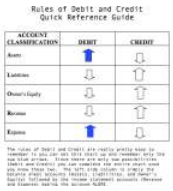
2.4: General Rules for Debits and Credits

One of the first steps in analyzing a business transaction is deciding if the accounts involved increase or decrease. However, we do not use the concept of increase or decrease in accounting. We use the words “debit” and “credit” instead of increase or decrease. The meaning of debit and credit will change depending on the account type. **Debit simply means left side; credit means right side.** Remember the accounting equation? ASSETS = LIABILITIES + EQUITY The accounting equation must always be in balance and the rules of debit and credit enforce this balance.

In each business transaction we record, the total dollar amount of debits must equal the total dollar amount of credits. When we debit one account (or accounts) for $100, we must credit another account (or accounts) for a total of $100. The accounting requirement that each transaction be recorded by an entry that has equal debits and credits is called **double-entry procedure**, or duality. Watch this video to help you remember this concept:



A YouTube element has been excluded from this version of the text. You can view it online here.


Rules of Debit and Credit
Quick Reference Guide

ACCOUNT CLASSIFICATION	DEBIT	CREDIT
Assets	⇧	⇩
Liabilities	⇩	⇧
Owner's Equity	⇩	⇧
Revenue	⇩	⇧
Expense	⇧	⇩

Review this quick guide to recording debits and credits. It will be necessary for you to commit the rules for debits and credits to memory before you move forward in this course. *Note: These are general guidelines and we will have exceptions to these rules.*

After recognizing a business event as a business transaction, we analyze it to determine its increase or decrease effects on the assets, liabilities, stockholders’ equity items, dividends, revenues, or expenses of the business. Then we translate these increase or decrease effects into debits and credits.

Recording Changes in Balance Sheet Accounts

Balance Sheet accounts are assets and liabilities and equity. The balance sheet proves the accounting equation. Recording transactions into journal entries is easier when you focus on the equal sign in the accounting equation. Assets, which are on the left of the equal sign, increase on the left side or DEBIT side. Liabilities and stockholders’ equity, to the right of the equal sign, increase on the right or CREDIT side.

Assets	Liabilities & Equity
DEBIT increases	CREDIT increases
CREDIT decreases	DEBIT decreases

There is an exception to this rule: Dividends (or withdrawals for a non-corporation) is an equity account but it reduces equity since the owner is taking equity from the company. This is called a **contra-account** because it works opposite the way the account normally works. For Dividends, it would be an equity account but have a normal DEBIT balance (meaning, debit will increase and credit will decrease).

Recording changes in Income Statement Accounts

We learned that net income is added to equity. We also learned that net income is revenues – expenses and calculated on the income statement. The recording rules for revenues and expenses are:

Revenues	Expenses
CREDIT increases	DEBIT increases
DEBIT decreases	CREDIT decreases

The reasoning behind this rule is that revenues increase retained earnings, and increases in retained earnings are recorded on the right side. Expenses decrease retained earnings, and decreases in retained earnings are recorded on the left side.

The side that increases (debit or credit) is referred to as an account's **normal balance**. Remember, any account can have both debits and credits. Here is another summary chart of each account type and the normal balances.

Account Type	Normal Balance
Asset	**DEBIT**
Liability	**CREDIT**
Equity	**CREDIT**
Revenue	**CREDIT**
Expense	**DEBIT**
Exception:	
Dividends	**DEBIT**

Regardless of what elements are present in the business transaction, a journal entry will always have AT least one debit and one credit. You should be able to complete the debit/credit columns of your chart of accounts spreadsheet (click Chart of Accounts).

Next, we look at how to apply this concept in journal entries.

An Open Assessments element has been excluded from this version of the text. You can view it online here.

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2.5: Debit and Credit Review

Four Steps to Determine What to Debit or Credit

Here is a handy list of questions to help guide students through the thought process involved with determining what to debit or credit in a given transaction.

Step 1: Pick ONE account that is affected by this transaction

Step 2: Is this account you picked in Step 1 INCREASING or DECREASING?

Step 3: What type of account is this?

CHOICES

- **Assets** – something that has future economic benefit – Cash, Accounts Receivable, Inventory, Prepaid Insurance, Equipment, etc.
- **Liabilities** – a debt owed to others – Accounts Payable, Unearned Revenue, Notes Payable, Bonds Payable, Long-term Mortgage Payable
- **Equity** – Common Stock, Retained Earnings
- **Revenues** – Sales Revenue, Service Revenue, Sales
- **Expenses** – Cost of Goods Sold, Salaries Expense, Insurance Expense
- **Dividends** – these are dividends that the company has declared and has, or will, pay to its stockholders

Step 4: Combine your answer from Step 2 and Step 3 to find whether you DEBIT or CREDIT the account you identified in Step 1

Type of account	How to INCREASE	How to DECREASE
Assets	Debit	Credit
Liabilities	Credit	Debit
Equity	Credit	Debit
Revenues	Credit	Debit
Expenses	Debit	Credit
Dividends	Debit	Credit

Repeat Steps 1 through 4 for the OTHER account in this transaction

Remember:

- Total debits in a journal entry (transaction) must equal the total credits in that transaction
- You need at least one debit and one credit for every journal entry
- Debits are on the left, credits are on the right

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CHAPTER OVERVIEW

3: The Accounting System

Learning Objectives

- Explain what a system is and how an accounting system is designed to satisfy the needs of specific businesses and users
- Apply transaction analysis, input transactions into the accounting system, process this input, and prepare and interpret the basic financial statements
- Summarize the purpose of journals and ledgers

3.1: Define and Describe the Components of an Accounting Information System
3.2: Define and Describe the Initial Steps in the Accounting Cycle
3.3: Use Journal Entries to Record Transactions and Post to T-Accounts
3.4: Prepare a Trial Balance
3.5: Preparing Financial Statements

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3.1: Define and Describe the Components of an Accounting Information System

Today, when we refer to an **accounting information system (AIS)**, we usually mean a computerized accounting system, because computers and computer software that help us process accounting transactions have become relatively inexpensive. The benefits of using a computerized accounting system outweigh the costs of purchasing one, and almost all companies, even very small ones, can afford to and do use a computerized accounting system. That is not to say that paper-based or manual accounting systems and processes have disappeared. Most businesses have some form of both noncomputerized and computerized systems. **QuickBooks** is an example of a relatively inexpensive accounting software application that is popular with small and medium-sized businesses.

Manual and Computerized Accounting Information Systems

Interestingly, the term *accounting information system* predates computers. Technically, an AIS is a system or set of processes for collecting data about accounting transactions; recording, organizing, and summarizing the data; and culminating with the preparation of financial statements and other reports for internal and external users. These systems or processes can exist as a series of paper ledgers, computer databases, or some combination of the two. Examples of external users include banks that might lend the company money, investors, and the Securities and Exchange Commission (SEC), which requires that publicly traded companies submit audited financial statements. Since business enterprises needed to produce financial statements long before computers existed, they used manual accounting systems to gather the data needed. **Data** is the term for parts of accounting transactions that constitute the input to an AIS. You have examined many forms of data in this course, for example, the cash received upon the sale of an item is one data point, the reduction of the inventory account related to that specific sold item is another data point, and both the revenue and the cost of goods sold would be additional data points associated with that single transaction of a sale. These data points are summarized and aggregated (in other words “processed”) into more meaningful and useful numbers that appear in the financial statements, and all this data is typically referred to as financial information. A company that may have used a manual AIS years ago likely uses a computerized AIS today. It is important to remember that a computerized accounting system does not change *what* we do with accounting transactions, it only changes *how* we do it, and how we can present the information to different users.

Let’s consider the example of a company that came into existence before we had computers, the department store **Macy’s**, which currently operates stores in nearly all fifty US states. **Macy’s** began as a small, fancy dry goods store that opened in New York City in 1858, became a department store, R.H. Macy & Co., in 1877 using the same red star logo it still uses today. We can assume that even one hundred years ago, **Macy’s** needed to perform the same tasks it does today:

- purchase merchandise inventory to sell to customers;
- record returns of some of the inventory;
- record sales made to customers at the sales price;
- record the cost of the goods sold at the amount Macy’s paid to purchase them;
- record payments from customers;
- record returns from customers;
- purchase other kinds of items needed for operations, like office supplies and fixed assets;
- pay for prior purchases;
- pay for rent, utilities, and other services;
- pay employees;
- enter all of these transactions;
- post all transactions;
- record adjusting journal entries;
- record closing journal entries;
- keep track of its receivables, payables, and inventory; and
- produce financial statements for internal and external users as well as other reports useful to managers in assessing various performance measures needed to evaluate the success of the company.

As you might imagine, doing all this without computers is quite different than performing these tasks with the aid of computers. In a manual system, each business transaction is recorded, in the form of a journal entry in the general journal or one of the four

common other special journals, using pen and paper. Journal entries are then posted to a general ledger; balances would be computed by hand or with an adding machine/calculator for each general ledger account; a trial balance is prepared; adjusting journal entries are prepared; and finally, financial statements prepared, all manually.

Concepts in Practice: Modernization of Accounting Systems

In 1955, in one of the earliest uses of a true computer to facilitate accounting tasks, **General Electric Company** used a UNIVAC computer to process its payroll. Initially, it took the computer forty hours just to process payroll for one pay period. The first modern-era spreadsheet software for personal computers, VisiCalc, became available in 1978. Thus, between these time periods, there were minor improvements to the use of computerized accounting tools, but it was not until the mid-1980s that comprehensive computerized accounting programs became widely used. Thus, prior to the mid-1980s, much accounting was done manually or using a variety of less-advanced computer systems in conjunction with manual systems. Imagine the number of bookkeepers it would take to record the transactions of many companies. For example, on the first day of business at **Macy's** in 1858, the store had revenues of $11.06.[1] The actual accounting ledger used to record those sales is shown in Figure 3.1.1, which seems quite simple. Today **Macy's** has over $24 billion in sales revenue—can you imagine accounting for all of those transactions (along with all expenses) by hand?

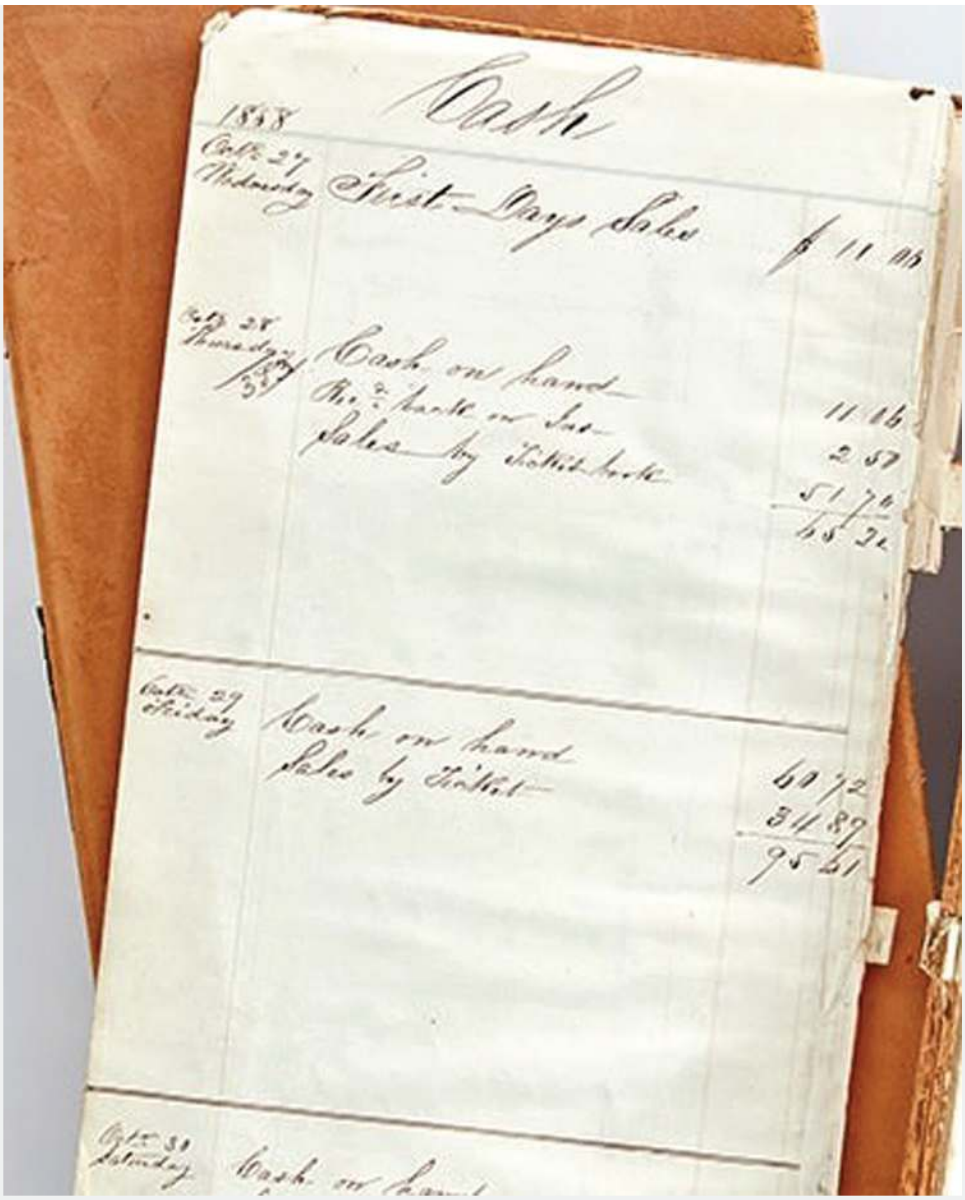


Figure 3.1.1: Macy's Accounting Ledger. Accounting ledger showing the transactions for Macy's first day. Total revenues were $11.06 or a little over $340 in today's dollars. (credit: used with permission of Macy's Corporation)

Today, **Macy's** and other large and small companies perform the same accounting tasks using computer hardware (computers, printers, and keyboards), and software. For example, cashiers can enter transactions into a computer using a keyboard, scanner, or touch screen. The screen displays the data entered or fields available for data entry. As an example, most retail stores have a **point-of-sale system (POS)** that enters the sale by scanning the item at the **point of sale**, meaning at the time the transaction is made. This system records the sale and at the same time updates inventory by reducing it based on the number of items purchased.

Later, you will be provided with a series of transactions for a small business and you will be asked to first enter the transactions manually into the appropriate journal, post the information from the journals to the general ledger, prepare trial balances, adjusting and closing entries, and manually produce financial statements just as **Macy's** or any other business would have done prior to the use of various computer technologies. You will then perform the same tasks using QuickBooks, a popular accounting software program used by many small and medium-sized businesses. A company as large as **Macy's** has stores in locations all over the country and a large volume of transactions, so it is more likely to use a software package designed to meet the needs of a very large business. This is often referred to as an enterprise resource planning (ERP)system which stands for enterprise resource planning

(ERP) system. An ERP system integrates all of the company's computerized systems including accounting systems and nonaccounting systems. That is, large companies have various accounting subsystems such as the revenue system (sales/accounts receivable/cash receipts), the expenditure system (purchasing/accounts payable/cash disbursements), the production system, the payroll system, and the general ledger system. Nonaccounting systems might include research and development, marketing, and human resources, which, while not an integral part of the accounting system, in a large companywide ERP system are integrated with the accounting modules. Examples of popular ERP software systems are PeopleSoft and SAP.

Like many businesses today, **Macy's** also maintains a company website and engages in e-commerce by offering the sale of many company products online. Accounting software companies like QuickBooks and larger software vendors have upgraded the ways in which they can provide AIS software to meet these needs. For example, a small local retail shoe store can purchase QuickBooks software provided on an electronic storage device such as a CD and upload it to be stored on the hard drive of the company's computers, or the store can purchase a "cloud" version. The cloud version provides the shoe store purchasing the software with access to the QuickBooks software online via a user ID and password with no need to load the software on the store's computers. QuickBooks updates the software when new versions are released and stores the company's accounting data in the cloud. **Cloud computing** refers to using the internet to access software and information storage facilities provided by companies rather than, or in addition to, storing this data on the company's computer hard drive or in paper form. An advantage of cloud computing is that company employees can access the software and enter transactions from any device with an internet connection at any location. The company pays a monthly fee for access to updated software, which can be less costly than buying software stored on individual computers. Potential disadvantages include security concerns because an outside company is storing company programs and data, and if the hosting company experiences technical difficulties, companies paying for these services may temporarily be unable to access their own data or conduct business. Nevertheless, cloud services are increasingly popular.

Here, we illustrate the concepts and practices of an AIS using Intuit QuickBooks, a popular and widely used AIS.

While a company typically selects an AIS to suit its specific needs, all systems should have components capable of:

- inputting/entering data (e.g., entering a sale to a customer);
- storing data;
- processing data and computing additional amounts related to transactions (e.g., computing sales tax on the sale, as well as shipping costs and insurance fees; computing an employee's pay by multiplying hours worked by hourly pay rate; processing inventory changes from both inventory purchases and inventory sales and data from any other transaction that occurs in the business);
- aggregating/summarizing data (e.g., computing total sales for the year);
- presenting data (e.g., producing a balance sheet and other financial statements and reports for the year); and
- storing data (such as the customer's name, address, shipping address, and credit limit).

AISs, whether computerized or manual, generally involve three stages: input, processing, and output. We enter raw data into our system at the input stage and try to correct any errors prior to going on to the next stage of processing the data. We ultimately produce "output," which is in the form of useful information.

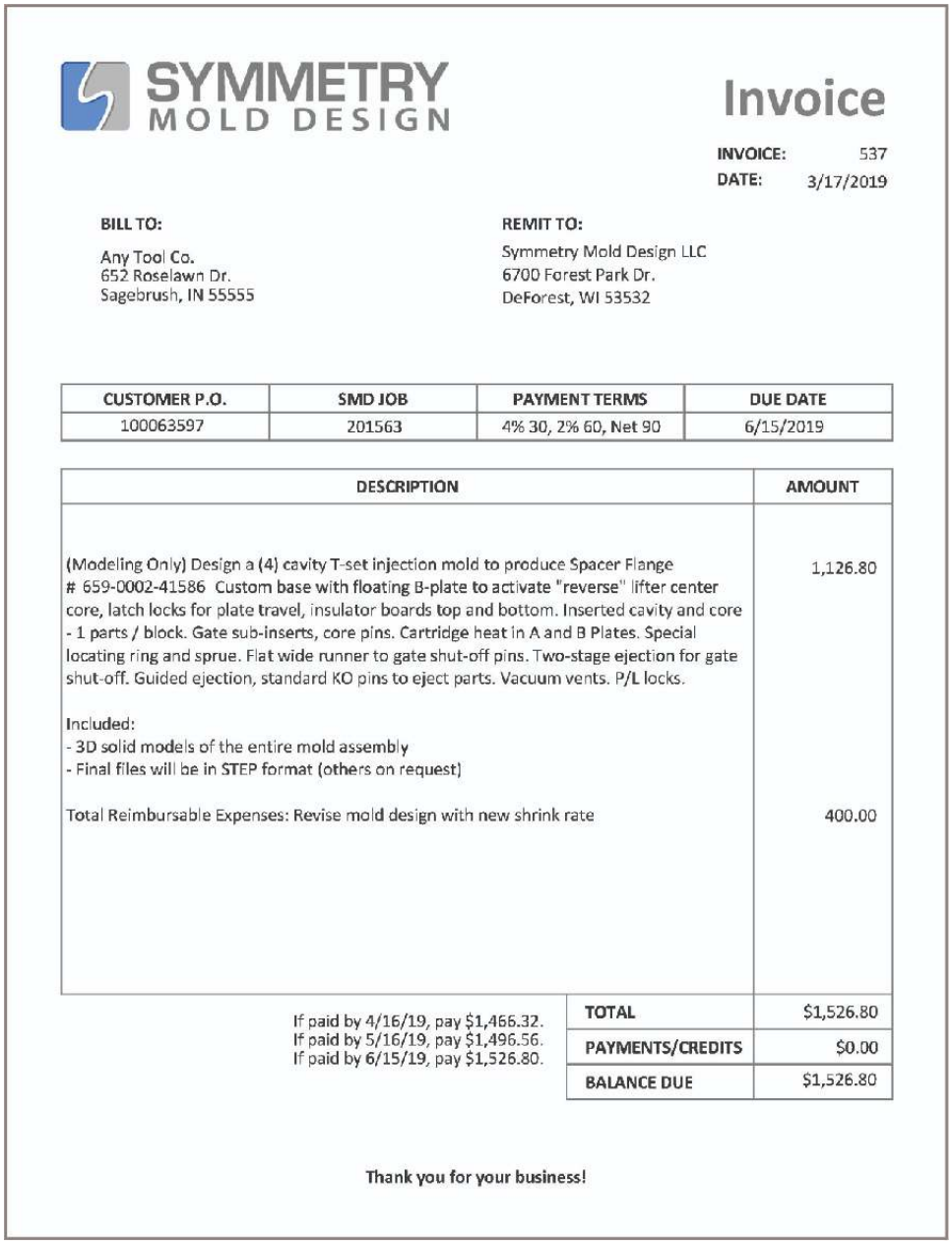
Inputting/Entering Data

A **source document** is an original document that provides evidence that a transaction occurred. If you hire a company to paint your house, it will most likely provide a document showing how much you owe. That is the company's sales document and your invoice. When you pay, your check or digital transaction record is also a source document for the company that provided the service, in this case, the home painter.

Assume you go into the university bookstore to purchase a school sweatshirt, and it is sold out. You then fill out a document ordering a size medium sweatshirt in blue. The form you fill out is a purchase order to you, and it is a sales order to the university bookstore. It is also a source document that provides evidence that you have ordered the sweatshirt. Assume the bookstore does not ask you to pay in advance because it is not sure it will be able to obtain the sweatshirt for you. At that point, no sale has been made, and you owe no money to the bookstore. A few days later, the bookstore manages to acquire the sweatshirt you ordered and sends you an email notifying you of this. When you return to the bookstore, you are presented with the sweatshirt and an invoice (also

known as a bill) that you must pay in order to take your sweatshirt home. This invoice/bill is also a source document. It provides evidence of the sale and your obligation to pay that amount. Let's look at an example.

Figure 3.1.2 is a source document—an invoice (bill) from **Symmetry Mold Design** for mold design services. Note the terms (agreements about payments) are listed at the top and how the company calculates those outcomes at the bottom.



SYMMETRY MOLD DESIGN

Invoice

INVOICE: 537
DATE: 3/17/2019

BILL TO:

Any Tool Co.
652 Roselawn Dr.
Sagebrush, IN 55555

REMIT TO:

Symmetry Mold Design LLC
6700 Forest Park Dr.
DeForest, WI 53532

CUSTOMER P.O.	SMD JOB	PAYMENT TERMS	DUE DATE
100063597	201563	4% 30, 2% 60, Net 90	6/15/2019

DESCRIPTION	AMOUNT
(Modeling Only) Design a (4) cavity T-set injection mold to produce Spacer Flange # 659-0002-41586 Custom base with floating B-plate to activate "reverse" lifter center core, latch locks for plate travel, insulator boards top and bottom. Inserted cavity and core - 1 parts / block. Gate sub-inserts, core pins. Cartridge heat in A and B Plates. Special locating ring and sprue. Flat wide runner to gate shut-off pins. Two-stage ejection for gate shut-off. Guided ejection, standard KO pins to eject parts. Vacuum vents. P/L locks. Included: - 3D solid models of the entire mold assembly - Final files will be in STEP format (others on request)	1,126.80
Total Reimbursable Expenses: Revise mold design with new shrink rate	400.00

If paid by 4/16/19, pay $1,466.32.
If paid by 5/16/19, pay $1,496.56.
If paid by 6/15/19, pay $1,526.80.

TOTAL	$1,526.80
PAYMENTS/CREDITS	$0.00
BALANCE DUE	$1,526.80

Thank you for your business!

Figure 3.1.2: Invoice from **Symmetry Mold Design** showing payment terms. (credit: modification of "Invoice" by James Ceszyk/Flickr, CC B 4.0)

Some companies send paper bills in the mail, often asking the recipient to tear off part of the bill and return it with the payment. This tear-off portion is a **turn-around document** and helps ensure that the payment is applied to the correct customer account and invoice. Generally, this document began as printed output, an invoice, from the billing part of the AIS. When the customer tears off a part of it and returns it in the envelope with a check to the company, it has now been "turned around" and will be used as an input source document, called a remittance advice. A remittance advice is a document that customers send along with checks and informs the recipient as to which invoice the customer is paying for. Figure 3.1.3 is an example of a turn-around document.

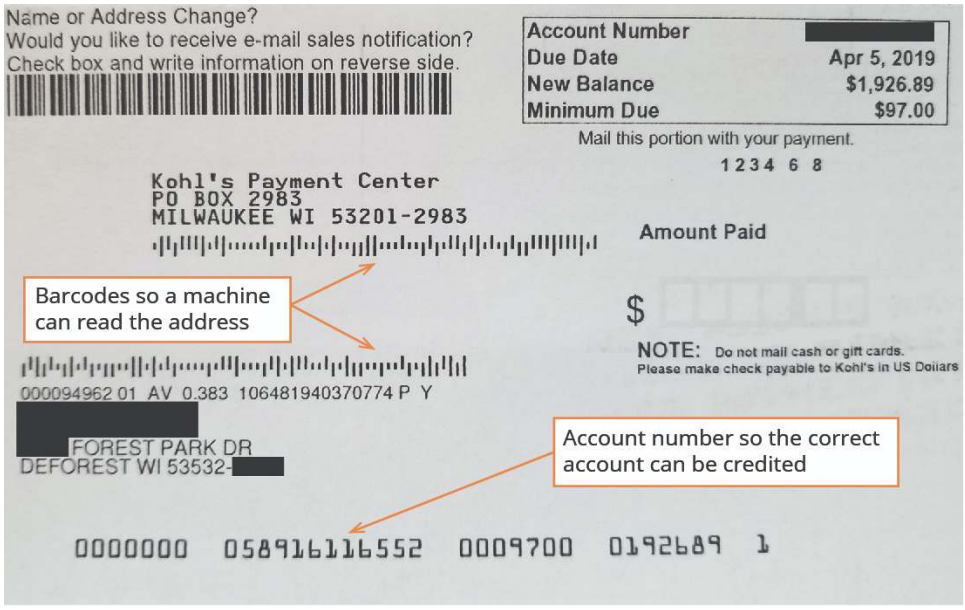


Figure 3.1.3: Turn-Around Document from Kohl's. The use of automation (bar codes) saves time and ensures accuracy since a machine can read the address, the account number, and even the amount on the check. (credit: modification of "Bill" by Kerry Ceszyk/Flickr, CC BY 4.0)

Both manual and computerized accounting systems utilized source documents. E-commerce systems have some additional source documents related to online transactions. Source documents help to establish an **audit trail**, which is a trail of evidence documenting the history of a specific transaction starting from its inception/source document and showing all the steps it went through until its final disposition. The trail of source documents and other records (the audit trail) makes it easier to investigate errors or questions by customers, vendors, employees, and others. For example, when a customer places an order by phone, by mail, or online, the sales order becomes the source document. If the customer does not receive the product ordered, the company can locate the original order, see if a picking ticket was generated (a picking ticket tells warehouse employees what inventory items the customer ordered, that now need to be picked off the shelf), locate the shipping documents, which provide evidence that the product was given to the shipper, and check for customer signature confirming receipt of goods. The trail of documents and entries in journals and ledgers and their electronic equivalent generated by this transaction provides evidence of all the steps that took place along the way. This makes it easy for anyone to verify or investigate, and perhaps find the weak links, where the process may have broken down. It allows the company to identify the reason why the customer never received the goods ordered. Maybe the order was never shipped because the company was out of stock of this specific product, maybe it was shipped and left at the customer's doorstep with no signature requested, or maybe the order was shipped to the wrong customer or to an incorrect address. An audit trail will help company personnel investigate any of these common issues. It should also help them identify weaknesses in their processes and precipitate improvements.

Businesses need a way to input data from the source document such as a sales invoice or purchase order. This was previously done with pen and paper and is currently done by keying it in on a computer keyboard; scanning, with a scanner such as one that reads MICR (magnetic ink character recognition) symbols (found on bank checks) or POS system scanners at cash registers that scan product bar codes/UPC symbols; or receiving it by e-transmission (or electronic funds transfer [EFT]). Input often involves the use of hardware such as scanners, keypads, keyboards, touch screens, or fingerprint readers called biometric devices. Once data has been input, it must be processed in order to be useful.

Processing Data

Companies need the accounting system to process the data that has been entered and transform it into useful information. In manual accounting systems, employees process all transaction data by journalizing, posting, and creating financial reports using paper. However, as technology has advanced, it became easier to keep records by using computers with software programs specifically developed for accounting transactions. Computers are good at repetition and calculations, both of which are involved in accounting, and computers can perform these calculations and analyses more quickly, and with fewer errors, thus making them a very effective tool for accounting from both an input and an output standpoint.

Link to Learning

See a list of popular bookkeeping software packages. With this information, potential options for sample accounting software options can be evaluated.

Output: Presenting Information

An AIS should provide a way to present system output (printed page, screen image, e-transmission). Any accounting software application such as that used by large companies (an ERP system) or one used by smaller businesses (QuickBooks) can easily print financial statements and other documents as well as display them on the screen.

Some financial information must be provided to other sources such as banks or government agencies, and though in past decades everything was presented and submitted on paper, today, most of this information is submitted electronically, and AISs help facilitate having the information in the necessary electronic format. Many banks require electronic data, and the Internal Revenue System (IRS) accepts your information as a digital transmission instead of a paper form. In 2017, 92 percent of all taxpayers who filed their own taxes did so electronically.[2] Most corporations choose to file their taxes electronically, and those with assets over $10 million are required to file electronically with the IRS.[3] Since May 5, 1996, all publicly traded companies are required to submit their filings, such as financial statements and stock offerings, to the SEC electronically.[4] The SEC places all the data into an electronic database known as the Electronic Data Gathering, Analysis, and Retrieval System (EDGAR). This database allows anyone to search the database for financial and other information about any publicly traded company. Thus, AISs facilitate not only internal access to financial information, but the sharing of that information externally as needed or required. Just as the EDGAR system used by the SEC stores data for retrieval, an AIS must provide a way to store and retrieve data.

Storing Data

Data can be stored by an AIS in paper, digital, or cloud formats. Before computers were widely used, financial data was stored on paper, like the journal and ledger shown in Figure 3.1.4.

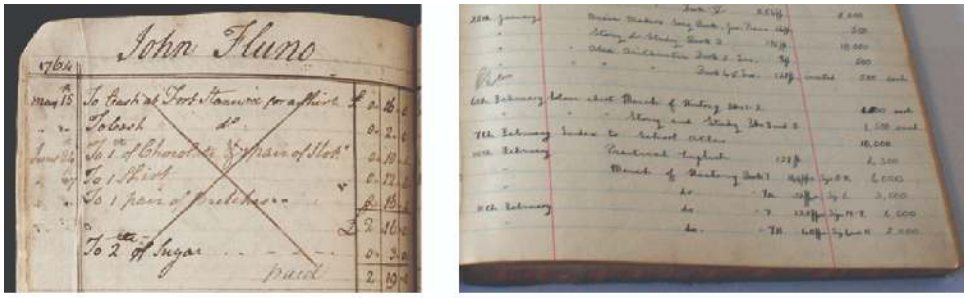


Figure 3.1.4: Data Storage. (a) General journal and (b) general ledger. (credit a: modification of “Entry in Barent Roseboom’s ledger detailing transactions with John Fluno in 1764” by National Park Service, Public Domain; credit b: modification of “Print Order Book, Holmes McDougall” by Edinburgh City of Print/Flickr, CC BY 2.0)

As technology has evolved, so have storage systems—from floppy disks to CDs, thumb drives, and the cloud. The hard drive on your computer is a data storage device, as is an external hard drive you can purchase. Data that is stored must have the ability to be retrieved when needed. As you can see from Figure 3.1.5, stored data comes from and/or flows through the three main functions of an AIS (input, processes, and output) with the end result being the use of the data in forms needed for decision-making, such as financial statements. Access to the ability to input data, manage processes, or retrieve data requires adequate controls to prevent fraud or unauthorized access and requires the implementation of data security measures. Figure 3.1.5 illustrates the key functions performed by an AIS.

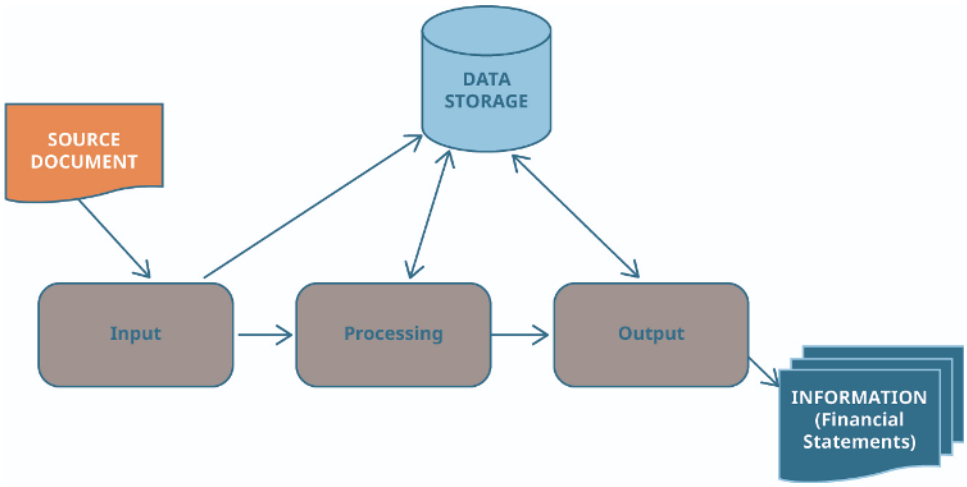


Figure 3.1.5: Accounting Information System. The four key functions performed by an accounting information system. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Your Turn: The Steps in an Accounting Information System

The three steps of an accounting information system are input, processing, and output. Data is the raw ingredient used in these processes. Some of the data may be obtained from a source document, and other data is obtained from the database where it had previously been stored. When the data has been processed, the final result is usually information. Information is more useful than data. Take, for example, another process that a bakery might use to bake chocolate chip cookies. While computers might not necessarily need to be involved, we begin the process by assembling a bunch of raw ingredients such as eggs, sugar, flour, chocolate chips, and oil, in a large bowl. Taking a spoonful of what is in the bowl at the time is not very pleasing to the taste buds or "useful" to someone craving a chocolate chip cookie. We process the raw ingredients by mixing them well and turning them into dough, cutting them into shapes, baking them, and glazing them. Similarly, raw data about a single sale contained on the sales invoice, such as customer name, date of sale, and amount of sale, is individually not very useful to a financial statement user such as an investor. However, by processing the data related to the sale, making sure it is correct by checking that the number of items ordered were in stock and actually shipped, aggregating it with other sales for the period, and producing an income statement containing the sales for the period is substantially more useful than the individual pieces of data relating to a single sale.

Can you give an example of each of the three steps, as well as a source document that might be used in the input stage and stored data that might be used in the input and processing stages, first for a grocery store, and then a medical office?

Answer

Grocery store

- Source Document: This would include a check to be deposited; totals from each cash register, including total cash; an invoice for produce; an application for employment by a potential new employee; time card information; a W-4 form (employment information); and so on.
- Input: This includes entering the data from the source document on the computer keyboard, electronically scanning the bar code of each product purchased at the grocery store (at checkout counter and to receive goods from vendor off the truck), maybe fingerprinting at the time clock, or keying in a price on the register.
- Processing: A cash register processes (accumulates and totals) different categories of items (coupons, checks, and charges) by the user; inventory can be tracked by RFID (radio-frequency identification); and software programs can process information gathered by individual cash registers as well as employee information.
- Output: Data that has been processed can be viewed on a computer screen, printed as a hard copy (paper output), or sent as electronic output from the cash register to the computer (can be done wirelessly or with a cable).
- Storage: Data can be stored in the company database on its computer hard drive or as cloud storage. Hopefully, the store is also paying for safe backup storage offsite (in case of fire at the store or hackers attempting to obtain information), generally accessed through the internet and stored in "the cloud." Otherwise, storage can be on paper printouts, the

computer hard drive, disks, or external drives. The data that is stored may be retrieved and used at the input, processing, and output stages.

Doctor's office:

- Source Document: This includes a check to be deposited from the patient; the patient's insurance information on file; a doctor's record of the diagnosis and procedures performed on the patient, to be submitted to the insurance company; and an invoice for medical supplies.
- Input: Data from the source document, for example, containing the diagnosis and a treatment plan, would be entered on the computer keyboard.
- Processing: The system might retrieve the treatment codes corresponding to every procedure the doctor performed, so it contains the appropriate information for the insurance company.
- Output: The treatment form is printed and then mailed to the insurance company for payment.
- Storage: The diagnosis and treatment plan are stored on the computer database for retrieval on the next visit for this patient. The form to be sent to the insurance company is also stored electronically so there can be follow-up until the payment from the insurance company is received. Also note that during processing, the system had to retrieve the treatment codes from a file of all of the codes that was stored in the database.

Your Turn: The Accounting Information System (AIS)

What are some of the types of information the accounting information system should be able to provide to the owners, managers, and employees of business, at the end of the day, or week, or month, which they, in turn, may need to provide to other external users?

Answer

- Information for internal purposes will include total sales and how much it cost to generate the sales. Also considered is how much inventory is on hand so a decision can be made as to whether or not to order more inventory.
- The company will need to record all of the economic events of the business in order to find total sales, cost of goods sold, expenses, and net income, as well as the number of hours employees worked, the employee's social security number, and how much the company promised to pay the employee per hour.
- Information for external users, such as the IRS or state and local government agencies, would include income tax returns and sales and payroll tax forms. The business owners and managers will need all sales and expenses, sales tax collected, and employees' earnings.
- In other words, the company needs an AIS.

While an AIS has the primary functions of input, processing, output, and storage, each company or system will decide on the exact steps and processes under each of these broad functions. We know that data is used to create the types of information needed by users to make decisions. One way in which a retail organization may obtain, input, process, and store data related to a sales transaction is through a point-of-sale system (POS). When a customer is ready to buy an item, the cashier scans the product being purchased, the price is retrieved from the price file, the sale is recorded, and inventory is updated. Most POS systems include a scanner, a computer screen, or a tablet with a touch screen. Customer payments are stored in the cash drawer. For noncash sales, credit card readers allow customers to insert, swipe, or tap their cards to pay (which also helps prevent keyboard input errors and keeps the information safer).

Ethical Considerations: Ethical Standards in Retail Stores

Professional sales employees operate the POS systems. There is an ethical code for sales professionals created by the Association of Professional Sales to help sales professionals maintain good judgment.[5] The organization sets forth standards such as the following:

- Maintain the highest standards of integrity in all business relationships.
- Provide our customers with a buying experience in which we "do the right thing and thereby help get the right results."
- Promote and protect good sales practices.

- Always act in line with my organization's codes and within the law.

Accountants can assist sales professionals in creating an ethical environment. The ethical environment will permit the users of accounting data to make solid business decisions and to better operate a company.

However, the POS is just part of the AIS. As each sale is entered into the register, other data is collected, recorded, and processed by the AIS and becomes information. Data about each sale is recorded in the information system: what was sold, how much it cost, the sales price, and any sales tax. It also records the time of day, the clerk, and anything else the company programmed the cash register to record. When all the sales for the day are totaled, it provides information in the form of organized and processed data with meaning to the company. A business might want to see which hour of the day resulted in the most sales, or to know which product was the best seller. An AIS can provide this information.

A system is created when processes work together to generate information for the business. The sales process accesses customers, accounts receivable, and inventory data and updates the appropriate files. The purchases process also accesses inventory and accounts payable and updates them, because most companies buy goods on credit. Since no two companies operate exactly the same way, you would expect each company to have a slightly different AIS. Some businesses do not have a cash register, but they will still have a Sales account. Some companies only have cash sales, so they would not have an Accounts Receivable account. Regardless of the type of business—retail, manufacturing, or service—an AIS is an important component of the business as it is this system that provides the information needed by internal and external decision-makers.

Concepts in Practice: Is This an Accounting Information System?

Do you think your average food truck proprietor has an accounting information system?



Figure 3.1.6: Food Truck. (credit: modification of "Food Trucks" by Daniel Lobo/Flickr, Public Domain)

Food trucks will have some type of accounting information system whether paper-based or electronic. One common method of creating an accounting information system in this type of business environment is to use an app, such as Square Point of Sale (**Square Inc.**). The Square Point of Sale (POS) software system keeps track of the sales. With this type of system, a food truck will likely have a Square Stand (a tablet-based POS), a cash drawer, and printers. The information input into the Square Stand is stored on Square servers using the cloud (online storage space offered by different companies and products) and is accessible by the company via an online dashboard. This system allows the handling of both cash sales and credit card sales. These components—the Square Point of Sale software, the Square Stand, cash drawer, and the printers—make up part of the accounting information system for a food truck.

IFRS Connection: Accounting Information Systems in an International Business Environment

All companies, regardless of whether they are domestic or international, will have an accounting information system with the features described in this chapter. It would be easy to assume that the accounting information systems created by public companies in the United States are created based on US generally accepted accounting principles (GAAP). This implies that these companies design their processes and controls so that in addition to meeting the reporting and monitoring goals of the company, the system also collects, measures, and reports the information that is required under US GAAP. But is this true? What about companies that have subsidiaries or a portion of their operations in another country? Do purely international companies use accounting information systems similar to their US counterparts?

As previously indicated, all companies will create some sort of accounting information system. **General Electric (GE)**, as a US-based manufacturer, uses an accounting information system that allows it to record, collect, produce, and analyze the operations of its various businesses. Since **GE** is a US corporation, headquartered in Boston, Massachusetts, its accounting information system is designed around the rules set out by US GAAP. **Fiat Chrysler Automobiles (FCA)** is headquartered in the United Kingdom, and it designs its accounting information system to produce financials under International Financial Reporting Standards (IFRS). On the surface, it looks as though each company will create an information system based on the accounting rules in its own home country. However, it is not quite that simple. Today, companies take advantage of the ability to borrow money across borders. The lenders often require the financial statements of the borrower to be presented using the accounting rules required by the lender's country. For example, if **GE** wanted to borrow money from the **Royal Bank of Scotland**, it would likely have to present its financial statements based on IFRS rules. Similarly, if **FCA** wanted to borrow from **Citibank**, it would need its financial statements in US GAAP form.

Borrowing is not the only reason a company may need to present financial statements based on a different set of accounting principles. As of 2017, **GE** had over 130 subsidiaries, and these businesses were located across 130 countries. A subsidiary is a business over which the parent company has decision-making control, usually indicated by an ownership interest of more than 50 percent. Many of these **GE** subsidiaries established their accounting information systems based on the accepted accounting principles in the countries in which they were located, as required in order to be in compliance with local regulations such as for local taxes. Thus, **GE** must convert the financial information obtained from the subsidiary's accounting information system, often based on IFRS, to US GAAP in order to consolidate the transactions and operations of all of the subsidiaries with those of the parent company to create one set of financial statements.

We have basically become a two GAAP world—IFRS and US GAAP—and many companies will find it necessary to have accounting information systems that can handle both sets of rules due to the global nature of business and the global nature of raising money through borrowing and issuing stock. This may seem crazy, to have two systems, but a little over ten years ago there were more than seventy different GAAP. Today, since many countries now use IFRS, the quality and consistency of financial reporting have improved. As a result, the cost associated with having accounting information systems that can combine many different sets of accounting rules has decreased.

Footnotes

- 1 Fraser Sherman. "The History of Computerized Accounting." Career Trend. January 14, 2019. https://careertrend.com/about-632821...ccounting.html
- 2 Income Tax Return Statistics. eFile. May 2018. https://www.efile.com/efile-tax-retu...it-statistics/
- 3 Income Tax Return Statistics. eFile. May 2018. https://www.efile.com/efile-tax-retu...it-statistics/
- 4 There is a hardship exemption for companies that cannot file their documents electronically. See U.S. Securities and Exchange Commission. Important Information about EDGAR. February 16, 2010. https://www.sec.gov/edgar/aboutedgar.htm
- 5 Association of Professional Sales. "APS Sales Code of Conduct." n.d. www.associationofprofessiona...-code-conduct/

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3.2: Define and Describe the Initial Steps in the Accounting Cycle

The **accounting cycle** is a step-by-step process to record business activities and events to keep financial records up to date. The process occurs over one accounting period and will begin the cycle again in the following period. A **period** is one operating cycle of a business, which could be a month, quarter, or year. Review the accounting cycle in Figure 3.2.1.

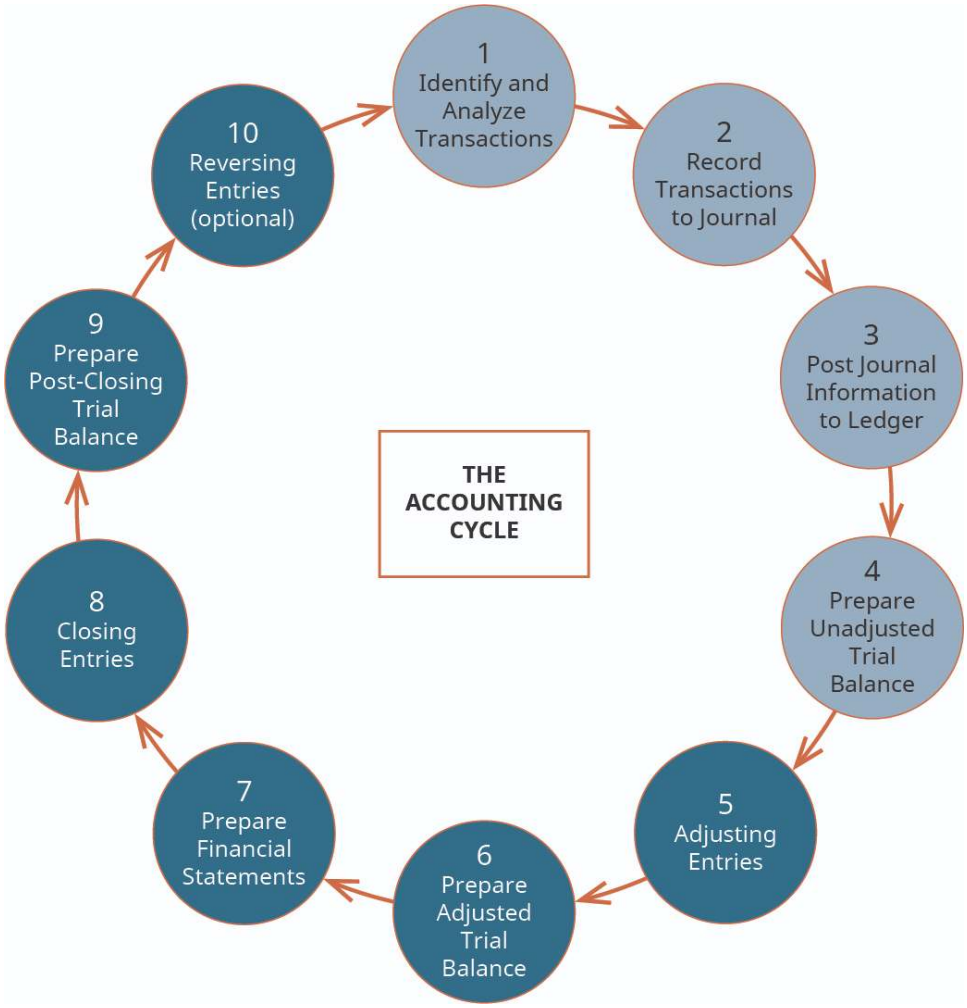


Figure 3.2.1: The Accounting Cycle. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

As you can see, the cycle begins with identifying and analyzing transactions and culminates in reversing entries. The entire cycle is meant to keep financial data organized and easily accessible to both internal and external users of information. In this chapter, we focus on the first four steps in the accounting cycle: identify and analyze transactions, record transactions to a journal, post journal information to a ledger, and prepare an unadjusted trial balance.

Ethical Considerations: Turning Hacked Gift Card Accounts into Cash

Gift cards are a great way for a company to presell its products and to create cash flow. One of the problems with gift cards is that fraudsters are using the retailer's weak internal controls to defraud the retailer's customers. A fraudster can hack into autoloading gift cards and drain a customer's bank account by buying new, physical gift cards through the autoloading gift card account. This is a real problem, and an internal control to reduce this type of fraud is to use a double verification system for the transfer of money from a bank account to reloadable gift card account. Accountants can help their organization limit gift card fraud by reviewing their company's internal controls over the gift card process.

A simple explanation of this fraud is that a fraudster will gain access to an individual's email account through phishing or by other means, such as a fraudster putting a key logger on a public computer or in a corrupted public Wi-Fi. The individual uses the same password for the reloadable gift card as his or her email account, and the fraudster will see emails about the gift card.

The fraudster contacts the retailer posing as the individual, and the retailer creates an in-store gift card redemption code, and the fraudster or his or her accomplice will go to the store posing as the individual and buy physical gift cards with the redemption code. The customer's bank account will be drained, and the customer will be upset. In another gift card fraud, the individual's credit card is stolen and used to buy physical gift cards from a retailer. This type of fraud causes problems for the retailer, for the retailer's reputation is damaged through the implementation of poor internal controls.

Does the fraudster use the fraudulently acquired gift cards? No, there is an entire market for selling gift cards on **Craigslist**, just go look and see how easy it is to buy discounted gift cards on **Craigslist**. Also, there are companies such as **cardcash.com** and **cardhub.com** that buy and resell gift cards. The fraudster just sells the gift cards, and the retailer has no idea it is redeeming fraudulently acquired gift cards. Through the implementation of proper internal controls, the accountant can help limit this fraud and protect his or her employer's reputation.

First Four Steps in the Accounting Cycle

The first four steps in the accounting cycle are (1) identify and analyze transactions, (2) record transactions to a journal, (3) post journal information to a ledger, and (4) prepare an unadjusted trial balance. We begin by introducing the steps and their related documentation.

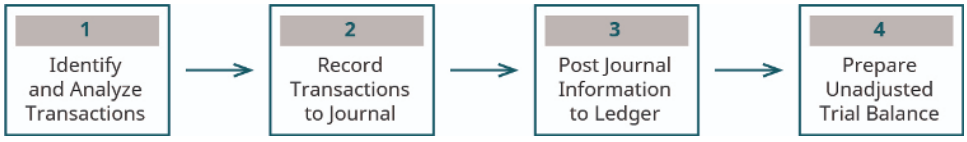


Figure 3.2.2: Accounting Cycle. The first four steps in the accounting cycle. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

These first four steps set the foundation for the recording process.

Step 1. Identifying and analyzing transactions is the first step in the process. This takes information from original sources or activities and translates that information into usable financial data. An **original source** is a traceable record of information that contributes to the creation of a business transaction. For example, a sales invoice is considered an original source. Activities would include paying an employee, selling products, providing a service, collecting cash, borrowing money, and issuing stock to company owners. Once the original source has been identified, the company will analyze the information to see how it influences financial records.

Let's say that Mark Summers of Supreme Cleaners provides cleaning services to a customer. He generates an invoice for $200, the amount the customer owes, so he can be paid for the service. This sales receipt contains information such as how much the customer owes, payment terms, and dates. This sales receipt is an original source containing financial information that creates a business transaction for the company.

Step 2. The second step in the process is recording transactions to a journal. This takes analyzed data from step 1 and organizes it into a comprehensive record of every company transaction. A **transaction** is a business activity or event that has an effect on financial information presented on financial statements. The information to record a transaction comes from an original source. A **journal** (also known as the book of original entry or general journal) is a record of all transactions.

For example, in the previous transaction, Supreme Cleaners had the invoice for $200. Mark Summers needs to record this $200 in his financial records. He needs to choose what accounts represent this transaction, whether or not this transaction will increase or decreases the accounts, and how that impacts the accounting equation before he can record the transaction in his journal. He needs to do this process for every transaction occurring during the period.

Figure 3.2.3 includes information such as the date of the transaction, the accounts required in the journal entry, and columns for debits and credits.

GENERAL JOURNAL			
Date	**Account Title**	**Debit**	**Credit**

Figure 3.2.3: General Journal. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Step 3. The third step in the process is posting journal information to a ledger. **Posting** takes all transactions from the journal during a period and moves the information to a general ledger, or ledger. As you've learned, account balances can be represented visually in the form of T-accounts.

Returning to Supreme Cleaners, Mark identified the accounts needed to represent the $200 sale and recorded them in his journal. He will then take the account information and move it to his general ledger. All of the accounts he used during the period will be shown on the general ledger, not only those accounts impacted by the $200 sale.

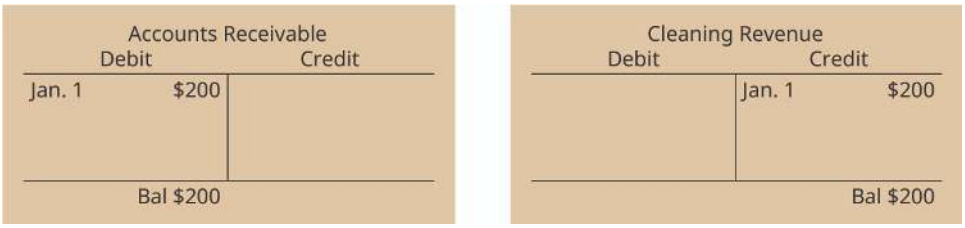


Figure 3.2.4: General Ledger in T-Account Form. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Step 4. The fourth step in the process is to prepare an unadjusted trial balance. This step takes information from the general ledger and transfers it onto a document showing all account balances, and ensuring that debits and credits for the period balance (debit and credit totals are equal).

Mark Summers from Supreme Cleaners needs to organize all of his accounts and their balances, including the $200 sale, onto a trial balance. He also needs to ensure his debits and credits are balanced at the culmination of this step.

SUPREME CLEAN Trial Balance April 30, 2018		
Account Title	**Debit**	**Credit**
Cash	XXX	
Accounts receivable	XXX	
Office supplies	XXX	
Prepaid insurance	XXX	
Equipment	XXX	
Accounts payable		XXX
Unearned cleaning revenue		XXX
Common stock		XXX
Dividends	XXX	
Cleaning revenue		XXX
Gas expense	XXX	
Advertising expense	XXX	
	XXX	XXX

Figure 3.2.5: Unadjusted Trial Balance. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

It is important to note that recording the entire process requires strong attention to detail. Any mistakes early on in the process can lead to incorrect reporting information on financial statements. If this occurs, accountants may have to go all the way back to the beginning of the process to find their error. Make sure that as you complete each step, you are careful and really take the time to understand how to record information and why you are recording it. In the next section, you will learn how the accounting equation is used to analyze transactions.

Concepts in Practice: Forensic Accounting

Ever dream about working for the Federal Bureau of Investigation (FBI)? As a forensic accountant, that dream might just be possible. A forensic accountant investigates financial crimes, such as tax evasion, insider trading, and embezzlement, among other things. Forensic accountants review financial records looking for clues to bring about charges against potential criminals. They consider every part of the accounting cycle, including original source documents, looking through journal entries, general ledgers, and financial statements. They may even be asked to testify to their findings in a court of law.

To be a successful forensic accountant, one must be detailed, organized, and naturally inquisitive. This position will need to retrace the steps a suspect may have taken to cover up fraudulent financial activities. Understanding how a company operates can help identify fraudulent activities that veer from the company's position. Some of the best forensic accountants have put away major criminals such as Al Capone, Bernie Madoff, Ken Lay, and Ivan Boesky.

Link to Learning

A tool that can be helpful to businesses looking for an easier way to view their accounting processes is to have drillable financial statements. This feature can be found in several software systems, allowing companies to go through the accounting cycle from transaction entry to financial statement construction. Read this *Journal of Accountancy* column on drillable financial statements to learn more.

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3.3: Use Journal Entries to Record Transactions and Post to T-Accounts

When we introduced debits and credits, you learned about the usefulness of T-accounts as a graphic representation of any account in the general ledger. But before transactions are posted to the T-accounts, they are first recorded using special forms known as *journals*.

Journals

Accountants use special forms called *journals* to keep track of their business transactions. A journal is the first place information is entered into the accounting system. A journal is often referred to as the **book of original entry** because it is the place the information originally enters into the system. A journal keeps a historical account of all recordable transactions with which the company has engaged. In other words, a journal is similar to a diary for a business. When you enter information into a journal, we say you are **journalizing** the entry. Journaling the entry is the second step in the accounting cycle. Here is a picture of a journal.

JOURNAL			
Date	**Account**	**Debit**	**Credit**

You can see that a journal has columns labeled debit and credit. The debit is on the left side, and the credit is on the right. Let's look at how we use a journal.

When filling in a journal, there are some rules you need to follow to improve journal entry organization.

Formatting When Recording Journal Entries

- Include the date of when the transaction occurred
- The debit account title(s) always come first and on the left
- The credit account title(s) always come after all debit titles are entered, and on the right
- The titles of the credit accounts will be indented below the debit accounts
- You will have at least one debit (possibly more)
- You will always have at least one credit (possibly more)
- The dollar value of the debits must equal the dollar value of the credits or else the equation will go out of balance
- You will write a short description after each journal entry
- Skip a space after the description before starting the next journal entry

An example journal entry format is as follows. It is not taken from previous examples but is intended to stand alone.

JOURNAL			
Date	**Description**	**Debit**	**Credit**
Apr. 1, 2018	Cash Common Stock *Received cash in exchange for common stock*	5,000	5,000

Note that this example has only one debit account and one credit account, which is considered a **simple entry**. A **compound entry** is when there is more than one account listed under the debit and/or credit column of a journal entry (as seen in the following).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 1, 2018	Cash Supplies Common Stock *Received cash and supplies in exchange for common stock*	3,000 2,000	5,000

Notice that for this entry, the rules for recording journal entries have been followed. There is a date of April 1, 2018, the debit account titles are listed first with Cash and Supplies, the credit account title of Common Stock is indented after the debit account

titles, there are at least one debit and one credit, the debit amounts equal the credit amount, and there is a short description of the transaction.

Let's now look at a few transactions from Printing Plus and record their journal entries.

Recording Transactions

We now return to our company example of Printing Plus, Lynn Sanders' printing service company. We will analyze and record each of the transactions for her business and discuss how this impacts the financial statements. Some of the listed transactions have been ones we have seen throughout this chapter. More detail for each of these transactions is provided, along with a few new transactions.

1. On January 3, 2019, issues $20,000 shares of common stock for cash.
2. On January 5, 2019, purchases equipment on account for $3,500, payment due within the month.
3. On January 9, 2019, receives $4,000 cash in advance from a customer for services not yet rendered.
4. On January 10, 2019, provides $5,500 in services to a customer who asks to be billed for the services.
5. On January 12, 2019, pays a $300 utility bill with cash.
6. On January 14, 2019, distributed $100 cash in dividends to stockholders.
7. On January 17, 2019, receives $2,800 cash from a customer for services rendered.
8. On January 18, 2019, paid in full, with cash, for the equipment purchase on January 5.
9. On January 20, 2019, paid $3,600 cash in salaries expense to employees.
10. On January 23, 2019, received cash payment in full from the customer on the January 10 transaction.
11. On January 27, 2019, provides $1,200 in services to a customer who asks to be billed for the services.
12. On January 30, 2019, purchases supplies on account for $500, payment due within three months.

Transaction 1: On January 3, 2019, issues $20,000 shares of common stock for cash.

Analysis:

- This is a transaction that needs to be recorded, as Printing Plus has received money, and the stockholders have invested in the firm.
- Printing Plus now has more cash. Cash is an asset, which in this case is increasing. Cash increases on the debit side.
- When the company issues stock, stockholders purchase common stock, yielding a higher common stock figure than before issuance. The common stock account is increasing and affects equity. Looking at the expanded accounting equation, we see that Common Stock increases on the credit side.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 3, 2019	Cash	20,000	
	Common Stock		20,000
	To recognize issuance of common stock		

Impact on the financial statements: Both of these accounts are balance sheet accounts. You will see total assets increase and total stockholders' equity will also increase, both by $20,000. With both totals increasing by $20,000, the accounting equation, and therefore our balance sheet, will be in balance. There is no effect on the income statement from this transaction as there were no revenues or expenses recorded.

Assets	=	Liabilities	+	Stockholders' Equity
+$20,000	=	+$0	+	+$20,000
$20,000	=	$0	+	$20,000

Transaction 2: On January 5, 2019, purchases equipment on account for $3,500, payment due within the month.

Analysis:

- In this case, equipment is an asset that is increasing. It increases because Printing Plus now has more equipment than it did before. Assets increase on the debit side; therefore, the Equipment account would show a $3,500 debit.
- The company did not pay for the equipment immediately. Lynn asked to be sent a bill for payment at a future date. This creates a liability for Printing Plus, who owes the supplier money for the equipment. Accounts Payable is used to recognize this liability. This liability is increasing, as the company now owes money to the supplier. A liability account increases on the credit side; therefore, Accounts Payable will increase on the credit side in the amount of $3,500.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 5, 2019	Equipment	3,500	
	Accounts Payable		3,500
	To recognize purchase of equipment on account		

Impact on the financial statements: Since both accounts in the entry are balance sheet accounts, you will see no effect on the income statement.

Assets	=	Liabilities	+	Stockholders' Equity
+$3,500	=	+ $3,500	+	0
$3,500	=	$3,500	+	0

Transaction 3: On January 9, 2019, receives $4,000 cash in advance from a customer for services not yet rendered.

Analysis:

- Cash was received, thus increasing the Cash account. Cash is an asset that increases on the debit side.
- Printing Plus has not yet provided the service, meaning it cannot recognize the revenue as earned. The company has a liability to the customer until it provides the service. The Unearned Revenue account would be used to recognize this liability. This is a liability the company did not have before, thus increasing this account. Liabilities increase on the credit side; thus, Unearned Revenue will recognize the $4,000 on the credit side.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 9, 2019	Cash	4,000	
	Unearned Revenue		4,000
	To recognize receipt of customer advanced payment for services yet to be rendered		

Impact on the financial statements: Since both accounts in the entry are balance sheet accounts, you will see no effect on the income statement.

Assets	=	Liabilities	+	Stockholders' Equity
+$4,000	=	+$4,000	+	0
$4,000	=	$4,000	+	0

Transaction 4: On January 10, 2019, provides $5,500 in services to a customer who asks to be billed for the services.

Analysis:

- The company provided service to the client; therefore, the company may recognize the revenue as earned (revenue recognition principle), which increases revenue. Service Revenue is a revenue account affecting equity. Revenue accounts increase on the credit side; thus, Service Revenue will show an increase of $5,500 on the credit side.
- The customer did not immediately pay for the services and owes Printing Plus payment. This money will be received in the future, increasing Accounts Receivable. Accounts Receivable is an asset account. Asset accounts increase on the debit side. Therefore, Accounts Receivable will increase for $5,500 on the debit side.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 10, 2019	Accounts Receivable Service Revenue *To recognize revenue earned, billed customer*	5,500	5,500

Impact on the financial statements: You have revenue of $5,500. Revenue is reported on your income statement. The more revenue you have, the more net income (earnings) you will have. The more earnings you have, the more retained earnings you will keep. Retained earnings is a stockholders' equity account, so total equity will increase $5,500. Accounts receivable is going up so total assets will increase by $5,500. The accounting equation, and therefore the balance sheet, remain in balance.

Assets	=	Liabilities	+	Stockholders' Equity
+$5,500	=	0	+	+$5,500
$5,500	=	0	+	$5,500

Transaction 5: On January 12, 2019, pays a $300 utility bill with cash.

Analysis:

- Cash was used to pay the utility bill, which means cash is decreasing. Cash is an asset that decreases on the credit side.
- Paying a utility bill creates an expense for the company. Utility Expense increases, and does so on the debit side of the accounting equation.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 12, 2019	Utility Expense Cash *Paid utility bill with cash*	300	300

Impact on the financial statements: You have an expense of $300. Expenses are reported on your income statement. More expenses lead to a decrease in net income (earnings). The fewer earnings you have, the fewer retained earnings you will end up with. Retained earnings is a stockholders' equity account, so total equity will decrease by $300. Cash is decreasing, so total assets will decrease by $300, impacting the balance sheet.

Assets	=	Liabilities	+	Stockholders' Equity
–$300	=	0	+	–$300
$300	=	0	+	$300

Transaction 6: On January 14, 2019, distributed $100 cash in dividends to stockholders.

Analysis:

- Cash was used to pay the dividends, which means cash is decreasing. Cash is an asset that decreases on the credit side.
- Dividends distribution occurred, which increases the Dividends account. Dividends is a part of stockholder's equity and is recorded on the debit side. This debit entry has the effect of reducing stockholder's equity.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan.14, 2019	Dividends Cash *Paid dividends with cash*	100	100

Impact on the financial statements: You have dividends of $100. An increase in dividends leads to a decrease in stockholders' equity (retained earnings). Cash is decreasing, so total assets will decrease by $100, impacting the balance sheet.

Assets	=	Liabilities	+	Stockholders' Equity
–$100	=	0	+	–$100
$100	=	0	+	$100

Transaction 7: On January 17, 2019, receives $2,800 cash from a customer for services rendered.

Analysis:

- The customer used cash as the payment method, thus increasing the amount in the Cash account. Cash is an asset that is increasing, and it does so on the debit side.
- Printing Plus provided the services, which means the company can recognize revenue as earned in the Service Revenue account. Service Revenue increases equity; therefore, Service Revenue increases on the credit side.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 17, 2019	Cash	2,800	
	Service Revenue		2,800
	Collected cash for services rendered		

Impact on the financial statements: Revenue is reported on the income statement. More revenue will increase net income (earnings), thus increasing retained earnings. Retained earnings is a stockholders' equity account, so total equity will increase $2,800. Cash is increasing, which increases total assets on the balance sheet.

Assets	=	Liabilities	+	Stockholders' Equity
+$2,800	=	0	+	+$2,800
$2,800	=	0	+	$2,800

Transaction 8: On January 18, 2019, paid in full, with cash, for the equipment purchase on January 5.

Analysis:

- Cash is decreasing because it was used to pay for the outstanding liability created on January 5. Cash is an asset and will decrease on the credit side.
- Accounts Payable recognized the liability the company had to the supplier to pay for the equipment. Since the company is now paying off the debt it owes, this will decrease Accounts Payable. Liabilities decrease on the debit side; therefore, Accounts Payable will decrease on the debit side by $3,500.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 18, 2019	Accounts Payable	3,500	
	Cash		3,500
	Paid liability for equipment in full		

Impact on the financial statements: Since both accounts in the entry are balance sheet accounts, you will see no effect on the income statement.

Assets	=	Liabilities	+	Stockholders' Equity
–$3,500	=	–$3,500	+	0
$3,500	=	$3,500	+	0

Transaction 9: On January 20, 2019, paid $3,600 cash in salaries expense to employees.

Analysis:

- Cash was used to pay for salaries, which decreases the Cash account. Cash is an asset that decreases on the credit side.

- Salaries are an expense to the business for employee work. This will increase Salaries Expense, affecting equity. Expenses increase on the debit side; thus, Salaries Expense will increase on the debit side.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 20, 2019	Salaries Expense	3,600	
	Cash		3,600
	Paid employee salaries		

Impact on the financial statements: You have an expense of $3,600. Expenses are reported on the income statement. More expenses lead to a decrease in net income (earnings). The fewer earnings you have, the fewer retained earnings you will end up with. Retained earnings is a stockholders' equity account, so total equity will decrease by $3,600. Cash is decreasing, so total assets will decrease by $3,600, impacting the balance sheet.

Assets	=	Liabilities	+	Stockholders' Equity
–$3,600	=	0	+	–$3,600
$3,600	=	0	+	$3,600

Transaction 10: On January 23, 2019, received cash payment in full from the customer on the January 10 transaction.

Analysis:

- Cash was received, thus increasing the Cash account. Cash is an asset, and assets increase on the debit side.
- Accounts Receivable was originally used to recognize the future customer payment; now that the customer has paid in full, Accounts Receivable will decrease. Accounts Receivable is an asset, and assets decrease on the credit side.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 23, 2019	Cash	5,500	
	Accounts Receivable		5,500
	Received customer payment from Jan. 10		

Impact on the financial statements: In this transaction, there was an increase to one asset (Cash) and a decrease to another asset (Accounts Receivable). This means total assets change by $0, because the increase and decrease to assets in the same amount cancel each other out. There are no changes to liabilities or stockholders' equity, so the equation is still in balance. Since there are no revenues or expenses affected, there is no effect on the income statement.

Assets	=	Liabilities	+	Stockholders' Equity
+$5,500 –$5,500	=	0	+	0 0
$0	=	0	+	

Transaction 11: On January 27, 2019, provides $1,200 in services to a customer who asks to be billed for the services.

Analysis:

- The customer does not pay immediately for the services but is expected to pay at a future date. This creates an Accounts Receivable for Printing Plus. The customer owes the money, which increases Accounts Receivable. Accounts Receivable is an asset, and assets increase on the debit side.
- Printing Plus provided the service, thus earning revenue. Service Revenue would increase on the credit side.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 27, 2019	Accounts Receivable	1,200	
	Service Revenue		1,200
	Billed customer for services rendered		

Impact on the financial statements: Revenue is reported on the income statement. More revenue will increase net income (earnings), thus increasing retained earnings. Retained earnings is a stockholders' equity account, so total equity will increase $1,200. Cash is increasing, which increases total assets on the balance sheet.

Assets	=	Liabilities	+	Stockholders' Equity
+$1,200	=	0	+	+$1,200
$1,200	=	0	+	$1,200

Transaction 12: On January 30, 2019, purchases supplies on account for $500, payment due within three months.

Analysis:

- The company purchased supplies, which are assets to the business until used. Supplies is increasing, because the company has more supplies than it did before. Supplies is an asset that is increasing on the debit side.
- Printing Plus did not pay immediately for the supplies and asked to be billed for the supplies, payable at a later date. This creates a liability for the company, Accounts Payable. This liability increases Accounts Payable; thus, Accounts Payable increases on the credit side.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 30, 2019	Supplies	500	
	Accounts Payable		500
	Billed customer for services rendered		

Impact on the financial statements: There is an increase to a liability and an increase to assets. These accounts both impact the balance sheet but not the income statement.

Assets	=	Liabilities	+	Stockholders' Equity
+$500	=	+$500	+	0
$500	=	$500	+	0

The complete journal for these transactions is as follows:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 3, 2019	Cash	20,000	
	Common Stock		20,000
	Recognize issuance of common stock		
Jan. 5, 2019	Equipment	3,500	
	Account Payable		3,500
	Recognize purchase of equipment on account		
Jan. 9, 2019	Cash	4,000	
	Unearned revenue		4,000
	Received advanced payment for services yet to be rendered		
Jan. 10, 2019	Accounts receivable	5,500	
	Service Revenue		5,500
	Revenue earned, billed customer		
Jan. 12, 2019	Utility Expense	300	
	Cash		300
	Paid utility bill		
Jan. 14, 2019	Dividends	100	
	Cash		100
	Paid out dividends		
Jan. 17, 2019	Cash	2,800	
	Service Revenue		2,800
	Collected cash for services rendered		
Jan. 18, 2019	Accounts Payable	3,500	
	Cash		3,500
	Paid liability for equipment in full		
Jan. 20, 2019	Salaries Expense	3,600	
	Cash		3,600
	Paid employee salaries		
Jan. 23, 2019	Cash	5,500	
	Accounts Receivable		5,500
	Received customer payment from Jan. 10		
Jan. 27, 2019	Accounts Receivable	1,200	
	Service Revenue		1,200
	Billed customer for services rendered		
Jan. 30, 2019	Supplies	500	
	Accounts Payable		500
	Paid for supplies on account		

We now look at the next step in the accounting cycle, step 3: post journal information to the ledger.

Continuing Application: Colfax Market

Colfax Market is a small corner grocery store that carries a variety of staple items such as meat, milk, eggs, bread, and so on. As a smaller grocery store, **Colfax** does not offer the variety of products found in a larger supermarket or chain. However, it records journal entries in a similar way.

Grocery stores of all sizes must purchase product and track inventory. While the number of entries might differ, the recording process does not. For example, **Colfax** might purchase food items in one large quantity at the beginning of each month, payable by the end of the month. Therefore, it might only have a few accounts payable and inventory journal entries each

month. Larger grocery chains might have multiple deliveries a week, and multiple entries for purchases from a variety of vendors on their accounts payable weekly.

This similarity extends to other retailers, from clothing stores to sporting goods to hardware. No matter the size of a company and no matter the product a company sells, the fundamental accounting entries remain the same.

Posting to the General Ledger

Recall that the general ledger is a record of each account and its balance. Reviewing journal entries individually can be tedious and time-consuming. The general ledger is helpful in that a company can easily extract account and balance information. Here is a small section of a general ledger.

GENERAL LEDGER					
Cash					Account No. 101
Date	Description	Ref.	Debit	Credit	Balance
2019					

You can see at the top is the name of the account "Cash," as well as the assigned account number "101." Remember, all asset accounts will start with the number 1. The date of each transaction related to this account is included, a possible description of the transaction, and a reference number if available. There are debit and credit columns, storing the financial figures for each transaction, and a balance column that keeps a running total of the balance in the account after every transaction.

Let's look at one of the journal entries from Printing Plus and fill in the corresponding ledgers.

JOURNAL			
Date	Account	Debit	Credit
Jan. 3, 2019	Cash	20,000	
	Common stock		20,000
	Received cash in exchange for common stock		

GENERAL LEDGER					
Cash					Account No. 101
Date	Description	Ref.	Debit	Credit	Balance
2019 Jan. 3	Cash for common stock		20,000		20,000
Common Stock					Account No. 301
Date	Description	Ref.	Debit	Credit	Balance
2019 Jan. 3	Cash for common stock			20,000	20,000

As you can see, there is one ledger account for Cash and another for Common Stock. Cash is labeled account number 101 because it is an asset account type. The date of January 3, 2019, is in the far left column, and a description of the transaction follows in the next column. Cash had a debit of $20,000 in the journal entry, so $20,000 is transferred to the general ledger in the debit column. The balance in this account is currently $20,000, because no other transactions have affected this account yet.

Common Stock has the same date and description. Common Stock had a credit of $20,000 in the journal entry, and that information is transferred to the general ledger account in the credit column. The balance at that time in the Common Stock ledger account is $20,000.

Another key element to understanding the general ledger, and the third step in the accounting cycle, is how to calculate balances in ledger accounts.

Link to Learning

It is a good idea to familiarize yourself with the type of information companies report each year. Peruse **Best Buy**'s 2017 annual report to learn more about **Best Buy**. Take note of the company's balance sheet on page 53 of the report and the income statement on page 54. These reports have much more information than the financial statements we have shown you; however, if you read through them you may notice some familiar items.

Calculating Account Balances

When calculating balances in ledger accounts, one must take into consideration which side of the account increases and which side decreases. To find the account balance, you must find the difference between the sum of all figures on the side that increases and the sum of all figures on the side that decreases.

For example, the Cash account is an asset. We know from the accounting equation that assets increase on the debit side and decrease on the credit side. If there was a debit of $5,000 and a credit of $3,000 in the Cash account, we would find the difference between the two, which is $2,000 (5,000 – 3,000). The debit is the larger of the two sides ($5,000 on the debit side as opposed to $3,000 on the credit side), so the Cash account has a debit balance of $2,000.

Another example is a liability account, such as Accounts Payable, which increases on the credit side and decreases on the debit side. If there were a $4,000 credit and a $2,500 debit, the difference between the two is $1,500. The credit is the larger of the two sides ($4,000 on the credit side as opposed to $2,500 on the debit side), so the Accounts Payable account has a credit balance of $1,500.

The following are selected journal entries from Printing Plus that affect the Cash account. We will use the Cash ledger account to calculate account balances.

JOURNAL

Date	Account	Debit	Credit
Jan. 3, 2019	Cash	20,000	
	Common Stock		20,000
	Recognize issuance of common stock		
Jan. 9, 2019	Cash	4,000	
	Unearned Revenue		4,000
	Received advanced payment for services yet to be rendered		
Jan. 12, 2019	Utility Expense	300	
	Cash		300
	Paid utility bill		
Jan. 14, 2019	Dividends	100	
	Cash		100
	Paid out dividends		
Jan. 17, 2019	Cash	2,800	
	Service Revenue		2,800
	Collected cash for services rendered		
Jan. 18, 2019	Accounts Payable	3,500	
	Cash		3,500
	Paid liability for equipment in full		
Jan. 20, 2019	Salaries Expense	3,600	
	Cash		3,600
	Paid employee salaries		
Jan. 23, 2019	Cash	5,500	
	Accounts Receivable		5,500
	Received customer payment from Jan. 10		

The general ledger account for Cash would look like the following:

GENERAL LEDGER					
Cash					Account No. 101
Date	Item	Ref.	Debit	Credit	Balance
2019					
Jan. 3	Cash for common stock		20,000		20,000
Jan. 9	Payment from client		4,000		24,000
Jan. 12	Utility bill			300	23,700
Jan. 14	Dividends payment			100	23,600
Jan. 17	Cash for services		2,800		26,400
Jan. 18	Paid cash for equipment			3,500	22,900
Jan. 20	Paid employee salaries			3,600	19,300
Jan. 23	Customer payment		5,500		24,800

In the last column of the Cash ledger account is the running balance. This shows where the account stands after each transaction, as well as the final balance in the account. How do we know on which side, debit or credit, to input each of these balances? Let's consider the general ledger for Cash.

On January 3, there was a debit balance of $20,000 in the Cash account. On January 9, a debit of $4,000 was included. Since both are on the debit side, they will be added together to get a balance on $24,000 (as is seen in the balance column on the January 9 row). On January 12, there was a credit of $300 included in the Cash ledger account. Since this figure is on the credit side, this $300 is subtracted from the previous balance of $24,000 to get a new balance of $23,700. The same process occurs for the rest of the entries in the ledger and their balances. The final balance in the account is $24,800.

Checking to make sure the final balance figure is correct; one can review the figures in the debit and credit columns. In the debit column for this cash account, we see that the total is $32,300 (20,000 + 4,000 + 2,800 + 5,500). The credit column totals $7,500 (300 + 100 + 3,500 + 3,600). The difference between the debit and credit totals is $24,800 (32,300 – 7,500). The balance in this Cash account is a debit of $24,800. Having a debit balance in the Cash account is the normal balance for that account.

Posting to the T-Accounts

The third step in the accounting cycle is to post journal information to the ledger. To do this we can use a T-account format. A company will take information from its journal and post to this general ledger. Posting refers to the process of transferring data from the journal to the general ledger. It is important to understand that T-accounts are only used for illustrative purposes in a textbook, classroom, or business discussion. They are not official accounting forms. Companies will use ledgers for their official books, not T-accounts.

Let's look at the journal entries for Printing Plus and post each of those entries to their respective T-accounts.

The following are the journal entries recorded earlier for Printing Plus.

Transaction 1: On January 3, 2019, issues $20,000 shares of common stock for cash.

JOURNAL			
Date	Account	Debit	Credit
Jan. 3, 2019	Cash	20,000	
	Common Stock		20,000
	To recognize issuance of common stock		

Cash		Common Stock	
Jan. 3 20,000			20,000 Jan. 3
Bal. 20,000			**Bal. 20,000**

In the journal entry, Cash has a debit of $20,000. This is posted to the Cash T-account on the debit side (left side). Common Stock has a credit balance of $20,000. This is posted to the Common Stock T-account on the credit side (right side).

Transaction 2: On January 5, 2019, purchases equipment on account for $3,500, payment due within the month.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 5, 2019	Equipment	3,500	
	Accounts Payable		3,500
	To recognize purchase of equipment on account		

Equipment	
Jan. 5 3,500	
Bal. 3,500	

Accounts Payable	
	3,500 Jan. 5
	Bal. 3,500

In the journal entry, Equipment has a debit of $3,500. This is posted to the Equipment T-account on the debit side. Accounts Payable has a credit balance of $3,500. This is posted to the Accounts Payable T-account on the credit side.

Transaction 3: On January 9, 2019, receives $4,000 cash in advance from a customer for services not yet rendered.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 9, 2019	Cash	4,000	
	Unearned Revenue		4,000
	To recognize receipt of customer advanced payment for services yet to be rendered		

Cash	
Jan. 3 20,000	
Jan. 9 4,000	
Bal. 24,000	

Unearned Revenue	
	4,000 Jan. 9
	Bal. 4,000

In the journal entry, Cash has a debit of $4,000. This is posted to the Cash T-account on the debit side. You will notice that the transaction from January 3 is listed already in this T-account. The next transaction figure of $4,000 is added directly below the $20,000 on the debit side. Unearned Revenue has a credit balance of $4,000. This is posted to the Unearned Revenue T-account on the credit side.

Transaction 4: On January 10, 2019, provides $5,500 in services to a customer who asks to be billed for the services.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 10, 2019	Accounts Receivable	5,500	
	Service Revenue		5,500
	To recognize revenue earned, billed customer		

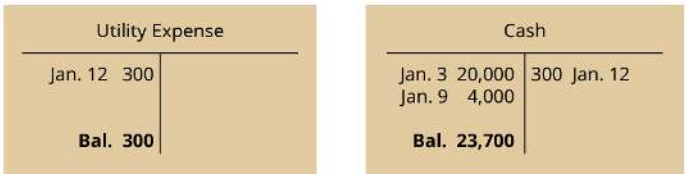
Accounts Receivable	
Jan. 10 5,500	
Bal. 5,500	

Service Revenue	
	5,500 Jan. 10
	Bal. 5,500

In the journal entry, Accounts Receivable has a debit of $5,500. This is posted to the Accounts Receivable T-account on the debit side. Service Revenue has a credit balance of $5,500. This is posted to the Service Revenue T-account on the credit side.

Transaction 5: On January 12, 2019, pays a $300 utility bill with cash.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 12, 2019	Utility Expense	300	
	Cash		300
	Paid utility bill with cash		



In the journal entry, Utility Expense has a debit balance of $300. This is posted to the Utility Expense T-account on the debit side. Cash has a credit of $300. This is posted to the Cash T-account on the credit side. You will notice that the transactions from January 3 and January 9 are listed already in this T-account. The next transaction figure of $300 is added on the credit side.

Transaction 6: On January 14, 2019, distributed $100 cash in dividends to stockholders.

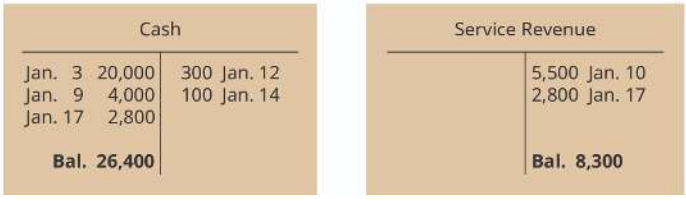
JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 14, 2019	Dividends	100	
	Cash		100
	Paid dividends with cash		



In the journal entry, Dividends has a debit balance of $100. This is posted to the Dividends T-account on the debit side. Cash has a credit of $100. This is posted to the Cash T-account on the credit side. You will notice that the transactions from January 3, January 9, and January 12 are listed already in this T-account. The next transaction figure of $100 is added directly below the January 12 record on the credit side.

Transaction 7: On January 17, 2019, receives $2,800 cash from a customer for services rendered.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 17, 2019	Cash	2,800	
	Service Revenue		2,800
	Collected cash for services rendered		



In the journal entry, Cash has a debit of $2,800. This is posted to the Cash T-account on the debit side. You will notice that the transactions from January 3, January 9, January 12, and January 14 are listed already in this T-account. The next transaction figure of $2,800 is added directly below the January 9 record on the debit side. Service Revenue has a credit balance of $2,800. This too has a balance already from January 10. The new entry is recorded under the Jan 10 record, posted to the Service Revenue T-account on the credit side.

Transaction 8: On January 18, 2019, paid in full, with cash, for the equipment purchase on January 5.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 18, 2019	Accounts Payable	3,500	
	Cash		3,500
	Paid liability for equipment in full		

Cash			
Jan. 3	20,000	300	Jan. 12
Jan. 9	4,000	100	Jan. 14
Jan. 17	2,800	3,500	Jan. 18
Bal.	**22,900**		

Accounts Payable			
Jan. 18	3,500	3,500	Jan. 5
		Bal.	**0**

On this transaction, Cash has a credit of $3,500. This is posted to the Cash T-account on the credit side beneath the January 14 transaction. Accounts Payable has a debit of $3,500 (payment in full for the Jan. 5 purchase). You notice there is already a credit in Accounts Payable, and the new record is placed directly across from the January 5 record.

Transaction 9: On January 20, 2019, paid $3,600 cash in salaries expense to employees.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 20, 2019	Salaries Expense	3,600	
	Cash		3,600
	Paid employee salaries		

Cash			
Jan. 3	20,000	300	Jan. 12
Jan. 9	4,000	100	Jan. 14
Jan. 17	2,800	3,500	Jan.18
		3,600	Jan.20
Bal.	**19,300**		

Salaries Expense			
Jan. 20	3,600		
Bal.	**3.600**		

On this transaction, Cash has a credit of $3,600. This is posted to the Cash T-account on the credit side beneath the January 18 transaction. Salaries Expense has a debit of $3,600. This is placed on the debit side of the Salaries Expense T-account.

Transaction 10: On January 23, 2019, received cash payment in full from the customer on the January 10 transaction.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 23, 2019	Cash	5,500	
	Accounts Receivable		5,500
	Received customer payment from Jan. 10		

Cash			
Jan. 3	20,500	300	Jan. 12
Jan. 9	4,000	100	Jan. 14
Jan. 17	2,800	3,500	Jan. 18
Jan. 23	5,500	3,600	Jan. 20
Bal.	**24,800**		

Accounts Receivable			
Jan. 10	5,500	5,500	Jan. 23
Bal.	**0**		

On this transaction, Cash has a debit of $5,500. This is posted to the Cash T-account on the debit side beneath the January 17 transaction. Accounts Receivable has a credit of $5,500 (from the Jan. 10 transaction). The record is placed on the credit side of the Accounts Receivable T-account across from the January 10 record.

Transaction 11: On January 27, 2019, provides $1,200 in services to a customer who asks to be billed for the services.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 27, 2019	Accounts Receivable Service Revenue *Billed customer for services rendered*	1,200	1,200

Accounts Receivable			
Jan. 10	5,500	5,500	Jan. 23
Jan. 27	1,200		
Bal.	**1,200**		

Service Revenue			
		5,500	Jan. 10
		2,800	Jan. 17
		1,200	Jan. 27
		Bal.	**9,500**

On this transaction, Accounts Receivable has a debit of $1,200. The record is placed on the debit side of the Accounts Receivable T-account underneath the January 10 record. Service Revenue has a credit of $1,200. The record is placed on the credit side of the Service Revenue T-account underneath the January 17 record.

Transaction 12: On January 30, 2019, purchases supplies on account for $500, payment due within three months.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 30, 2019	Supplies Accounts Payable *Purchased supplies on account*	500	500

Supplies			
Jan. 30	500		
Bal.	**500**		

Accounts Payable			
Jan. 18	3,500	3,500	Jan. 9
		500	Jan. 30
		Bal.	**500**

On this transaction, Supplies has a debit of $500. This will go on the debit side of the Supplies T-account. Accounts Payable has a credit of $500. You notice there are already figures in Accounts Payable, and the new record is placed directly underneath the January 5 record.

T-Accounts Summary

Once all journal entries have been posted to T-accounts, we can check to make sure the accounting equation remains balanced. A summary showing the T-accounts for Printing Plus is presented in Figure 3.3.1.

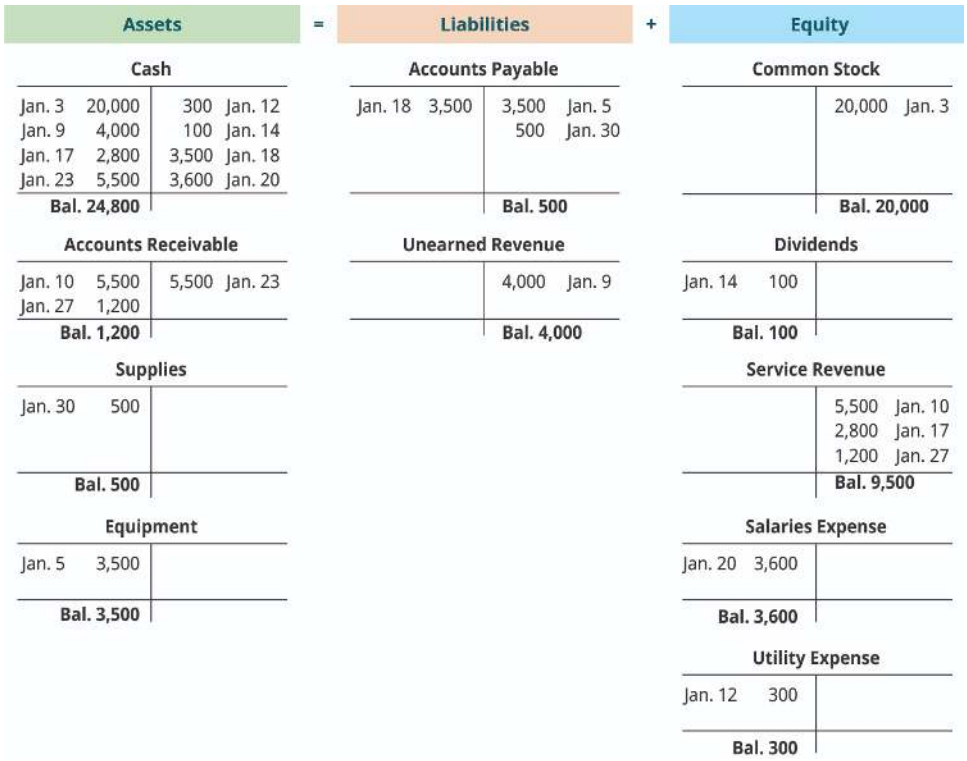


Figure 3.3.1: Summary of T-Accounts for Printing Plus. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The sum on the assets side of the accounting equation equals $30,000, found by adding together the final balances in each asset account (24,800 + 1,200 + 500 + 3,500). To find the total on the liabilities and equity side of the equation, we need to find the difference between debits and credits. Credits on the liabilities and equity side of the equation total $34,000 (500 + 4,000 + 20,000 + 9,500). Debits on the liabilities and equity side of the equation total $4,000 (100 + 3,600 + 300). The difference $34,000 – $4,000 = $30,000. Thus, the equation remains balanced with $30,000 on the asset side and $30,000 on the liabilities and equity side. Now that we have the T-account information, and have confirmed the accounting equation remains balanced, we can create the unadjusted trial balance.

Your Turn: Journalizing Transactions

You have the following transactions the last few days of April.

Apr. 25	You stop by your uncle's gas station to refill both gas cans for your company, Watson's Landscaping. Your uncle adds the total of $28 to your account.
Apr. 26	You record another week's revenue for the lawns mowed over the past week. You earned $1,200. You received cash equal to 75% of your revenue.
Apr. 27	You pay your local newspaper $35 to run an advertisement in this week's paper.
Apr. 29	You make a $25 payment on account.

Table 3.3.1

1. Prepare the necessary journal entries for these four transactions.
2. Explain why you debited and credited the accounts you did.
3. What will be the new balance in each account used in these entries?

Answer

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 25, 2018	Gas expense	28	
	Accounts payable		28
	Purchased gas on account		
Apr. 26, 2018	Cash	900	
	Accounts receivable	300	
	Lawnmowing revenue		1,200
	Earned $1,200 revenue: received 75% in cash		
Apr. 27, 2018	Advertising expense	35	
	Cash		35
	Paid cash to run an ad in the newspaper		
Apr. 29, 2018	Accounts payable	25	
	Cash		25
	Made a payment on account		

April 25

- You have incurred more gas expense. This means you have an increase in the total amount of gas expense for April. Expenses go up with debit entries. Therefore, you will debit gas expense.
- You purchased the gas on account. This will increase your liabilities. Liabilities increase with credit entries. Credit accounts payable to increase the total in the account.

April 26

- You have received more cash from customers, so you want the total cash to increase. Cash is an asset, and assets increase with debit entries, so debit cash.
- You also have more money owed to you by your customers. You have performed the services, your customers owe you the money, and you will receive the money in the future. Debit accounts receivable as asset accounts increase with debits.
- You have mowed lawns and earned more revenue. You want the total of your revenue account to increase to reflect this additional revenue. Revenue accounts increase with credit entries, so credit lawn-mowing revenue.

April 27

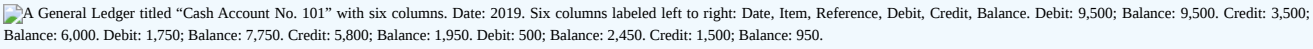
- Advertising is an expense of doing business. You have incurred more expenses, so you want to increase an expense account. Expense accounts increase with debit entries. Debit advertising expense.
- You paid cash for the advertising. You have less cash, so credit the cash account. Cash is an asset, and asset account totals decrease with credits.

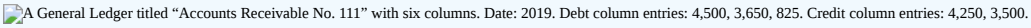
April 29

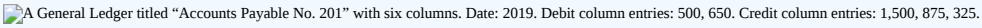
- You paid “on account.” Remember that “on account” means a service was performed or an item was received without being paid for. The customer asked to be billed. You were the customer in this case. You made a purchase of gas on account earlier in the month, and at that time you increased accounts payable to show you had a liability to pay this amount sometime in the future. You are now paying down some of the money you owe on that account. Since you paid this money, you now have less of a liability so you want to see the liability account, accounts payable, decrease by the amount paid. Liability accounts decrease with debit entries.
- You paid, which means you gave cash (or wrote a check or electronically transferred) so you have less cash. To decrease the total cash, credit the account because asset accounts are reduced by recording credit entries.

Your Turn: Normal Account Balances

Calculate the balances in each of the following accounts. Do they all have the normal balance they should have? If not, which one? How do you know this?


A General Ledger titled “Cash Account No. 101” with six columns. Date: 2019. Six columns labeled left to right: Date, Item, Reference, Debit, Credit, Balance. Debit: 9,500; Balance: 9,500. Credit: 3,500; Balance: 6,000. Debit: 1,750; Balance: 7,750. Credit: 5,800; Balance: 1,950. Debit: 500; Balance: 2,450. Credit: 1,500; Balance: 950.

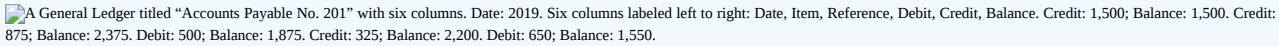

A General Ledger titled “Accounts Receivable No. 111” with six columns. Date: 2019. Debt column entries: 4,500, 3,650, 825. Credit column entries: 4,250, 3,500.


A General Ledger titled “Accounts Payable No. 201” with six columns. Date: 2019. Debit column entries: 500, 650. Credit column entries: 1,500, 875, 325.

Answer

GENERAL LEDGER					
Cash					Account No. 101
Date	**Item**	**Ref.**	**Debit**	**Credit**	**Balance**
2019					
			9,500		9,500
				3,500	6,000
			1,750		7,750
				5,800	1,950
			500		2,450
				1,500	950

GENERAL LEDGER					
Accounts Receivable					Account No. 111
Date	**Item**	**Ref.**	**Debit**	**Credit**	**Balance**
2019					
			4,500		4,500
			3,650		8,150
				4,250	3,900
				3,500	400
			825		1,225


A General Ledger titled “Accounts Payable No. 201” with six columns. Date: 2019. Six columns labeled left to right: Date, Item, Reference, Debit, Credit, Balance. Credit: 1,500; Balance: 1,500. Credit: 875; Balance: 2,375. Debit: 500; Balance: 1,875. Credit: 325; Balance: 2,200. Debit: 650; Balance: 1,550.

Think It Through: Gift Cards

Gift cards have become an important topic for managers of any company. Understanding who buys gift cards, why, and when can be important in business planning. Also, knowing when and how to determine that a gift card will not likely be redeemed will affect both the company’s balance sheet (in the liabilities section) and the income statement (in the revenues section).

According to a 2017 holiday shopping report from the National Retail Federation, gift cards are the most-requested presents for the eleventh year in a row, with 61% of people surveyed saying they are at the top of their wish lists, according to the National Retail Federation.[6] *CEB TowerGroup* projects that total gift card volume will reach $160 billion by 2018.[7]

How are all of these gift card sales affecting one of America’s favorite specialty coffee companies, **Starbucks**?

In 2014 one in seven adults received a **Starbucks** gift card. On Christmas Eve alone $2.5 million gift cards were sold. This is a rate of 1,700 cards per minute.[8]

The following discussion about gift cards is taken from **Starbucks**’s 2016 annual report:

“When an amount is loaded onto a stored value card we recognize a corresponding liability for the full amount loaded onto the card, which is recorded within stored value card liability on our consolidated balance sheets. When a stored value card is redeemed at a company-operated store or online, we recognize revenue by reducing the stored value card liability. When a stored value card is redeemed at a licensed store location, we reduce the corresponding stored value card liability and cash, which is reimbursed to the licensee. There are no expiration dates on our stored value cards, and in most markets, we do not

charge service fees that cause a decrement to customer balances. While we will continue to honor all stored value cards presented for payment, management may determine the likelihood of redemption, based on historical experience, is deemed to be remote for certain cards due to long periods of inactivity. In these circumstances, unredeemed card balances may be recognized as breakage income. In fiscal 2016, 2015, and 2014, we recognized breakage income of $60.5 million, $39.3 million, and $38.3 million, respectively.[9]"

As of October 1, 2017, **Starbucks** had a total of $1,288,500,000 in stored value card liability.

Footnotes

- 6 National Retail Federation (NRF). "NRF Consumer Survey Points to Busy Holiday Season, Backs Up Economic Forecast and Import Numbers." October 27, 2017. https://nrf.com/media-center/press-r...nomic-forecast
- 7 CEB Tower Group. "2015 Gift Card Sales to Reach New Peak of $130 Billion." PR Newswire. December 8, 2015. https://www.prnewswire.com/news-rele...300189615.html
- 8 Sara Haralson. "Last-Minute Shoppers Rejoice! Starbucks Has You Covered." *Fortune*. December 22, 2015. fortune.com/video/2015/12/22/...ks-gift-cards/
- 9 U.S. Securities and Exchange Commission. Communication from Starbucks Corporation regarding 2014 10-K Filing. November 14, 2014. https://www.sec.gov/Archives/edgar/d.../filename1.htm

3.3: Use Journal Entries to Record Transactions and Post to T-Accounts is shared under a CC BY-NC-SA license and was authored, remixed, and/or curated by LibreTexts.

3.4: Prepare a Trial Balance

Once all the monthly transactions have been analyzed, journalized, and posted on a continuous day-to-day basis over the accounting period (a month in our example), we are ready to start working on preparing a trial balance (unadjusted). Preparing an unadjusted trial balance is the fourth step in the accounting cycle. A **trial balance** is a list of all accounts in the general ledger that have nonzero balances. A trial balance is an important step in the accounting process, because it helps identify any computational errors throughout the first three steps in the cycle.

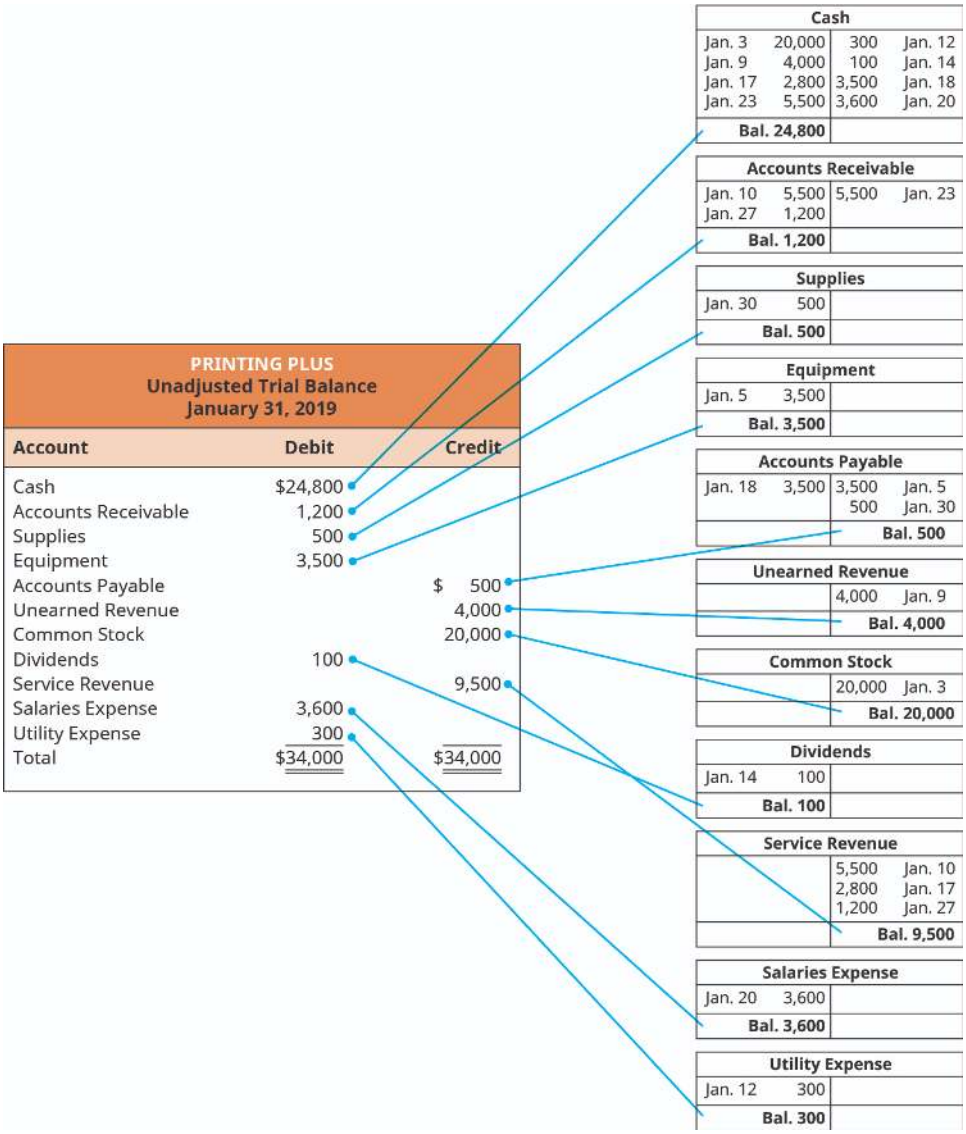
Note that for this step, we are considering our trial balance to be unadjusted. The **unadjusted trial balance** in this section includes accounts before they have been adjusted.

When constructing a trial balance, we must consider a few formatting rules, akin to those requirements for financial statements:

- The header must contain the name of the company, the label of a Trial Balance (Unadjusted), and the date.
- Accounts are listed in the accounting equation order with assets listed first followed by liabilities and finally equity.
- Amounts at the top of each debit and credit column should have a dollar sign.
- When amounts are added, the final figure in each column should be underscored.
- The totals at the end of the trial balance need to have dollar signs and be double-underscored.

Transferring information from T-accounts to the trial balance requires consideration of the final balance in each account. If the final balance in the ledger account (T-account) is a debit balance, you will record the total in the left column of the trial balance. If the final balance in the ledger account (T-account) is a credit balance, you will record the total in the right column.

Once all ledger accounts and their balances are recorded, the debit and credit columns on the trial balance are totaled to see if the figures in each column match each other. The final total in the debit column must be the same dollar amount that is determined in the final credit column. For example, if you determine that the final debit balance is $24,000 then the final credit balance in the trial balance must also be $24,000. If the two balances are not equal, there is a mistake in at least one of the columns.



PRINTING PLUS
Unadjusted Trial Balance
January 31, 2019

Account	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Supplies	500	
Equipment	3,500	
Accounts Payable		$ 500
Unearned Revenue		4,000
Common Stock		20,000
Dividends	100	
Service Revenue		9,500
Salaries Expense	3,600	
Utility Expense	300	
Total	$34,000	$34,000

Cash

Jan. 3	20,000	300	Jan. 12
Jan. 9	4,000	100	Jan. 14
Jan. 17	2,800	3,500	Jan. 18
Jan. 23	5,500	3,600	Jan. 20
Bal. 24,800			

Accounts Receivable

Jan. 10	5,500	5,500	Jan. 23
Jan. 27	1,200		
Bal. 1,200			

Supplies

Jan. 30	500		
Bal. 500			

Equipment

Jan. 5	3,500		
Bal. 3,500			

Accounts Payable

Jan. 18	3,500	3,500	Jan. 5
		500	Jan. 30
		Bal. 500	

Unearned Revenue

		4,000	Jan. 9
		Bal. 4,000	

Common Stock

		20,000	Jan. 3
		Bal. 20,000	

Dividends

Jan. 14	100		
Bal. 100			

Service Revenue

		5,500	Jan. 10
		2,800	Jan. 17
		1,200	Jan. 27
		Bal. 9,500	

Salaries Expense

Jan. 20	3,600		
Bal. 3,600			

Utility Expense

Jan. 12	300		
Bal. 300			

Let's now take a look at the T-accounts and unadjusted trial balance for Printing Plus to see how the information is transferred from the T-accounts to the unadjusted trial balance.

For example, Cash has a final balance of $24,800 on the debit side. This balance is transferred to the Cash account in the debit column on the unadjusted trial balance. Accounts Receivable ($1,200), Supplies ($500), Equipment ($3,500), Dividends ($100), Salaries Expense ($3,600), and Utility Expense ($300) also have debit final balances in their T-accounts, so this information will be transferred to the debit column on the unadjusted trial balance. Accounts Payable ($500), Unearned Revenue ($4,000), Common Stock ($20,000), and Service Revenue ($9,500) all have credit final balances in their T-accounts. These credit balances would transfer to the credit column on the unadjusted trial balance.

Once all balances are transferred to the unadjusted trial balance, we will sum each of the debit and credit columns. The debit and credit columns both total $34,000, which means they are equal and in balance. However, just because the column totals are equal and in balance, we are still not guaranteed that a mistake is not present.

PRINTING PLUS Unadjusted Trial Balance January 31, 2019		
Account	**Debit**	**Credit**
Cash	$24,800	
Accounts Receivable	1,200	
Supplies	500	
Equipment	3,500	
Accounts Payable		$ 500
Unearned Revenue		4,000
Common Stock		20,000
Dividends	100	
Service Revenue		9,500
Salaries Expense	3,600	
Utility Expense	300	
Total	$34,000	$34,000

What happens if the columns are not equal?

Concepts in Practice: Enron and Arthur Andersen

One of the most well-known financial schemes is that involving the companies **Enron Corporation** and **Arthur Andersen**. **Enron** defrauded thousands by intentionally inflating revenues that did not exist. **Arthur Andersen** was the auditing firm in charge of independently verifying the accuracy of **Enron**'s financial statements and disclosures. This meant they would review statements to make sure they aligned with GAAP principles, assumptions, and concepts, among other things.

It has been alleged that **Arthur Andersen** was negligent in its dealings with **Enron** and contributed to the collapse of the company. **Arthur Andersen** was brought up on a charge of obstruction of justice for shredding important documents related to criminal actions by **Enron**. They were found guilty but had that conviction overturned. However, the damage was done, and the company's reputation prevented it from operating as it had.[10]

Locating Errors

Sometimes errors may occur in the accounting process, and the trial balance can make those errors apparent when it does not balance.

One way to find the error is to take the difference between the two totals and divide the difference by two. For example, let's assume the following is the trial balance for Printing Plus.

PRINTING PLUS Unadjusted Trial Balance January 31, 2019		
Account	**Debit**	**Credit**
Cash	$24,800	
Accounts Receivable	1,200	
Supplies	500	
Equipment	3,500	
Accounts Payable		$ 500
Unearned Revenue		4,000
Common Stock		20,000
Dividends		100
Service Revenue		9,500
Salaries Expense	3,600	
Utility Expense	300	
Total	$33,900	$34,100

You notice that the balances are not the same. Find the difference between the two totals: $34,100 – $33,900 = $200 difference. Now divide the difference by two: $200/2 = $100. Since the credit side has a higher total, look carefully at the numbers on the credit side to see if any of them are $100. The Dividends account has a $100 figure listed in the credit column. Dividends normally have a debit balance, but here it is a credit. Look back at the Dividends T-account to see if it was copied onto the trial balance incorrectly. If the answer is the same as the T-account, then trace it back to the journal entry to check for mistakes. You may discover in your investigation that you copied the number from the T-account incorrectly. Fix your error, and the debit total will go up $100 and the credit total down $100 so that they will both now be $34,000.

Another way to find an error is to take the difference between the two totals and divide by nine. If the outcome of the difference is a whole number, then you may have transposed a figure. For example, let's assume the following is the trial balance for Printing Plus.

PRINTING PLUS Unadjusted Trial Balance January 31, 2019		
Account	**Debit**	**Credit**
Cash	$24,800	
Accounts Receivable	1,200	
Supplies	500	
Equipment	5,300	
Accounts Payable		$ 500
Unearned Revenue		4,000
Common Stock		20,000
Dividends	100	
Service Revenue		9,500
Salaries Expense	3,600	
Utility Expense	300	
Total	$35,800	$34,000

Find the difference between the two totals: $35,800 – 34,000 = $1,800 difference. This difference divided by nine is $200 ($1,800/9 = $200). Looking at the debit column, which has the higher total, we determine that the Equipment account had transposed figures. The account should be $3,500 and not $5,300. We transposed the three and the five.

What do you do if you have tried both methods and neither has worked? Unfortunately, you will have to go back through one step at a time until you find the error.

If a trial balance is in balance, does this mean that all of the numbers are correct? Not necessarily. We can have errors and still be mathematically in balance. It is important to go through each step very carefully and recheck your work often to avoid mistakes early on in the process.

After the unadjusted trial balance is prepared and it appears error-free, a company might look at its financial statements to get an idea of the company's position before adjustments are made to certain accounts. A more complete picture of company position develops after adjustments occur, and an adjusted trial balance has been prepared.

Your Turn: Completing a Trial Balance

Complete the trial balance for Magnificent Landscaping Service using the following T-account final balance information for April 30, 2018.

Cash	
10,000	6,000
Bal. 4,000	

Common Stock	
	2,050
	Bal. 2,050

Accounts Receivable	
400	
Bal. 400	

Service Revenue	
	2,000
	400
	Bal. 2,400

Accounts Payable	
	50
	Bal. 50

Advertising Expense	
100	
Bal. 100	

Answer

MAGNIFICENT LANDSCAPING SERVICE
Trial Balance
April 30, 2018

	Debit	Credit
Cash	$4,000	
Accounts receivable	400	
Accounts payable		50
Common stock		2,050
Service revenue		2,400
Advertising expense	100	
	$4,500	$4,500

Think It Through: Correcting Errors in the Trial Balance

You own a small consulting business. Each month, you prepare a trial balance showing your company's position. After preparing your trial balance this month, you discover that it does not balance. The debit column shows $2,000 more dollars than the credit column. You decide to investigate this error.

What methods could you use to find the error? What are the ramifications if you do not find and fix this error? How can you minimize these types of errors in the future?

Footnotes

- 10 James Titcomb. “Arthur Andersen Returns 12 Years after Enron Scandal.” *The Telegraph*. September 2, 2014. https://www.telegraph.co.uk/finance/...n-scandal.html

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3.5: Preparing Financial Statements

Preparing Financial Statements

After the adjusted trial balance, we will prepare the financial statements. The financial statements are how a business communicates or publishes its story. We will be focusing on three financial statements:

1. **Income Statement**: Calculates net income or loss of a company by showing revenues – expenses. If revenues are greater than expenses, you have net income. If revenues are less than expenses, you have net loss.
2. **Statement of Retained Earnings**: Calculates an ending balance in the retained earnings account using net income or loss calculated on the income statement. This statement takes the beginning balance in retained earnings + net income (or – net loss) – dividends to get the ending retained earnings balance. The ending retained earnings balance is reported on the balance sheet.
3. **Balance Sheet**: Proves the accounting equation of Assets = Liabilities + Equity and uses ending retained earnings calculated on the statement of retained earnings in equity.

This video will review the basic financial statements after the adjusted trial balance.



The balance sheet shown in the video is the simplified version we learned at the beginning of the course. If you look at the balance sheets produced by companies now, they are a little more detailed. A **classified balance sheet** adds groupings and subtotals to make the balance sheet easier for investors to read and analyze. The balance sheet can be done in report form where assets are first and liabilities and equity are below. Or in a side-by-side presentation. The classified balance sheet still proves the accounting equation but it separates assets and liabilities into subgroups:

- **Current Assets**: Can be converted to cash within a year or the operating cycle whichever is longer. Current assets include cash, accounts receivable, interest receivable, supplies, inventory, and other prepaid expenses.
- **Long Term Investments**: Investments that do not come due for more than a year are reported in this section. Long term investments would include notes receivable or investments in bonds or stocks.
- **Plant Assets**: Plant assets (also called Property, Plant, and Equipment or Fixed Assets) refer to property that is tangible (can be seen and touched) and is used in the business to generate revenue. Plant assets include depreciable assets and land used in the business. The plant asset is recorded with its accumulated depreciation (if any) subtracted below it to get the asset's book value.
- **Intangible Assets**: Intangible assets are items that have a financial value but do not have a physical form. These would be things like trademarks, patents, and copyrights.
- **Current Liabilities**: Like current assets, these are liabilities that are due to be paid within a year or the operating cycle whichever is longer. Current liabilities include accounts payable, salaries payable, taxes payable, unearned revenue, etc.
- **Long Term Liabilities**: Liabilities due more than a year from now would be reported here. These would include notes payable, mortgage payable, bonds payable, etc.

The Equity section of a classified balance sheet does not change. Using the information for MicroTrain, the financial statements would be:

MicroTrain Company		
Income Statement		
For Year Ended December 31		
Revenues:		
Service Revenue	$ 36,500	
Interest Revenue	600	
Total Revenues		$ 37,100
Expenses:		
Salaries Expense	18,360	
Rent Expense	1,200	
Utilities Expense	500	
Insurance Expense	200	
Supplies Expense	7,000	
Depreciation Expense	750	
Total Expenses		28,010
Net Income (37,100 – 28,010)		**$ 9,090**

The net income gets carried over to the statement of retained earnings. We will also use the retained earnings balance from the adjusted trial balance as the beginning balance. There are no dividends listed on the adjusted trial balance so MicroTrain did not pay dividends.

MicroTrain Company		
Statement of Retained Earnings		
For Year Ended December 31		
Beginning Retained Earnings	$ 6,100	*from the adjusted trial balance*
Net Income	9,090	*from the income statement*
	$ 15,190	
Dividends	– 0	*No dividends paid this year*
Ending Retained Earnings	**$ 15,190**	*goes to the balance sheet*

The calculated ending balance will be reported as the Retained Earnings amount on the balance sheet. We are doing the Classified Balance Sheet showing the subgroups for assets and liabilities in report form.

MicroTrain Company		
Classified Balance Sheet		
December 31		
Assets		
Current Assets		
Cash	$ 10,000	
Accounts Receivable	25,000	
Interest Receivable	600	
Supplies	1,500	
Prepaid Insurance	2,200	
Total Current Assets		$ 39,300
Plant Assets		
Trucks	40,000	
Less: Accum. Depreciation – Trucks	(750)	
Total Plant Assets		39,250
TOTAL ASSETS		**$ 78,550**
Liabilities and Equity		
Current Liabilities		
Accounts Payable	25,000	
Unearned Revenue	3,000	
Salaries Payable	360	
Total Current Liabilities		28,360
Equity		
Common Stock	35,000	
Retained Earnings	15,190	
Total Equity		50,190
TOTAL LIABILITIES AND EQUITY		**$ 78,550**

Notice how accumulated depreciation, a contra-account, reduces the asset account it is related to in the plant asset section. Remember, the balance sheet proves the accounting equation (ASSETS = LIABILITIES + EQUITY) and must always be in balance. Why do we need these groupings? It makes it easier for investors to quickly calculate ratios, for example, the **current ratio**.

The current ratio measures how much in assets the company has available now to pay liabilities due in the next year. The current ratio uses current assets and current liabilities:

Current Ratio =	Current Assets
	Current Liabilities

We can calculate MicroTrain's current ratio as follows:

Current Assets =	39,300 =	1.39
Current Liabilities	28,360	

The current ratio has been rounded to 2-decimal places to get a current ratio of 1.39 or 1.39 to 1. This means MicroTrain has approximately $1.39 in current assets available to pay every $1 of current liabilities. Investors like to see a ratio of between 1.5 and 2 so MicroTrain's current ratio is a little low but still good since we have more assets than liabilities.

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CHAPTER OVERVIEW

4: Adjusting Journal Entries (AJE's)

Learning Objectives

- Distinguish between cash basis and accrual basis accounting and explain their impact on the financial statements, including the revenue recognition and matching principles

4.1: Explain the Concepts and Guidelines Affecting Adjusting Entries
4.2: Discuss the Adjustment Process and Illustrate Common Types of Adjusting Entries
4.3: Record and Post the Common Types of Adjusting Entries
4.4: Use the Ledger Balances to Prepare an Adjusted Trial Balance
4.5: Prepare Financial Statements Using the Adjusted Trial Balance
4.6: Describe and Prepare Closing Entries for a Business
4.7: Prepare a Post-Closing Trial Balance

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4.1: Explain the Concepts and Guidelines Affecting Adjusting Entries

Explain the Concepts and Guidelines Affecting Adjusting Entries

Earlier, we discussed the first four steps in the accounting cycle: identify and analyze transactions, record transactions to a journal, post journal information to the general ledger, and prepare an (unadjusted) trial balance (Figure 4.1.1).

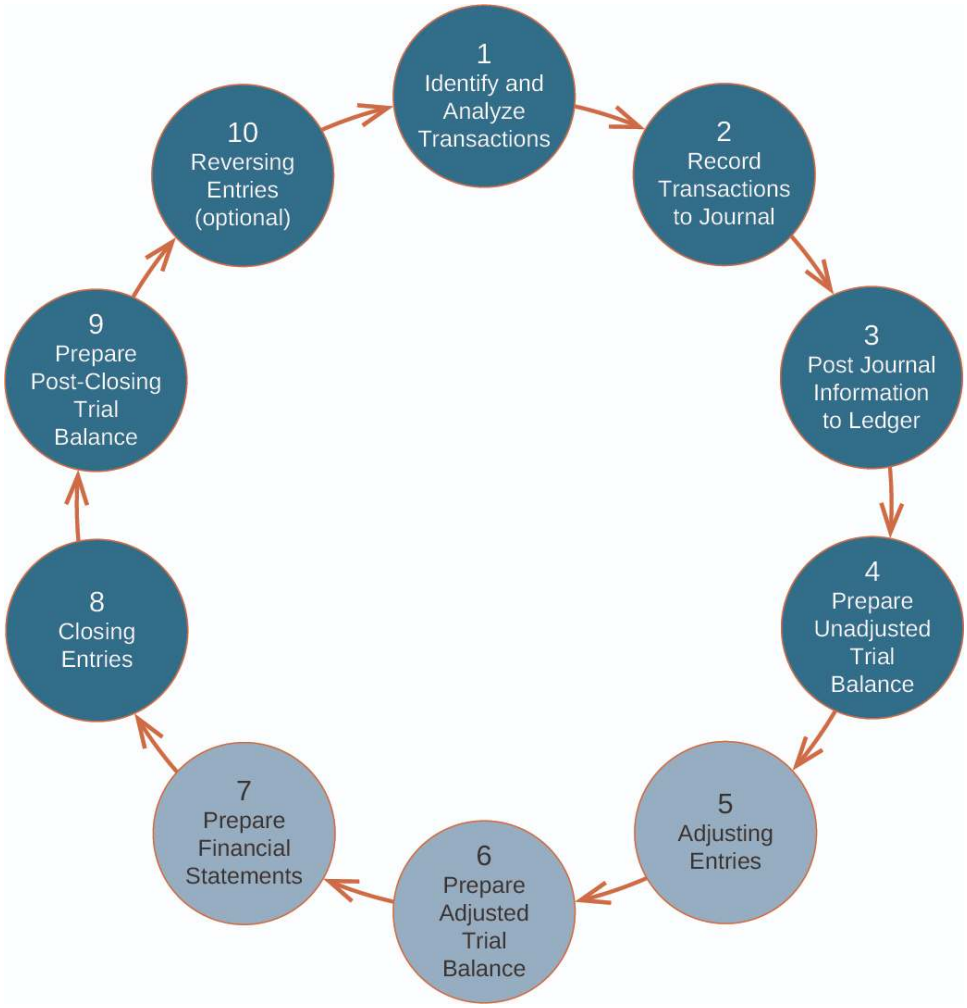


Figure 4.1.1: The Basic Accounting Cycle. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

This section examines the next three steps in the cycle: record adjusting entries (journalizing and posting), prepare an adjusted trial balance, and prepare the financial statements (Figure 4.1.2).

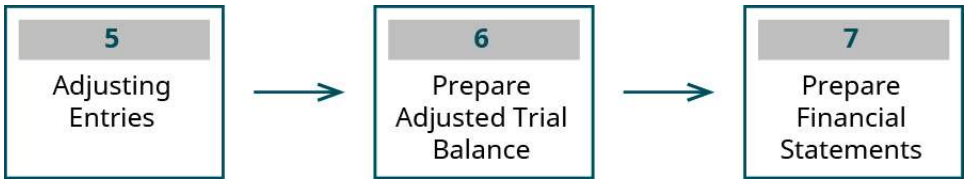


Figure 4.1.2: Steps 5, 6, and 7 in the Accounting Cycle. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

As we progress through these steps, you learn why the trial balance in this phase of the accounting cycle is referred to as an "adjusted" trial balance. We also discuss the purpose of adjusting entries and the accounting concepts supporting their need. One of the first concepts we discuss is accrual accounting.

Accrual Accounting

Public companies reporting their financial positions use either US generally accepted accounting principles (GAAP) or International Financial Reporting Standards (IFRS), as allowed under the Securities and Exchange Commission (SEC) regulations. Also, companies, public or private, using US GAAP or IFRS prepare their financial statements using the rules of accrual accounting. Accrual basis accounting prescribes that revenues and expenses must be recorded in the accounting period in which they were earned or incurred, no matter when cash receipts or payments occur. It is because of accrual accounting that we have the *revenue recognition principle* and the *expense recognition principle* (also known as the *matching principle*).

The accrual method is considered to better match revenues and expenses and standardizes reporting information for comparability purposes. Having comparable information is important to external users of information trying to make investment or lending decisions, and to internal users trying to make decisions about company performance, budgeting, and growth strategies.

Some nonpublic companies may choose to use cash basis accounting rather than accrual basis accounting to report financial information. Cash basis accounting is a method of accounting in which transactions are not recorded in the financial statements until there is an exchange of cash. Cash basis accounting sometimes delays or accelerates revenue and expense reporting until cash receipts or outlays occur. With this method, cash flows are used to measure business performance in a given period and can be simpler to track than accrual basis accounting.

There are several other accounting methods or concepts that accountants will sometimes apply. The first is **modified accrual accounting**, which is commonly used in governmental accounting and merges accrual basis and cash basis accounting. The second is **tax basis accounting** that is used in establishing the tax effects of transactions in determining the tax liability of an organization.

One fundamental concept to consider related to the accounting cycle—and to accrual accounting in particular—is the idea of the accounting period.

The Accounting Period

As we discussed, accrual accounting requires companies to report revenues and expenses in the accounting period in which they were earned or incurred. An **accounting period** breaks down company financial information into specific time spans, and can cover a month, a quarter, a half-year, or a full year. Public companies governed by GAAP are required to present quarterly (three-month) accounting period financial statements called 10-Qs. However, most public and private companies keep monthly, quarterly, and yearly (annual) period information. This is useful to users needing up-to-date financial data to make decisions about company investment and growth. When the company keeps yearly information, the year could be based on a fiscal or calendar year. This is explained shortly.

Continuing Application: Adjustment Process for Grocery Stores

In every industry, adjustment entries are made at the end of the period to ensure revenue matches expenses. Companies with an online presence need to account for items sold that have not yet been shipped or are in the process of reaching the end user. But what about the grocery industry? At first glance, it might seem that no such adjustment entries are necessary. However, grocery stores have adapted to the current retail environment. For example, your local grocery store might provide catering services for a graduation party. If the contract requires the customer to put down a 50% deposit, and occurs near the end of a period, the grocery store will have unearned revenue until it provides the catering service. Once the party occurs, the grocery store needs to make an adjusting entry to reflect that revenue has been earned.

The Fiscal Year and the Calendar Year

A company may choose its yearly reporting period to be based on a calendar or fiscal year. If a company uses a **calendar year**, it is reporting financial data from January 1 to December 31 of a specific year. This may be useful for businesses needing to coincide with a traditional yearly tax schedule. It can also be easier to track for some businesses without formal reconciliation practices, and for small businesses.

A **fiscal year** is a twelve-month reporting cycle that can begin in any month and records financial data for that consecutive twelve-month period. For example, a business may choose its fiscal year to begin on April 1, 2019, and end on March 31, 2020. This can

be common practice for corporations and may best reflect the operational flow of revenues and expenses for a particular business. In addition to annual reporting, companies often need or choose to report financial statement information in interim periods.

Interim Periods

An **interim period** is any reporting period shorter than a full year (fiscal or calendar). This can encompass monthly, quarterly, or half-year statements. The information contained in these statements is timelier than waiting for a yearly accounting period to end. The most common interim period is three months, or a quarter. For companies whose common stock is traded on a major stock exchange, meaning these are *publicly traded* companies, quarterly statements must be filed with the SEC on a Form 10-Q. The companies must file a Form 10-K for their annual statements. As you've learned, the SEC is an independent agency of the federal government that provides oversight of public companies to maintain fair representation of company financial activities for investors to make informed decisions.

In order for information to be useful to the user, it must be timely—that is, the user has to get it quickly enough so it is relevant to decision-making. This is the basis of the time period assumption in accounting. For example, a potential or existing investor wants timely information by which to measure the performance of the company, and to help decide whether to invest, to stay invested, or to sell their stockholdings and invest elsewhere. This requires companies to organize their information and break it down into shorter periods. Internal and external users can then rely on the information that is both timely and relevant to decision-making.

The accounting period a company chooses to use for financial reporting will impact the types of adjustments they may have to make to certain accounts.

Ethical Considerations: Illegal Cookie Jar Accounting Used to Manage Earnings

From 2000 through the end of 2001, **Bristol-Myers Squibb** engaged in "Cookie Jar Accounting," resulting in $150 million in SEC fines. The company manipulated its accounting to create a false indication of income and growth to create the appearance that it was meeting its own targets and Wall Street analysts' earnings estimates during the years 2000 and 2001. The SEC describes some of what occurred:

"Bristol-Myers inflated its results primarily by (1) stuffing its distribution channels with excess inventory near the end of every quarter in amounts sufficient to meet its targets by making pharmaceutical sales to its wholesalers ahead of demand; and (2) improperly recognizing $1.5 billion in revenue from such pharmaceutical sales to its two biggest wholesalers. In connection with the $1.5 billion in revenue, Bristol-Myers covered these wholesalers' carrying costs and guaranteed them a return on investment until they sold the products. When Bristol-Myers recognized the $1.5 billion in revenue upon shipment, it did so contrary to generally accepted accounting principles.[1]"

In addition to the improper distribution of product to manipulate earnings numbers, which was not enough to meet earnings targets, the company improperly used divestiture reserve funds (a "cookie jar" fund that is funded by the sale of assets such as product lines or divisions) to meet those targets. In this circumstance, earnings management was considered illegal, costing the company millions of dollars in fines.

Footnotes

- 1 U.S. Securities and Exchange Commission. "Bristol-Myers Squibb Company Agrees to Pay $150 Million to Settle Fraud Charges." August 4, 2004. https://www.sec.gov/news/press/2004-105.htm

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4.2: Discuss the Adjustment Process and Illustrate Common Types of Adjusting Entries

When a company reaches the end of a period, it must update certain accounts that have either been left unattended throughout the period or have not yet been recognized. **Adjusting entries** update accounting records at the end of a period for any transactions that have not yet been recorded. One important accounting principle to remember is that just as the accounting equation (Assets = Liabilities + Owner's equity/or common stock/or capital) must be equal, it must remain equal after you make adjusting entries. Also note that in this equation, owner's equity represents an individual owner (sole proprietorship), common stock represents a corporation's owners' interests, and capital represents a partnership's owners' interests. We discuss the effects of adjusting entries in greater detail throughout this chapter.

There are several steps in the accounting cycle that require the preparation of a trial balance: step 4, preparing an unadjusted trial balance; step 6, preparing an adjusted trial balance; and step 9, preparing a post-closing trial balance. You might question the purpose of more than one trial balance. For example, why can we not go from the unadjusted trial balance straight into preparing financial statements for public consumption? What is the purpose of the adjusted trial balance? Does preparing more than one trial balance mean the company made a mistake earlier in the accounting cycle? To answer these questions, let's first explore the (unadjusted) trial balance, and why some accounts have incorrect balances.

Why Some Accounts Have Incorrect Balances on the Trial Balance

The unadjusted trial balance may have incorrect balances in some accounts.

PRINTING PLUS
Unadjusted Trial Balance
January 31, 2019

Account	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Supplies	500	
Equipment	3,500	
Accounts Payable		$ 500
Unearned Revenue		4,000
Common Stock		20,000
Dividends	100	
Service Revenue		9,500
Salaries Expense	3,600	
Utility Expense	300	
Total	$34,000	$34,000

Figure 4.2.1: Unadjusted Trial Balance for Printing Plus. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The trial balance for Printing Plus shows Supplies of $500, which were purchased on January 30. Since this is a new company, Printing Plus would more than likely use some of their supplies right away, before the end of the month on January 31. Supplies are only an asset when they are unused. If Printing Plus used some of its supplies immediately on January 30, then why is the full $500 still in the supply account on January 31? How do we fix this incorrect balance?

Similarly, what about Unearned Revenue? On January 9, the company received $4,000 from a customer for printing services to be performed. The company recorded this as a liability because it received payment without providing the service. To clear this liability, the company must perform the service. Assume that as of January 31 some of the printing services have been provided. Is the full $4,000 still a liability? Since a portion of the service was provided, a change to unearned revenue should occur. The company needs to correct this balance in the Unearned Revenue account.

Having incorrect balances in Supplies and in Unearned Revenue on the company's January 31 trial balance is not due to any error on the company's part. The company followed all of the correct steps of the accounting cycle up to this point. So why are the balances still incorrect?

Journal entries are recorded when an activity or event occurs that triggers the entry. Usually, the trigger is from an original source. Recall that an original source can be a formal document substantiating a transaction, such as an invoice, purchase order, canceled check, or employee time sheet. Not every transaction produces an original source document that will alert the bookkeeper that it is time to make an entry.

When a company purchases supplies, the original order, receipt of the supplies, and receipt of the invoice from the vendor will all trigger journal entries. This trigger does not occur when using supplies from the supply closet. Similarly, for unearned revenue, when the company receives an advance payment from the customer for services yet provided, the cash received will trigger a journal entry. When the company provides the printing services for the customer, the customer will not send the company a reminder that revenue has now been earned. Situations such as these are why businesses need to make adjusting entries.

Think It Through: Keep Calm and Adjust...

Elliot Simmons owns a small law firm. He does the accounting himself and uses an accrual basis for accounting. At the end of his first month, he reviews his records and realizes there are a few inaccuracies on this unadjusted trial balance.

One difference is the supplies account; the figure on paper does not match the value of the supplies inventory still available. Another difference was interest earned from his bank account. He did not have anything recognizing these earnings.

Why did his unadjusted trial balance have these errors? What can be attributed to the differences in supply figures? What can be attributed to the differences in interest earned?

The Need for Adjusting Entries

Adjusting entries update accounting records at the end of a period for any transactions that have not yet been recorded. These entries are necessary to ensure the income statement and balance sheet present the correct, up-to-date numbers. Adjusting entries are also necessary because the initial trial balance may not contain complete and current data due to several factors:

- The inefficiency of recording every single day-to-day event, such as the use of supplies.
- Some costs are not recorded during the period but must be recognized at the end of the period, such as depreciation, rent, and insurance.
- Some items are forthcoming for which original source documents have not yet been received, such as a utility bill.

There are a few other guidelines that support the need for adjusting entries.

Guidelines Supporting Adjusting Entries

Several guidelines support the need for adjusting entries:

- Revenue recognition principle: Adjusting entries are necessary because the revenue recognition principle requires revenue recognition when earned, thus the need for an update to unearned revenues.
- Expense recognition (matching) principle: This requires matching expenses incurred to generate the revenues earned, which affects accounts such as insurance expense and supplies expense.
- Time period assumption: This requires useful information be presented in shorter time periods such as years, quarters, or months. This means a company must recognize revenues and expenses in the proper period, requiring adjustment to certain accounts to meet these criteria.

The required adjusting entries depend on what types of transactions the company has, but there are some common types of adjusting entries. Before we look at recording and posting the most common types of adjusting entries, we briefly discuss the various types of adjusting entries.

Types of Adjusting Entries

Adjusting entries requires updates to specific account types at the end of the period. Not all accounts require updates, only those not naturally triggered by an original source document. There are two main types of adjusting entries that we explore further, deferrals and accruals.

Deferrals

Deferrals are prepaid expense and revenue accounts that have delayed recognition until they have been used or earned. This recognition may not occur until the end of a period or future periods. When deferred expenses and revenues have yet to be recognized, their information is stored on the balance sheet. As soon as the expense is incurred and the revenue is earned, the information is transferred from the balance sheet to the income statement. Two main types of deferrals are prepaid expenses and unearned revenues.

Prepaid Expenses

Prepaid expenses (prepayments) are assets for which advanced payment has occurred, before the company can benefit from use. As soon as the asset has provided benefit to the company, the value of the asset used is transferred from the balance sheet to the income statement as an expense. Some common examples of prepaid expenses are supplies, depreciation, insurance, and rent.

When a company purchases supplies, it may not use all supplies immediately, but chances are the company has used some of the supplies by the end of the period. It is not worth it to record every time someone uses a pencil or piece of paper during the period, so at the end of the period, this account needs to be updated for the value of what has been used.

Let's say a company paid for supplies with cash in the amount of $400. At the end of the month, the company took an inventory of supplies used and determined the value of those supplies used during the period to be $150. The following entry occurs for the initial payment.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Supplies Cash *To recognize purchase of supplies*	400	400

Supplies increases (debit) for $400, and Cash decreases (credit) for $400. When the company recognizes the supplies usage, the following adjusting entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Supplies Expense Supplies *To recognize supplies used during the period*	150	150

Supplies Expense is an expense account, increasing (debit) for $150, and Supplies is an asset account, decreasing (credit) for $150. This means $150 is transferred from the balance sheet (asset) to the income statement (expense). Notice that not all of the supplies are used. There is still a balance of $250 (400 – 150) in the Supplies account. This amount will carry over to future periods until used. The balances in the Supplies and Supplies Expense accounts show as follows.

Supplies	
400	150
Bal. 250	

Salaries Expense	
150	
Bal. 150	

Depreciation may also require an adjustment at the end of the period. Recall that *depreciation* is the systematic method to record the allocation of cost over a given period of certain assets. This allocation of cost is recorded over the **useful life** of the asset, or the time period over which an asset cost is allocated. The allocated cost up to that point is recorded in Accumulated Depreciation, a contra asset account. A **contra account** is an account paired with another account type, has an opposite normal balance to the paired account, and reduces the balance in the paired account at the end of a period.

Accumulated Depreciation is contrary to an asset account, such as Equipment. This means that the normal balance for Accumulated Depreciation is on the credit side. It houses all depreciation expensed in current and prior periods. Accumulated Depreciation will reduce the asset account for depreciation incurred up to that point. The difference between the asset's value (cost) and accumulated depreciation is called the **book value** of the asset. When depreciation is recorded in an adjusting entry, Accumulated Depreciation is credited and Depreciation Expense is debited.

For example, let's say a company pays $2,000 for equipment that is supposed to last four years. The company wants to depreciate the asset over those four years equally. This means the asset will lose $500 in value each year ($2,000/four years). In the first year, the company would record the following adjusting entry to show depreciation of the equipment.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Depreciation Expense	500	
	Accumulated Depreciation: Equipment		500
	To recognize depreciation for the year		

Depreciation Expense increases (debit) and Accumulated Depreciation, Equipment, increases (credit). If the company wanted to compute the book value, it would take the original cost of the equipment and subtract accumulated depreciation.

Book value of equipment = $2,000 – $500 = $1,500

This means that the current book value of the equipment is $1,500, and depreciation will be subtracted from this figure the next year. The following account balances after adjustment are as follows:

Accumulated Depreciation: Equipment	
	500
	Bal. 500

Depreciation Expense	
500	
Bal. 500	

The book value of an asset is not necessarily the price at which the asset would sell. For example, you might have a building for which you paid $1,000,000 that currently has been depreciated to a book value of $800,000. However, today it could sell for more than, less than, or the same as its book value. The same is true about just about any asset you can name, except, perhaps, cash itself.

Insurance policies can require advanced payment of fees for several months at a time, six months, for example. The company does not use all six months of insurance immediately but over the course of the six months. At the end of each month, the company needs to record the amount of insurance expired during that month.

For example, a company pays $4,500 for an insurance policy covering six months. It is the end of the first month and the company needs to record an adjusting entry to recognize the insurance used during the month. The following entries show the initial payment

for the policy and the subsequent adjusting entry for one month of insurance usage.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Prepaid Insurance	4,500	
	Cash		4,500
	To recognize payment for insurance policy covering six months		
	Insurance Expense	750	
	Prepaid Insurance		750
	To recognize insurance used during one month		

In the first entry, Cash decreases (credit) and Prepaid Insurance increases (debit) for $4,500. In the second entry, Prepaid Insurance decreases (credit) and Insurance Expense increases (debit) for one month's insurance usage found by taking the total $4,500 and dividing by six months (4,500/6 = 750). The account balances after adjustment are as follows:

Prepaid Insurance	
4,500	750
Bal. 3,750	

Insurance Expense	
750	
Bal. 750	

Similar to prepaid insurance, rent also requires advanced payment. Usually, to rent a space, a company will need to pay rent at the beginning of the month. The company may also enter into a lease agreement that requires several months, or years, of rent in advance. Each month that passes, the company needs to record rent used for the month.

Let's say a company pays $8,000 in advance for four months of rent. After the first month, the company records an adjusting entry for the rent used. The following entries show initial payment for four months of rent and the adjusting entry for one month's usage.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Prepaid Rent	8,000	
	Cash		8,000
	To recognize payment for rent covering four months		
	Rent Expense	2,000	
	Prepaid Rent		2,000
	To recognize rent used during one month		

In the first entry, Cash decreases (credit) and Prepaid Rent increases (debit) for $8,000. In the second entry, Prepaid Rent decreases (credit) and Rent Expense increases (debit) for one month's rent usage found by taking the total $8,000 and dividing by four months (8,000/4 = 2,000). The account balances after adjustment are as follows:

Prepaid Rent	
8,000	2,000
Bal. 6,000	

Rent Expense	
2,000	
Bal. 2,000	

Another type of deferral requiring adjustment is unearned revenue.

Unearned Revenues

Unearned revenue represents a customer's advanced payment for a product or service that has yet to be provided by the company. Since the company has not yet provided the product or service, it cannot recognize the customer's payment as revenue. At the end

of a period, the company will review the account to see if any of the unearned revenue has been earned. If so, this amount will be recorded as revenue in the current period.

For example, let's say the company is a law firm. During the year, it collected retainer fees totaling $48,000 from clients. Retainer fees are money lawyers collect in advance of starting work on a case. When the company collects this money from its clients, it will debit cash and credit unearned fees. Even though not all of the $48,000 was probably collected on the same day, we record it as if it was for simplicity's sake.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cash	48,000	
	Unearned Fee Revenue		48,000
	To recognize collection of retainer fees		

In this case, Unearned Fee Revenue increases (credit) and Cash increases (debit) for $48,000.

At the end of the year after analyzing the unearned fees account, 40% of the unearned fees have been earned. This 40% can now be recorded as revenue. Total revenue recorded is $19,200 ($48,000 × 40%).

For this entry, Unearned Fee Revenue decreases (debit) and Fee Revenue increases (credit) for $19,200, which is the 40% earned during the year. The company will have the following balances in the two accounts:

Unearned Fee Revenue	
19,200	48,000
	Bal. 28,800

Fee Revenue	
	19,200
	Bal. 19,200

Besides deferrals, other types of adjusting entries include accruals.

Accruals

Accruals are types of adjusting entries that accumulate during a period, where amounts were previously unrecorded. The two specific types of adjustments are accrued revenues and accrued expenses.

Accrued Revenues

Accrued revenues are revenues earned in a period but have yet to be recorded, and no money has been collected. Some examples include interest, and services completed but a bill has yet to be sent to the customer.

Interest can be earned from bank account holdings, notes receivable, and some accounts receivables (depending on the contract). Interest had been accumulating during the period and needs to be adjusted to reflect interest earned at the end of the period. Note that this interest has not been paid at the end of the period, only earned. This aligns with the revenue recognition principle to recognize revenue when earned, even if cash has yet to be collected.

For example, assume that a company has one outstanding note receivable in the amount of $100,000. Interest on this note is 5% per year. Three months have passed, and the company needs to record interest earned on this outstanding loan. The calculation for the interest revenue earned is $100,000 × 5% × 3/12 = $1,250. The following adjusting entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Interest Receivable	1,250	
	Interest Revenue		1,250
	To recognize interest revenue earned and due		

Interest Receivable increases (debit) for $1,250 because interest has not yet been paid. Interest Revenue increases (credit) for $1,250 because interest was earned in the three-month period but had been previously unrecorded.

Interest Receivable	
1,250	
Bal. 1,250	

Interest Revenue	
	1,250
	Bal. 1,250

Previously unrecorded service revenue can arise when a company provides a service but did not yet bill the client for the work. This means the customer has also not yet paid for services. Since there was no bill to trigger a transaction, an adjustment is required to recognize revenue earned at the end of the period.

For example, a company performs landscaping services in the amount of $1,500. However, they have not yet received payment. At the period end, the company would record the following adjusting entry.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Receivable Service Revenue *To recognize service revenue earned and due*	1,500	1,500

Accounts Receivable increases (debit) for $1,500 because the customer has not yet paid for services completed. Service Revenue increases (credit) for $1,500 because service revenue was earned but had been previously unrecorded.

Service Revenue	
	1,500
	Bal. 1,500

Accounts Receivable	
1,500	
Bal. 1,500	

Accrued Expenses

Accrued expenses are expenses incurred in a period but have yet to be recorded, and no money has been paid. Some examples include interest, tax, and salary expenses.

Interest expense arises from notes payable and other loan agreements. The company has accumulated interest during the period but has not recorded or paid the amount. This creates a liability that the company must pay at a future date.

For example, a company accrued $300 of interest during the period. The following entry occurs at the end of the period.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Interest Expense Interest Payable *To recognize interest expense incurred but not paid*	300	300

Interest Expense increases (debit) and Interest Payable increases (credit) for $300. The following are the updated ledger balances after posting the adjusting entry.

Interest Payable	
	300
	Bal. 300

Interest Expense	
300	
Bal. 300	

Taxes are only paid at certain times during the year, not necessarily every month. Taxes the company owes during a period that are unpaid require adjustment at the end of a period. This creates a liability for the company. Some tax expense examples are income and sales taxes.

For example, a company has accrued income taxes for the month for $9,000. The company would record the following adjusting entry.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Income Tax Expense Income Tax Payable *To recognize income tax expense incurred but not paid*	9,000	9,000

Income Tax Expense increases (debit) and Income Tax Payable increases (credit) for $9,000. The following are the updated ledger balances after posting the adjusting entry.

Income Tax Payable	
	9,000
	Bal. 9,000

Income Tax Expense	
9,000	
Bal. 9,000	

Many salaried employees are paid once a month. The salary that the employee earned during the month might not be paid until the following month. For example, the employee is paid for the prior month's work on the first of the next month. The financial statements must remain up to date, so an adjusting entry is needed during the month to show salaries previously unrecorded and unpaid at the end of the month.

Let's say a company has five salaried employees, each earning $2,500 per month. In our example, assume that they do not get paid for this work until the first of the next month. The following is the adjusting journal entry for salaries.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Salaries Expense Salaries Payable *To recognize salaries expense incurred but not paid*	12,500	12,500

Salaries Expense increases (debit) and Salaries Payable increases (credit) for $12,500 ($2,500 per employee × five employees). The following are the updated ledger balances after posting the adjusting entry.

Salaries Payable	
	12,500
	Bal. 12,500

Salaries Expense	
12,500	
Bal. 12,500	

Your Turn: Adjusting Entries

Example	Income Statement Account	Balance Sheet Account	Cash in Entry?

Table 4.2.1

Review the three adjusting entries that follow. Using the table provided, for each entry write down the income statement account and balance sheet account used in the adjusting entry in the appropriate column. Then in the last column answer yes or no.

	Supplies Expense Supplies	500	500
	Unearned Revenue Service Revenue	2,000	2,000
	Rent Expense Prepaid Machine Rent	1,200	1,200

Answer

Example	Income Statement Account	Balance Sheet Account	Cash in Entry?
1	Supplies expense	Supplies	no
2	Service Revenue	Unearned Revenue	no
3	Rent Expense	Prepaid machine rent	no

Table 4.2.2

Your Turn: Adjusting Entries Take Two

Did we continue to follow the rules of adjusting entries in these two examples? Explain.

	Electricity Expense Accounts Payable	100	100
	Salaries Expense Salaries Payable	4,000	4,000

Example	Income Statement Account	Balance Sheet Account	Cash in Entry?

Table 4.2.3

Answer

Yes, we did. Each entry has one income statement account and one balance sheet account, and cash does not appear in either of the adjusting entries.

Example	Income Statement Account	Balance Sheet Account	Cash in Entry?
1	Electricity Expense	Accounts Payable	no
2	Salaries Expense	Salaries Payable	no

Table 4.2.4

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4.3: Record and Post the Common Types of Adjusting Entries

Before beginning adjusting entry examples for Printing Plus, let's consider some rules governing adjusting entries:

- Every adjusting entry will have at least one income statement account and one balance sheet account.
- Cash will never be in an adjusting entry.
- The adjusting entry records the change in amount that occurred during the period.

What are "income statement" and "balance sheet" accounts? Income statement accounts include revenues and expenses. Balance sheet accounts are assets, liabilities, and stockholders' equity accounts, since they appear on a balance sheet. The second rule tells us that cash can never be in an adjusting entry. This is true because paying or receiving cash triggers a journal entry. This means that every transaction with cash will be recorded at the time of the exchange. We will not get to the adjusting entries and have cash paid or received which has not already been recorded. If accountants find themselves in a situation where the cash account must be adjusted, the necessary adjustment to cash will be a *correcting entry* and not an adjusting entry.

With an adjusting entry, the amount of change occurring during the period is recorded. For example, if the supplies account had a $300 balance at the beginning of the month and $100 is still available in the supplies account at the end of the month, the company would record an adjusting entry for the $200 used during the month (300 – 100). Similarly for unearned revenues, the company would record how much of the revenue was earned during the period.

Let's now consider new transaction information for Printing Plus.

Concepts in Practice: Earnings Management

Recording adjusting entries seems so cut and dry. It looks like you just follow the rules and all of the numbers come out 100 percent correct on all financial statements. But in reality, this is not always the case. Just the fact that you have to make estimates in some cases, such as depreciation estimating residual value and useful life, tells you that numbers will not be 100 percent correct unless the accountant has ESP. Some companies engage in something called earnings management, where they follow the rules of accounting mostly but they stretch the truth a little to make it look like they are more profitable. Some companies do this by recording revenue before they should. Others leave assets on the books instead of expensing them when they should to decrease total expenses and increase profit.

Take Mexico-based home-building company **Desarrolladora Homex S.A.B. de C.V.** This company reported revenue earned on more than 100,000 homes they had not even build yet. The SEC's complaint states that Homex reported revenues from a project site where every planned home was said to have been "built and sold by Dec. 31, 2011. Satellite images of the project site on March 12, 2012, show it was still largely undeveloped and the vast majority of supposedly sold homes remained unbuilt."[2]

Is managing your earnings illegal? In some situations, it is just an unethical stretch of the truth easy enough to do because of the estimates made in adjusting entries. You can simply change your estimate and insist the new estimate is really better when maybe it is your way to improve the bottom line, for example, changing your annual depreciation expense calculated on expensive plant assets from assuming a ten-year useful life, a reasonable estimated expectation, to a twenty-year useful life, not so reasonable but you insist your company will be able to use these assets twenty years while knowing that is a slim possibility. Doubling the useful life will cause 50% of the depreciation expense you would have had. This will make a positive impact on net income. This method of earnings management would probably not be considered illegal but is definitely a breach of ethics. In other situations, companies manage their earnings in a way that the SEC believes is actual fraud and charges the company with illegal activity.

Recording Common Types of Adjusting Entries

Recall the transactions for Printing Plus.

Jan. 3, 2019	issues $20,000 shares of common stock for cash
Jan. 5, 2019	purchases equipment on account for $3,500, payment due within the month
Jan. 9, 2019	receives $4,000 cash in advance from a customer for services not yet rendered
Jan. 10, 2019	provides $5,500 in services to a customer who asks to be billed for the services
Jan. 12, 2019	pays a $300 utility bill with cash
Jan. 14, 2019	distributed $100 cash in dividends to stockholders
Jan. 17, 2019	receives $2,800 cash from a customer for services rendered
Jan. 18, 2019	paid in full, with cash, for the equipment purchase on January 5
Jan. 20, 2019	paid $3,600 cash in salaries expense to employees
Jan. 23, 2019	received cash payment in full from the customer on the January 10 transaction
Jan. 27, 2019	provides $1,200 in services to a customer who asks to be billed for the services
Jan. 30, 2019	purchases supplies on account for $500, payment due within three months

On January 31, 2019, Printing Plus makes adjusting entries for the following transactions.

1. On January 31, Printing Plus took an inventory of its supplies and discovered that $100 of supplies had been used during the month.
2. The equipment purchased on January 5 depreciated $75 during the month of January.
3. Printing Plus performed $600 of services during January for the customer from the January 9 transaction.
4. Reviewing the company bank statement, Printing Plus discovers $140 of interest earned during the month of January that was previously uncollected and unrecorded.
5. Employees earned $1,500 in salaries for the period of January 21–January 31 that had been previously unpaid and unrecorded.

We now record the adjusting entries from January 31, 2019, for Printing Plus.

Transaction 13: On January 31, Printing Plus took an inventory of its supplies and discovered that $100 of supplies had been used during the month.

Analysis:

- $100 of supplies were used during January. Supplies is an asset that is decreasing (credit).
- Supplies is a type of prepaid expense that, when used, becomes an expense. Supplies Expense would increase (debit) for the $100 of supplies used during January.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Supplies Expense Supplies *To recognize supply usage for January*	100	100

Impact on the financial statements: Supplies is a balance sheet account, and Supplies Expense is an income statement account. This satisfies the rule that each adjusting entry will contain an income statement and balance sheet account. We see total assets decrease by $100 on the balance sheet. Supplies Expense increases overall expenses on the income statement, which reduces net income.

Assets	=	Liabilities	+	Stockholders' Equity
–$100	=	+$0	+	–$100
–$100	=	$0	+	–$100

Transaction 14: The equipment purchased on January 5 depreciated $75 during the month of January.

Analysis:

- Equipment lost value in the amount of $75 during January. This depreciation will impact the Accumulated Depreciation–Equipment account and the Depreciation Expense–Equipment account. While we are not doing depreciation calculations here, you will come across more complex calculations in the future.
- Accumulated Depreciation–Equipment is a contra asset account (contrary to Equipment) and increases (credit) for $75.
- Depreciation Expense–Equipment is an expense account that is increasing (debit) for $75.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Depreciation Expense: Equipment	75	
	Accumulated Depreciation: Equipment		75
	To recognize equipment depreciation for January		

Impact on the financial statements: Accumulated Depreciation–Equipment is a contra account to Equipment. When calculating the book value of Equipment, Accumulated Depreciation–Equipment will be deducted from the original cost of the equipment. Therefore, total assets will decrease by $75 on the balance sheet. Depreciation Expense will increase overall expenses on the income statement, which reduces net income.

Assets	=	Liabilities	+	Stockholders' Equity
–$75	=	+$0	+	–$75
–$75	=	$0	+	–$75

Transaction 15: Printing Plus performed $600 of services during January for the customer from the January 9 transaction.

Analysis:

- The customer from the January 9 transaction gave the company $4,000 in advanced payment for services. By the end of January, the company had earned $600 of the advanced payment. This means that the company still has yet to provide $3,400 in services to that customer.
- Since some of the unearned revenue is now earned, Unearned Revenue would decrease. Unearned Revenue is a liability account and decreases on the debit side.
- The company can now recognize the $600 as earned revenue. Service Revenue increases (credit) for $600.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Unearned Revenue Service Revenue *To recognize revenue earned from January 9 transaction*	600	600

Impact on the financial statements: Unearned revenue is a liability account and will decrease total liabilities and equity by $600 on the balance sheet. Service Revenue will increase overall revenue on the income statement, which increases net income.

Assets	=	Liabilities	+	Stockholders' Equity
$0	=	–$600	+	+$600
$0	=	–$600	+	$600

Transaction 16: Reviewing the company bank statement, Printing Plus discovers $140 of interest earned during the month of January that was previously uncollected and unrecorded.

Analysis:

- Interest is revenue for the company on money kept in a savings account at the bank. The company only sees the bank statement at the end of the month and needs to record interest revenue that has not yet been collected or recorded.
- Interest Revenue is a revenue account that increases (credit) for $140.
- Since Printing Plus has yet to collect this interest revenue, it is considered a receivable. Interest Receivable increases (debit) for $140.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Interest Receivable Interest Revenue *To recognize interest revenue earned but not yet collected*	140	140

Impact on the financial statements: Interest Receivable is an asset account and will increase total assets by $140 on the balance sheet. Interest Revenue will increase overall revenue on the income statement, which increases net income.

Assets	=	Liabilities	+	Stockholder's Equity
+$140	=	$0	+	+$140
+$140	=	$0	+	+$140

Transaction 17: Employees earned $1,500 in salaries for the period of January 21–January 31 that had been previously unpaid and unrecorded.

Analysis:

- Salaries have accumulated since January 21 and will not be paid in the current period. Since the salaries expense occurred in January, the expense recognition principle requires recognition in January.
- Salaries Expense is an expense account that is increasing (debit) for $1,500.
- Since the company has not yet paid salaries for this time period, Printing Plus owes the employees this money. This creates a liability for Printing Plus. Salaries Payable increases (credit) for $1,500.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Salaries Expense Salaries Payable *To recognize salaries expense but not yet paid*	1,500	1,500

Impact on the financial statements: Salaries Payable is a liability account and will increase total liabilities and equity by $1,500 on the balance sheet. Salaries expense will increase overall expenses on the income statement, which decreases net income.

Assets	=	Liabilities	+	Stockholder's Equity
$0	=	+$1,500	+	–$1,500
$0	=	+$1,500	+	–$1,500

We now explore how these adjusting entries impact the general ledger (T-accounts).

Your Turn: Deferrals Versus Accruals

Label each of the following as a deferral or an accrual, and explain your answer.

1. The company recorded supplies usage for the month.
2. A customer paid in advance for services, and the company recorded revenue earned after providing service to that customer.
3. The company recorded salaries that had been earned by employees but were previously unrecorded and have not yet been paid.

Answer

1. The company is recording a deferred expense. The company was deferring the recognition of supplies from supplies expense until it had used the supplies.
2. The company has deferred revenue. It deferred the recognition of the revenue until it was actually earned. The customer already paid the cash and is currently on the balance sheet as a liability.
3. The company has an accrued expense. The company is bringing the salaries that have been incurred, added up since the last paycheck, onto the books for the first time during the adjusting entry. Cash will be given to the employees at a later time.

Link to Learning

Several internet sites can provide additional information for you on adjusting entries. One very good site where you can find many tools to help you study this topic is Accounting Coach which provides a tool that is available to you free of charge. Visit the website and take a quiz on accounting basics to test your knowledge.

Posting Adjusting Entries

Once you have journalized all of your adjusting entries, the next step is posting the entries to your ledger. Posting adjusting entries is no different than posting the regular daily journal entries. T-accounts will be the visual representation for the Printing Plus general ledger.

Transaction 13: On January 31, Printing Plus took an inventory of its supplies and discovered that $100 of supplies had been used during the month.

Journal entry and T-accounts:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Supplies Expense	100	
	Supplies		100
	To recognize supply usage for January		

Supplies			
Jan. 30	500	100	Jan. 31
Bal. 400			

Supplies Expense			
Jan. 31	100		
Bal. 100			

In the journal entry, Supplies Expense has a debit of $100. This is posted to the Supplies Expense T-account on the debit side (left side). Supplies has a credit balance of $100. This is posted to the Supplies T-account on the credit side (right side). You will notice there is already a debit balance in this account from the purchase of supplies on January 30. The $100 is deducted from $500 to get a final debit balance of $400.

Transaction 14: The equipment purchased on January 5 depreciated $75 during the month of January.

Journal entry and T-accounts:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Depreciation Expense: Equipment	75	
	Accumulated Depreciation: Equipment		75
	To recognize equipment depreciation for January		

Depreciation Expense: Equipment			
Jan. 31	75		
Bal. 75			

Accumulated Depreciation: Equipment			
		75	Jan. 31
		Bal. 75	

In the journal entry, Depreciation Expense–Equipment has a debit of $75. This is posted to the Depreciation Expense–Equipment T-account on the debit side (left side). Accumulated Depreciation–Equipment has a credit balance of $75. This is posted to the Accumulated Depreciation–Equipment T-account on the credit side (right side).

Transaction 15: Printing Plus performed $600 of services during January for the customer from the January 9 transaction.

Journal entry and T-accounts:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Unearned Revenue Service Revenue *To recognize revenue earned from January 9 transaction*	600	600

Unearned Revenue			
		4,000	Jan. 9
Jan. 31	600		
		Bal. 3,400	

Service Revenue			
		5,500	Jan. 10
		2,800	Jan. 17
		1,200	Jan. 27
		600	Jan. 31
		Bal. 10,100	

In the journal entry, Unearned Revenue has a debit of $600. This is posted to the Unearned Revenue T-account on the debit side (left side). You will notice there is already a credit balance in this account from the January 9 customer payment. The $600 debit is subtracted from the $4,000 credit to get a final balance of $3,400 (credit). Service Revenue has a credit balance of $600. This is posted to the Service Revenue T-account on the credit side (right side). You will notice there is already a credit balance in this account from other revenue transactions in January. The $600 is added to the previous $9,500 balance in the account to get a new final credit balance of $10,100.

Transaction 16: Reviewing the company bank statement, Printing Plus discovers $140 of interest earned during the month of January that was previously uncollected and unrecorded.

Journal entry and T-accounts:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Interest Receivable Interest Revenue *To recognize interest revenue earned but not yet collected*	140	140

Interest Receivable			
Jan. 31	140		
Bal. 140			

Interest Revenue			
		140	Jan. 31
		Bal. 140	

In the journal entry, Interest Receivable has a debit of $140. This is posted to the Interest Receivable T-account on the debit side (left side). Interest Revenue has a credit balance of $140. This is posted to the Interest Revenue T-account on the credit side (right side).

Transaction 17: Employees earned $1,500 in salaries for the period of January 21–January 31 that had been previously unpaid and unrecorded.

Journal entry and T-accounts:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Interest Receivable	140	
	Interest Revenue		140
	To recognize interest revenue earned but not yet collected		

Interest Receivable	
Jan. 31 140	
Bal. 140	

Interest Revenue	
	140 Jan. 31
	Bal. 140

In the journal entry, Salaries Expense has a debit of $1,500. This is posted to the Salaries Expense T-account on the debit side (left side). You will notice there is already a debit balance in this account from the January 20 employee salary expense. The $1,500 debit is added to the $3,600 debit to get a final balance of $5,100 (debit). Salaries Payable has a credit balance of $1,500. This is posted to the Salaries Payable T-account on the credit side (right side).

T-accounts Summary

Once all adjusting journal entries have been posted to T-accounts, we can check to make sure the accounting equation remains balanced. Following is a summary showing the T-accounts for Printing Plus including adjusting entries.

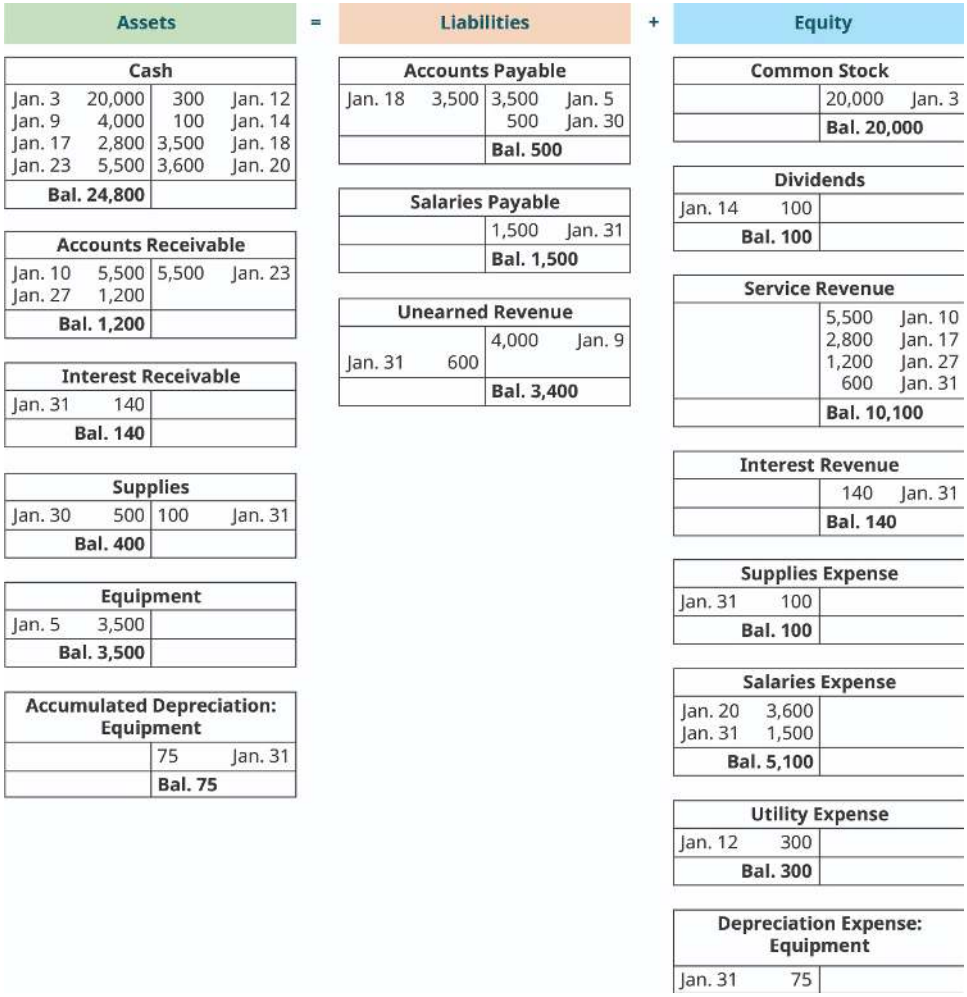


Figure 4.3.1: Printing Plus summary of T-accounts with Adjusting Entries. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The sum on the assets side of the accounting equation equals $29,965, found by adding together the final balances in each asset account (24,800 + 1,200 + 140 + 400 + 3,500 – 75). To find the total on the liabilities and equity side of the equation, we need to find the difference between debits and credits. Credits on the liabilities and equity side of the equation total $35,640 (500 + 1,500 + 3,400 + 20,000 + 10,100 + 140). Debits on the liabilities and equity side of the equation total $5,675 (100 + 100 + 5,100 + 300 + 75). The difference between $35,640 – $5,675 = $29,965. Thus, the equation remains balanced with $29,965 on the asset side and $29,965 on the liabilities and equity side. Now that we have the T-account information, and have confirmed the accounting equation remains balanced, we can create the adjusted trial balance in our sixth step in the accounting cycle.

Link to Learning

When posting any kind of journal entry to a general ledger, it is important to have an organized system for recording to avoid any account discrepancies and misreporting. To do this, companies can streamline their general ledger and remove any unnecessary processes or accounts. Check out this article "Encourage General Ledger Efficiency" from the *Journal of Accountancy* that discusses some strategies to improve general ledger efficiency.

Footnotes

- 2 U.S. Securities and Exchange Commission. "SEC Charges Mexico-Based Homebuilder in $3.3 Billion Accounting Fraud. Press Release." March 3, 2017. https://www.sec.gov/news/pressrelease/2017-60.html

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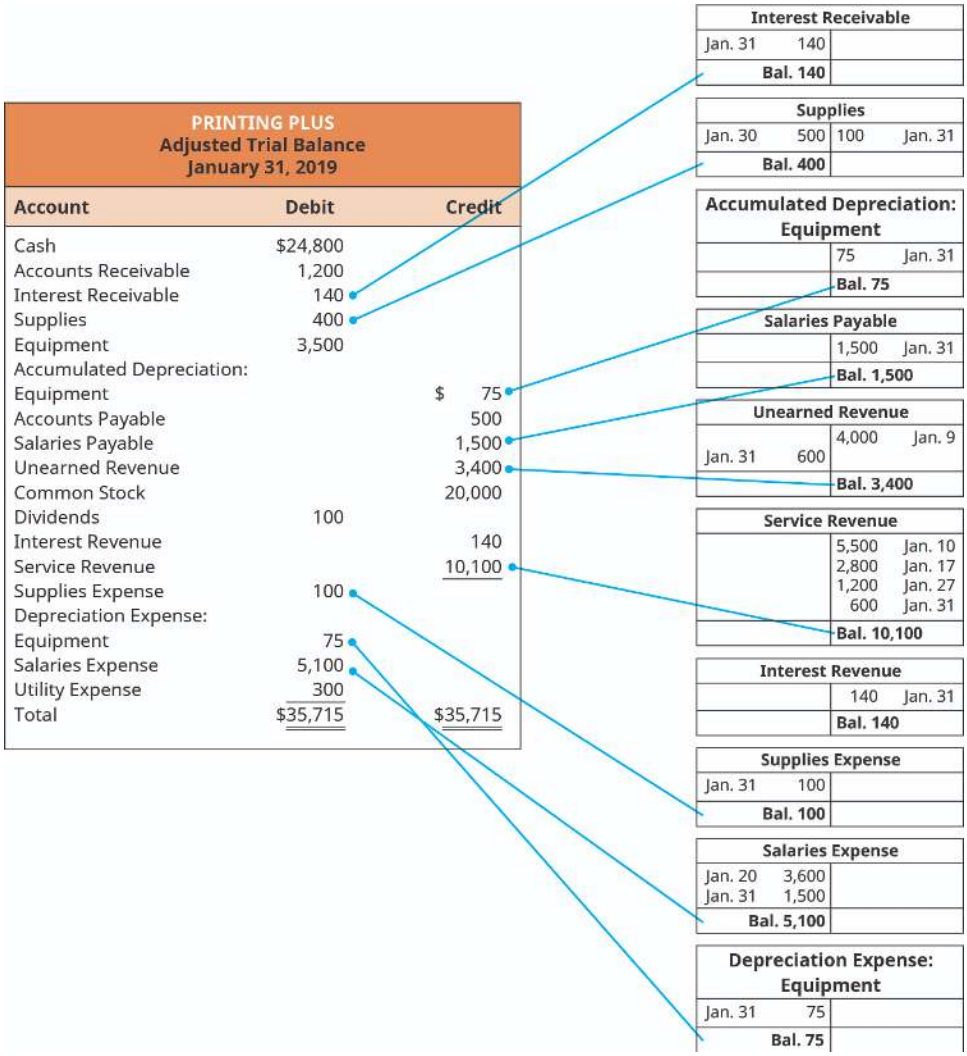
4.4: Use the Ledger Balances to Prepare an Adjusted Trial Balance

Once all of the adjusting entries have been posted to the general ledger, we are ready to start working on preparing the adjusted trial balance. Preparing an adjusted trial balance is the sixth step in the accounting cycle. An **adjusted trial balance** is a list of all accounts in the general ledger, including adjusting entries, which have nonzero balances. This trial balance is an important step in the accounting process because it helps identify any computational errors throughout the first five steps in the cycle.

As with the unadjusted trial balance, transferring information from T-accounts to the adjusted trial balance requires consideration of the final balance in each account. If the final balance in the ledger account (T-account) is a debit balance, you will record the total in the left column of the trial balance. If the final balance in the ledger account (T-account) is a credit balance, you will record the total in the right column.

Once all ledger accounts and their balances are recorded, the debit and credit columns on the adjusted trial balance are totaled to see if the figures in each column match. The final total in the debit column must be the same dollar amount that is determined in the final credit column.

Let's now take a look at the adjusted T-accounts and adjusted trial balance for Printing Plus to see how the information is transferred from these T-accounts to the adjusted trial balance. We only focus on those general ledger accounts that had balance adjustments.



PRINTING PLUS
Adjusted Trial Balance
January 31, 2019

Account	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Interest Receivable	140	
Supplies	400	
Equipment	3,500	
Accumulated Depreciation: Equipment		$ 75
Accounts Payable		500
Salaries Payable		1,500
Unearned Revenue		3,400
Common Stock		20,000
Dividends	100	
Interest Revenue		140
Service Revenue		10,100
Supplies Expense	100	
Depreciation Expense: Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total	$35,715	$35,715

For example, Interest Receivable is an adjusted account that has a final balance of $140 on the debit side. This balance is transferred to the Interest Receivable account in the debit column on the adjusted trial balance. Supplies ($400), Supplies Expense

($100), Salaries Expense ($5,100), and Depreciation Expense–Equipment ($75) also have debit final balances in their adjusted T-accounts, so this information will be transferred to the debit column on the adjusted trial balance. Accumulated Depreciation–Equipment ($75), Salaries Payable ($1,500), Unearned Revenue ($3,400), Service Revenue ($10,100), and Interest Revenue ($140) all have credit final balances in their T-accounts. These credit balances would transfer to the credit column on the adjusted trial balance.

Once all balances are transferred to the adjusted trial balance, we sum each of the debit and credit columns. The debit and credit columns both total $35,715, which means they are equal and in balance.

PRINTING PLUS
Adjusted Trial Balance
January 31, 2019

Account	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Interest Receivable	140	
Supplies	400	
Equipment	3,500	
Accumulated Depreciation: Equipment		$ 75
Accounts Payable		500
Salaries Payable		1,500
Unearned Revenue		3,400
Common Stock		20,000
Dividends	100	
Interest Revenue		140
Service Revenue		10,100
Supplies Expense	100	
Depreciation Expense: Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total	$35,715	$35,715

After the adjusted trial balance is complete, we next prepare the company's financial statements.

THINK IT THROUGH

Cash or Accrual Basis Accounting?

You are a new accountant at a salon. The salon had previously used cash basis accounting to prepare its financial records but now considers switching to an accrual basis method. You have been tasked with determining if this transition is appropriate.

When you go through the records you notice that this transition will greatly impact how the salon reports revenues and expenses. The salon will now report some revenues and expenses before it receives or pays cash.

How will change positively impact its business reporting? How will it negatively impact its business reporting? If you were the accountant, would you recommend the salon transition from cash basis to accrual basis?

CONCEPTS IN PRACTICE

Why Is the Adjusted Trial Balance So Important?

As you have learned, the adjusted trial balance is an important step in the accounting process. But outside of the accounting department, why is the adjusted trial balance important to the rest of the organization? An employee or customer may not

immediately see the impact of the adjusted trial balance on his or her involvement with the company.

The adjusted trial balance is the key point to ensure all debits and credits are in the general ledger accounts balance before information is transferred to financial statements. Financial statements drive decision-making for a business. Budgeting for employee salaries, revenue expectations, sales prices, expense reductions, and long-term growth strategies are all impacted by what is provided on the financial statements.

So if the company skips over creating an adjusted trial balance to make sure all accounts are balanced or adjusted, it runs the risk of creating incorrect financial statements and making important decisions based on inaccurate financial information.

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4.5: Prepare Financial Statements Using the Adjusted Trial Balance

Once you have prepared the adjusted trial balance, you are ready to prepare the financial statements. Preparing financial statements is the seventh step in the accounting cycle. Remember that we have four financial statements to prepare: an income statement, a statement of retained earnings, a balance sheet, and the statement of cash flows. These financial statements were introduced in Introduction to Financial Statements and Statement of Cash Flows dedicates in-depth discussion to that statement.

To prepare the financial statements, a company will look at the adjusted trial balance for account information. From this information, the company will begin constructing each of the statements, beginning with the income statement. Income statements will include all revenue and expense accounts. The statement of retained earnings will include beginning retained earnings, any net income (loss) (found on the income statement), and dividends. The balance sheet is going to include assets, contra assets, liabilities, and stockholder equity accounts, including ending retained earnings and common stock.

YOUR TURN

Magnificent Adjusted Trial Balance

MAGNIFICENT LANDSCAPING SERVICE
Adjusted Trial Balance
April 30, 2018

Account Title	Debit	Credit
Cash	$2,950	
Accounts Receivable	575	
Office Supplies	40	
Prepaid Insurance	240	
Equipment	2,500	
Accumulated Depreciation: Equipment		$ 35
Accounts Payable		28
Salaries Payable		420
Unearned Lawn Mowing Revenue		100
Common Stock		5,000
Dividends	1,000	
Lawn Mowing Revenue		2,350
Gas Expense	53	
Advertising Expense	35	
Depreciation Expense: Equipment	35	
Supplies Expense	85	
Salaries Expense	420	
	$7,933	$7,933

Go over the adjusted trial balance for Magnificent Landscaping Service. Identify which income statement each account will go on: Balance Sheet, Statement of Retained Earnings, or Income Statement.

Solution

Balance Sheet: Cash, accounts receivable, office supplied, prepaid insurance, equipment, accumulated depreciation (equipment), accounts payable, salaries payable, unearned lawn mowing revenue, and common stock. Statement of Retained Earnings: Dividends. Income Statement: Lawn mowing revenue, gas expense, advertising expense, depreciation expense (equipment), supplies expense, and salaries expense.

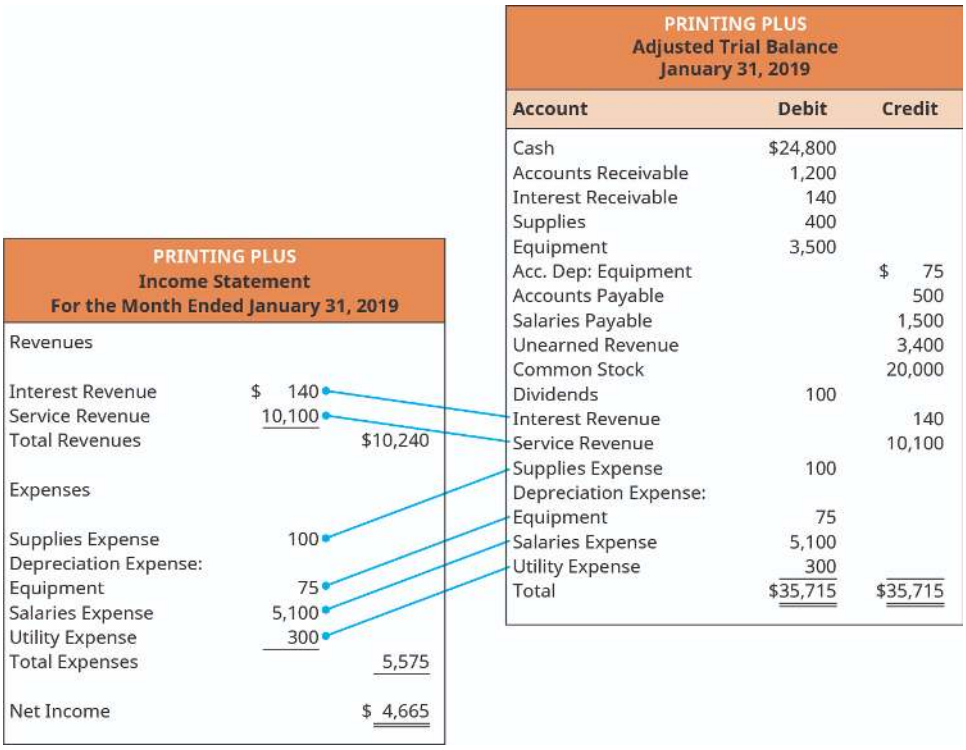
Income Statement

An income statement shows the organization's financial performance for a given period of time. When preparing an income statement, revenues will always come before expenses in the presentation. For Printing Plus, the following is its January 2019 Income Statement.

PRINTING PLUS
Income Statement
For the Month Ended January 31, 2019

Revenues		
Interest Revenue	$ 140	
Service Revenue	10,100	
Total Revenues		$10,240
Expenses		
Supplies Expense	100	
Depreciation Expense		
Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total Expenses		5,575
Net Income		$ 4,665

Revenue and expense information is taken from the adjusted trial balance as follows:



PRINTING PLUS
Income Statement
For the Month Ended January 31, 2019

Revenues		
Interest Revenue	$ 140	
Service Revenue	10,100	
Total Revenues		$10,240
Expenses		
Supplies Expense	100	
Depreciation Expense: Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total Expenses		5,575
Net Income		$ 4,665

PRINTING PLUS
Adjusted Trial Balance
January 31, 2019

Account	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Interest Receivable	140	
Supplies	400	
Equipment	3,500	
Acc. Dep: Equipment		$ 75
Accounts Payable		500
Salaries Payable		1,500
Unearned Revenue		3,400
Common Stock		20,000
Dividends	100	
Interest Revenue		140
Service Revenue		10,100
Supplies Expense	100	
Depreciation Expense: Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total	$35,715	$35,715

Total revenues are $10,240, while total expenses are $5,575. Total expenses are subtracted from total revenues to get a net income of $4,665. If total expenses were more than total revenues, Printing Plus would have a net loss rather than a net income. This net income figure is used to prepare the statement of retained earnings.

CONCEPTS IN PRACTICE

The Importance of Accurate Financial Statements

Financial statements give a glimpse into the operations of a company, and investors, lenders, owners, and others rely on the accuracy of this information when making future investing, lending, and growth decisions. When one of these statements is inaccurate, the financial implications are great.

For example, **Celadon Group** misreported revenues over the span of three years and elevated earnings during those years. The total overreported income was approximately $200–$250 million. This gross misreporting misled investors and led to the removal of **Celadon Group** from the New York Stock Exchange. Not only did this negatively impact **Celadon Group**'s stock price and lead to criminal investigations, but investors and lenders were left to wonder what might happen to their investment.

That is why it is so important to go through the detailed accounting process to reduce errors early on and hopefully prevent misinformation from reaching financial statements. The business must have strong internal controls and best practices to ensure the information is presented fairly.[3]

Statement of Retained Earnings

The statement of retained earnings (which is often a component of the statement of stockholders' equity) shows how the equity (or value) of the organization has changed over a period of time. The statement of retained earnings is prepared second to determine the ending retained earnings balance for the period. The statement of retained earnings is prepared before the balance sheet because the ending retained earnings amount is a required element of the balance sheet. The following is the Statement of Retained Earnings for Printing Plus.

PRINTING PLUS
Statement of Retained Earnings
For Month Ended January 31, 2019

Beginning Retained Earnings (Jan 1)	$
Net Income	4,665
	4,665
– Dividends	100
Ending Retained Earnings (Jan 31)	$4,565

Net income information is taken from the income statement, and dividends information is taken from the adjusted trial balance as follows.

PRINTING PLUS
Income Statement
For Month Ended January 31, 2019

Revenues		
Interest Revenue	$ 140	
Service Revenue	10,100	
Total Revenues		$10,240
Expenses		
Supplies Expense	100	
Depreciation Expense Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total Expenses		5,575
Net Income		$ 4,665

PRINTING PLUS
Statement of Retained Earnings
For Month Ended January 31, 2019

Beginning Retained Earnings (Jan 1)	$
Net Income	4,665
	4,665
– Dividends	100
Ending Retained Earnings (Jan 31)	$4,565

PRINTING PLUS
Adjusted Trial Balance
January 31, 2019

Account	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Interest Receivable	140	
Supplies	400	
Equipment	3,500	
Accumulated Depreciation Equipment		$ 75
Accounts Payable		500
Salaries Payable		1,500
Unearned Revenue		3,400
Common Stock		20,000
Dividends	100	
Interest Revenue		140
Service Revenue		10,100
Supplies Expense	100	
Depreciation Expense Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total	$35,715	$35,715

The statement of retained earnings always leads with beginning retained earnings. Beginning retained earnings carry over from the previous period's ending retained earnings balance. Since this is the first month of business for Printing Plus, there is no beginning retained earnings balance. Notice the net income of $4,665 from the income statement is carried over to the statement of retained earnings. Dividends are taken away from the sum of beginning retained earnings and net income to get the ending retained earnings balance of $4,565 for January. This ending retained earnings balance is transferred to the balance sheet.

LINK TO LEARNING

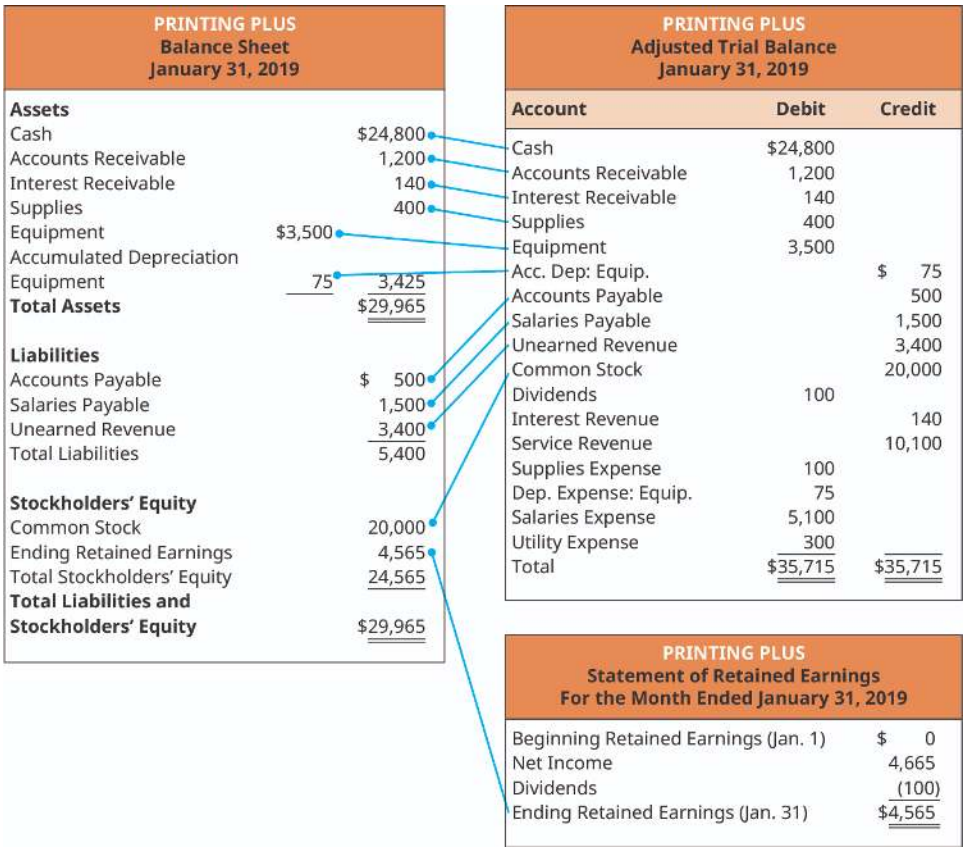
Concepts Statements give the Financial Accounting Standards Board (FASB) a guide to creating accounting principles and consider the limitations of financial statement reporting. See the FASB's "Concepts Statements" page to learn more.

Balance Sheet

The balance sheet is the third statement prepared after the statement of retained earnings and lists what the organization owns (*assets*), what it owes (*liabilities*), and what the shareholders control (*equity*) on a specific date. Remember that the balance sheet represents the accounting equation, where assets equal liabilities plus stockholders' equity. The following is the Balance Sheet for Printing Plus.

PRINTING PLUS Balance Sheet January 31, 2019		
Assets		
Cash		$24,800
Accounts Receivable		1,200
Interest Receivable		140
Supplies		400
Equipment	$3,500	
Accumulated Depreciation: Equipment	(75)	3,425
Total Assets		**$29,965**
Liabilities		
Accounts Payable		$ 500
Salaries Payable		1,500
Unearned Revenue		3,400
Total Liabilities		5,400
Stockholders' Equity		
Common Stock		20,000
Ending Retained Earnings		4,565
Total Stockholders' Equity		24,565
Total Liabilities and Stockholders' Equity		**$29,965**

Ending retained earnings information is taken from the statement of retained earnings, and asset, liability, and common stock information is taken from the adjusted trial balance as follows.



PRINTING PLUS
Balance Sheet
January 31, 2019

Assets		
Cash		$24,800
Accounts Receivable		1,200
Interest Receivable		140
Supplies		400
Equipment	$3,500	
Accumulated Depreciation Equipment	75	3,425
Total Assets		$29,965
Liabilities		
Accounts Payable		$ 500
Salaries Payable		1,500
Unearned Revenue		3,400
Total Liabilities		5,400
Stockholders' Equity		
Common Stock		20,000
Ending Retained Earnings		4,565
Total Stockholders' Equity		24,565
Total Liabilities and Stockholders' Equity		$29,965

PRINTING PLUS
Adjusted Trial Balance
January 31, 2019

Account	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Interest Receivable	140	
Supplies	400	
Equipment	3,500	
Acc. Dep: Equip.		$ 75
Accounts Payable		500
Salaries Payable		1,500
Unearned Revenue		3,400
Common Stock		20,000
Dividends	100	
Interest Revenue		140
Service Revenue		10,100
Supplies Expense	100	
Dep. Expense: Equip.	75	
Salaries Expense	5,100	
Utility Expense	300	
Total	$35,715	$35,715

PRINTING PLUS
Statement of Retained Earnings
For the Month Ended January 31, 2019

Beginning Retained Earnings (Jan. 1)	$ 0
Net Income	4,665
Dividends	(100)
Ending Retained Earnings (Jan. 31)	$4,565

Looking at the asset section of the balance sheet, Accumulated Depreciation–Equipment is included as a contra asset account to equipment. The accumulated depreciation ($75) is taken away from the original cost of the equipment ($3,500) to show the book value of equipment ($3,425). The accounting equation is balanced, as shown on the balance sheet, because total assets equal $29,965 as do the total liabilities and stockholders' equity.

There is a worksheet approach a company may use to make sure end-of-period adjustments translate to the correct financial statements.

IFRS CONNECTION

Financial Statements

Both US-based companies and those headquartered in other countries produce the same primary financial statements—Income Statement, Balance Sheet, and Statement of Cash Flows. The presentation of these three primary financial statements is largely similar with respect to what should be reported under US GAAP and IFRS, but some interesting differences can arise, especially when presenting the Balance Sheet.

While both US GAAP and IFRS require the same minimum elements that must be reported on the Income Statement, such as revenues, expenses, taxes, and net income, to name a few, publicly traded companies in the United States have further requirements placed by the SEC on the reporting of financial statements. For example, IFRS-based financial statements are only required to report the current period of information and the information for the prior period. US GAAP has no requirement for reporting prior periods, but the SEC requires that companies present one prior period for the Balance Sheet and three prior periods for the Income Statement. Under both IFRS and US GAAP, companies can report more than the minimum requirements.

Presentation differences are most noticeable between the two forms of GAAP in the Balance Sheet. Under US GAAP there is no specific requirement on how accounts should be presented. However, the SEC requires that companies present their Balance Sheet information in liquidity order, which means current assets listed first with cash being the first account presented, as it is a company's most liquid account. Liquidity refers to how easily an item can be converted to cash. IFRS requires that accounts be classified into current and noncurrent categories for both assets and liabilities, but no specific presentation format is required. Thus,

for US companies, the first category always seen on a Balance Sheet is Current Assets, and the first account balance reported is cash. This is not always the case under IFRS. While many Balance Sheets of international companies will be presented in the same manner as those of a US company, the lack of a required format means that a company can present noncurrent assets first, followed by current assets. The accounts of a Balance Sheet using IFRS might appear as shown here.

INTERNATIONAL COMPANY Balance Sheet December 31, 2020		
Assets		
Noncurrent Assets		
Buildings	$1,500,000	
Equipment	800,000	
Total Noncurrent Assets		$2,300,000
Current Assets		
Investments	$ 100,000	
Inventory	500,000	
Accounts Receivable	400,000	
Cash	200,000	
Total Current Assets		1,200,000
Total Assets		$3,500,000
Share Equity and Liabilities		
Share Equity		
Share Capital	$ 550,000	
Retained Earnings	750,000	
Total Share Equity		$1,300,000
Long-term Liabilities		
Pensions	$ 875,000	
Note Payable	$ 225,000	
Total Long-term Liabilities		1,200,000
Current Liabilities		
Short-term Note Payable	$ 650,000	
Accounts Payable	$ 350,000	
Total Current Liabilities		1,000,000
Total Share Equity and Liabilities		$3,500,000

Review the annual report of Stora Enso which is an international company that utilizes the illustrated format in presenting its Balance Sheet, also called the Statement of Financial Position. The Balance Sheet is found on page 31 of the report.

Some of the biggest differences that occur on financial statements prepared under US GAAP versus IFRS relate primarily to measurement or timing issues: in other words, how a transaction is valued and when it is recorded.

Ten-Column Worksheets

The **10-column worksheet** is an all-in-one spreadsheet showing the transition of account information from the trial balance through the financial statements. Accountants use the 10-column worksheet to help calculate end-of-period adjustments. Using a 10-column worksheet is an optional step companies may use in their accounting process.

Here is a picture of a 10-column worksheet for Printing Plus.

PRINTING PLUS										
10-Column Worksheet										
For the Month Ended January, 2019										
Account Name	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	24,800				24,800				24,800	
Accounts Receivable	1,200				1,200				1,200	
Interest Receivable			140		140				140	
Supplies	500			100	400				400	
Equipment	3,500				3,500				3,500	
Accumulated Depreciation: Equipment				75		75				75
Accounts Payable		500				500				500
Salaries Payable				1,500		1,500				1,500
Unearned Revenue		4,000	600			3,400				3,400
Common Stock		20,000				20,000				20,000
Dividends	100				100				100	
Interest Revenue				140		140		140		
Service Revenue		9,500		600		10,100		10,100		
Supplies Expense			100		100		100			
Depreciation Expense: Equipment			75		75		75			
Salaries Expense	3,600		1,500		5,100		5,100			
Utility Expense	300				300		300			
Totals	34,000	34,000	2,415	2,415	35,715	35,715	5,575	10,240	30,140	25,475
Net Income							4,665			4,665
							10,240	10,240	30,140	30,140

There are five sets of columns, each set having a column for debit and credit, for a total of 10 columns. The five column sets are the trial balance, adjustments, adjusted trial balance, income statement, and the balance sheet. After a company posts its day-to-day journal entries, it can begin transferring that information to the trial balance columns of the 10-column worksheet.

PRINTING PLUS		
10-Column Worksheet		
For the Month Ended January, 2019		
Account Name	**Trial Balance**	
	Debit	**Credit**
Cash	24,800	
Accounts Receivable	1,200	
Interest Receivable		
Supplies	500	
Equipment	3,500	
Accumulated Depreciation: Equipment		
Accounts Payable		500
Salaries Payable		
Unearned Revenue		4,000
Common Stock		20,000
Dividends	100	
Interest Revenue		
Service Revenue		9,500
Supplies Expense		
Depreciation Expense: Equipment		
Salaries Expense	3,600	
Utility Expense	300	
Totals	34,000	34,000
Net Income		

The trial balance information for Printing Plus is shown previously. Notice that the debit and credit columns both equal $34,000. If we go back and look at the trial balance for Printing Plus, we see that the trial balance shows debits and credits equal to $34,000.

PRINTING PLUS Unadjusted Trial Balance January 31, 2019		
Account	**Debit**	**Credit**
Cash	$24,800	
Accounts Receivable	1,200	
Supplies	500	
Equipment	3,500	
Accounts Payable		$ 500
Unearned Revenue		4,000
Common Stock		20,000
Dividends	100	
Service Revenue		9,500
Salaries Expense	3,600	
Utility Expense	300	
Total	$34,000	$34,000

Once the trial balance information is on the worksheet, the next step is to fill in the adjusting information from the posted adjusted journal entries.

PRINTING PLUS				
10-Column Worksheet				
For the Month Ended January, 2019				
Account Name	**Trial Balance**		**Adjustments**	
	Debit	**Credit**	**Debit**	**Credit**
Cash	24,800			
Accounts Receivable	1,200			
Interest Receivable			140	
Supplies	500			100
Equipment	3,500			
Accumulated Depreciation: Equipment				75
Accounts Payable		500		
Salaries Payable				1,500
Unearned Revenue		4,000	600	
Common Stock		20,000		
Dividends	100			
Interest Revenue				140
Service Revenue		9,500		600
Supplies Expense			100	
Depreciation Expense: Equipment			75	
Salaries Expense	3,600		1,500	
Utility Expense	300			
Totals	34,000	34,000	2,415	2,415
Net Income				

The adjustments total of $2,415 balances in the debit and credit columns.

The next step is to record information in the adjusted trial balance columns.

PRINTING PLUS						
10-Column Worksheet						
For the Month Ended January, 2019						
Account Name	Trial Balance		Adjustments		Adjusted Trial Balance	
	Debit	Credit	Debit	Credit	Debit	Credit
Cash	24,800				24,800	
Accounts Receivable	1,200				1,200	
Interest Receivable			140		140	
Supplies	500			100	400	
Equipment	3,500				3,500	
Accumulated Depreciation: Equipment				75		75
Accounts Payable		500				500
Salaries Payable				1,500		1,500
Unearned Revenue		4,000	600			3,400
Common Stock		20,000				20,000
Dividends	100				100	
Interest Revenue				140		140
Service Revenue		9,500		600		10,100
Supplies Expense			100		100	
Depreciation Expense: Equipment			75		75	
Salaries Expense	3,600		1,500		5,100	
Utility Expense	300				300	
Totals	34,000	34,000	2,415	2,415	35,715	35,715
Net Income						

To get the numbers in these columns, you take the number in the trial balance column and add or subtract any number found in the adjustment column. For example, Cash shows an unadjusted balance of $24,800. There is no adjustment in the adjustment columns, so the Cash balance from the unadjusted balance column is transferred over to the adjusted trial balance columns at $24,800. Interest Receivable did not exist in the trial balance information, so the balance in the adjustment column of $140 is transferred over to the adjusted trial balance column.

Unearned revenue had a credit balance of $4,000 in the trial balance column, and a debit adjustment of $600 in the adjustment column. Remember that adding debits and credits is like adding positive and negative numbers. This means the $600 debit is subtracted from the $4,000 credit to get a credit balance of $3,400 that is translated to the adjusted trial balance column.

Service Revenue had a $9,500 credit balance in the trial balance column, and a $600 credit balance in the Adjustments column. To get the $10,100 credit balance in the adjusted trial balance column requires adding together both credits in the trial balance and adjustment columns (9,500 + 600). You will do the same process for all accounts. Once all accounts have balances in the adjusted trial balance columns, add the debits and credits to make sure they are equal. In the case of Printing Plus, the balances equal $35,715. If you check the adjusted trial balance for Printing Plus, you will see the same equal balance is present.

PRINTING PLUS Adjusted Trial Balance January 31, 2019		
Account	**Debit**	**Credit**
Cash	$24,800	
Accounts Receivable	1,200	
Interest Receivable	140	
Supplies	400	
Equipment	3,500	
Accumulated Depreciation: Equipment		$ 75
Accounts Payable		500
Salaries Payable		1,500
Unearned Revenue		3,400
Common Stock		20,000
Dividends	100	
Interest Revenue		140
Service Revenue		10,100
Supplies Expense	100	
Depreciation Expense: Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total	$35,715	$35,715

Next you will take all of the figures in the adjusted trial balance columns and carry them over to *either* the income statement columns or the balance sheet columns.

YOUR TURN

Income Statement and Balance Sheet

MAGNIFICENT LANDSCAPING SERVICE										
Worksheet										
April 30, 2018										
Account Name	Trial Balance		Adjustments		Adjusted Trial		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	2,950				2,950					
Accounts Receivable	575				575					
Office Supplies	85			(c) 45	40					
Prepaid Insurance	240				240					
Equipment	2,540			(b) 40	2,500					
Accounts Payable		28				28				
Unearned Lawn Mowing Revenue		200	(d) 100			100				
Common Stock		5,000				5,000				
Dividends	1,000				1,000					
Lawn Mowing Revenue		2,250		(d) 100		2,350				
Gas Expense	53				53					
Advertising Expense	35				35					
	7,478	7,478								
Depreciation Expense: Equipment			(a) 35		35					
Accumulated Depreciating: Equipment				(a) 35		35				
Supplies Expense			(b) 40 (c) 45		85					
Salaries Expense			(e) 420		420					
Salaries Payable				(e) 420		420				
			640	640	7,933	7,933				

Take a couple of minutes and fill in the income statement and balance sheet columns. Total them when you are done. Do not panic when they do not balance. They will not balance at this time.

Solution

MAGNIFICENT LANDSCAPING SERVICE										
Worksheet										
April 30, 2018										
Account Name	Trial Balance		Adjustments		Adjusted Trial		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	2,950				2,950				2,950	
Accounts Receivable	575				575				575	
Office Supplies	85			(c) 45	40				40	
Prepaid Insurance	240				240				240	
Equipment	2,540			(b) 40	2,500				2,500	
Accounts Payable		28				28				28
Unearned Lawn Mowing Revenue		200	(d) 100			100				100
Common Stock		5,000				5,000				5,000
Dividends	1,000				1,000				1,000	
Lawn Mowing Revenue		2,250		(d) 100		2,350		2,350		
Gas Expense	53				53		53			
Advertising Expense	35				35		35			
	7,478	7,478								
Depreciation Expense: Equipment			(a) 35		35		35			
Accumulated Depreciation: Equipment				(a) 35		35				35
Supplies Expense			(b) 40 (c) 45		85		85			
Salaries Expense			(e) 420		420		420			
Salaries Payable				(e) 420		420				420
			640	640	7,933	7,933	628	2,350	7,305	5,583

Every other account title has been highlighted to help your eyes focus better while checking your work.

Looking at the income statement columns, we see that all revenue and expense accounts are listed in either the debit or credit column. This is a reminder that the income statement itself does not organize information into debits and credits, but we do use this presentation on a 10-column worksheet.

PRINTING PLUS								
10-column Worksheet								
For the Month Ended January, 2019								
Account Name	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	24,800				24,800			
Accounts Receivable	1,200				1,200			
Interest Receivable			140		140			
Supplies	500			100	400			
Equipment	3,500				3,500			
Accumulated Depreciation: Equipment				75		75		
Accounts Payable		500				500		
Salaries Payable				1,500		1,500		
Unearned Revenue		4,000	600			3,400		
Common Stock		20,000				20,000		
Dividends	100				100			
Interest Revenue				140		140		140
Service Revenue		9,500		600		10,100		10,100
Supplies Expense			100		100		100	
Depreciation Expense: Equipment			75		75		75	
Salaries Expense	3,600		1,500		5,100		5,100	
Utility Expense	300				300		300	
Totals	34,000	34,000	2,415	2,415	35,715	35,715	5,575	10,240
Net Income							4,665	
							10,240	10,240

You will notice that when debit and credit income statement columns are totaled, the balances are not the same. The debit balance equals $5,575, and the credit balance equals $10,240. Why do they not balance?

If the debit and credit columns equal each other, it means the expenses equal the revenues. This would happen if a company broke even, meaning the company did not make or lose any money. If there is a difference between the two numbers, that difference is the amount of net income, or net loss, the company has earned.

In the Printing Plus case, the credit side is the higher figure at $10,240. The credit side represents revenues. This means revenues exceed expenses, thus giving the company a net income. If the debit column were larger, this would mean the expenses were larger than revenues, leading to a net loss. You want to calculate the net income and enter it onto the worksheet. The $4,665 net income is found by taking the credit of $10,240 and subtracting the debit of $5,575. When entering net income, it should be written in the column with the lower total. In this instance, that would be the debit side. You then add together the $5,575 and $4,665 to get a total of $10,240. This balances the two columns for the income statement. If you review the income statement, you see that net income is in fact $4,665.

PRINTING PLUS Income Statement For the Month Ended January 31, 2019		
Revenues		
Interest Revenue	$ 140	
Service Revenue	10,100	
Total Revenues		$10,240
Expenses		
Supplies Expense	100	
Depreciation Expense: Equip.	75	
Salaries Expense	5,100	
Utility Expense	300	
Total Expenses		5,575
Net Income		$ 4,665

PRINTING PLUS										
10-Column Worksheet										
For the Month Ended January, 2019										
Account Name	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	24,800				24,800				24,800	
Accounts Receivable	1,200				1,200				1,200	
Interest Receivable			140		140				140	
Supplies	500			100	400				400	
Equipment	3,500				3,500				3,500	
Acc. Dep: Equip.				75		75				75
Accounts Payable		500				500				500
Salaries Payable				1,500		1,500				1,500
Unearned Revenue		4,000	600			3,400				3,400
Common Stock		20,000				20,000				20,000
Dividends	100				100				100	
Interest Revenue				140		140		140		
Service Revenue		9,500		600		10,100		10,100		
Supplies Expense			100		100		100			
Dep. Exp: Equip.			75		75		75			
Salaries Expense	3,600		1,500		5,100		5,100			
Utility Expense	300				300		300			
Totals	34,000	34,000	2,415	2,415	35,715	35,715	5,575	10,240	30,140	25,475
Net Income							4,665			4,665
							10,240	10,240	30,140	30,140

We now consider the last two columns for the balance sheet. In these columns we record all asset, liability, and equity accounts.

When adding the total debits and credits, you notice they do not balance. The debit column equals $30,140, and the credit column equals $25,475. How do we get the columns to balance?

Treat the income statement and balance sheet columns like a double-entry accounting system, where if you have a debit on the income statement side, you must have a credit equaling the same amount on the credit side. In this case we added a debit of $4,665 to the income statement column. This means we must add a credit of $4,665 to the balance sheet column. Once we add the $4,665 to the credit side of the balance sheet column, the two columns equal $30,140.

You may notice that dividends are included in our 10-column worksheet balance sheet columns even though this account is not included on a balance sheet. So why is it included here? There is actually a very good reason we put dividends in the balance sheet columns.

When you prepare a balance sheet, you must first have the most updated retained earnings balance. To get that balance, you take the beginning retained earnings balance + net income – dividends. If you look at the worksheet for Printing Plus, you will notice there is no retained earnings account. That is because they just started business this month and have no beginning retained earnings balance.

If you look in the balance sheet columns, we do have the new, up-to-date retained earnings, but it is spread out through two numbers. You have the dividends balance of $100 and net income of $4,665. If you combine these two individual numbers ($4,665 – $100), you will have your updated retained earnings balance of $4,565, as seen on the statement of retained earnings.

PRINTING PLUS Statement of Retained Earnings For the Month Ended January 31, 2019	
Beginning Retained Earnings (Jan. 1)	$ 0
Net Income	4,665
Dividends	(100)
Ending Retained Earnings (Jan. 31)	$4,565

You will not see a similarity between the 10-column worksheet and the balance sheet, because the 10-column worksheet is categorizing all accounts by the type of balance they have, debit or credit. This leads to a final balance of $30,140.

The balance sheet is classifying the accounts by type of accounts, assets and contra assets, liabilities, and equity. This leads to a final balance of $29,965. Even though they are the same numbers in the accounts, the totals on the worksheet and the totals on the balance sheet will be different because of the different presentation methods.

LINK TO LEARNING

Publicly traded companies release their financial statements quarterly for open viewing by the general public, which can usually be viewed on their websites. One such company is Alphabet, Inc. (trade name Google). Take a look at Alphabet's quarter ended March 31, 2018, financial statements from the SEC Form 10-Q.

YOUR TURN

Frank's Net Income and Loss

What amount of net income/loss does Frank have?

FRANK INVESTMENT ADVISERS										
Work Sheet										
For the Month Ended December 31, 2016										
Account Name	Trial Balance		Adjustments		Adjusted Trial		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	28,000				28,000				28,000	
Accounts Receivable	46,000				46,000				46,000	
Office Supplies	5,000			(b) 1,000	4,000				4,000	
Equipment	28,000				28,000				28,000	
Accumulated Depreciation-Equipment		14,000		(c) 2,800		16,800				16,800
Accounts Payable		16,000				16,000				16,000
Salaries Payable				(d) 2,000		2,000				2,000
Unearned Revenue		2,000	(a) 100			1,900				1,900
Notes Payable (Long Term)		23,000				23,000				23,000
Common Stock		15,000				15,000				15,000
Retained Earnings		52,000				52,000				52,000
Dividends	20,000				20,000				20,000	
Service Revenue		55,000		(a) 100		55,100		55,100		
Insurance Expense	3,000				3,000		3,000			
Salaries Expense	35,000		(d) 2,000		37,000		37,000			
Supplies Expense			(b) 1,000		1,000		1,000			
Interest Expense	4,000				4,000		4,000			
Rent Expense	8,000				8,000		8,000			
Deprecation Expense-Equipment			(c) 2,800		2,800		2,800			
	177,000	177,000	5,900	5,900	181,800	181,800	55,800	55,100	126,000	126,700

Solution

https://biz.libretexts.org/@go/page/62187

FRANK INVESTMENT ADVISERS										
Worksheet										
For the Month Ended December 31, 2016										
Account Name	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	24,800				28,000				24,800	
Accounts Receivable	46,000				46,000				46,000	
Office Supplies	5,000			1,000 b	4,000				4,000	
Equipment	28,000				28,000				28,000	
Accumulated Depreciation: Equipment		14,000		2,800 c		16,800				16,800
Accounts Payable		16,000				16,000				16,000
Salaries Payable				2,000 d		2,000				2,000
Unearned Revenue		2,000	a 100			1,900				1,900
Notes Payable (long term)		23,000				23,000				23,000
Common Stock		15,000				15,000				15,000
Retained Earnings		52,000				52,000				52,000
Dividends	20,000				20,000				20,000	
Service Revenue		55,000		100 a		55,100		55,100		
Insurance Expense	3,000				3,000		3,000			
Salaries Expense	35,000		d 2,000		37,000		37,000			
Supplies Expense			b 1,000		1,000		1,000			
Interest Expense	4,000				4,000		4,000			
Rent Expense	8,000				8,000		8,000			
Depreciation Expense: Equipment			c 2,800		2,800		2,800			
	177,000	177,000	5,900	5,900	181,800	181,800	55,800	55,100	126,000	126,700
Net Loss								**700**		
							55,800	55,800		

In Completing the Accounting Cycle, we continue our discussion of the accounting cycle, completing the last steps of journalizing and posting closing entries and preparing a post-closing trial balance.

Footnotes

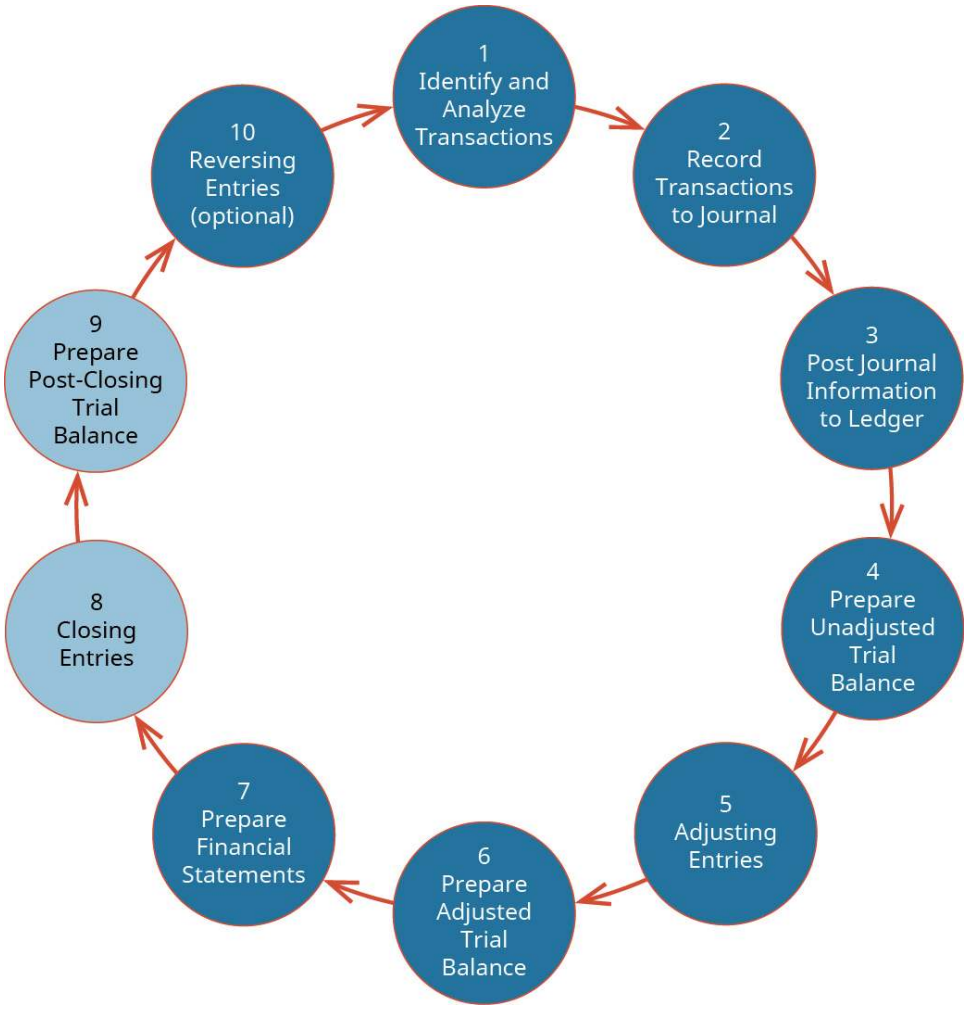
- 3 James Jaillet. “Celadon under Criminal Investigation over Financial Statements.” *Commercial Carrier Journal*. July 25, 2018. https://www.ccjdigital.com/200520-2/

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4.6: Describe and Prepare Closing Entries for a Business

In this chapter, we complete the final steps (steps 8 and 9) of the accounting cycle, the closing process. You will notice that we do not cover step 10, reversing entries. This is an optional step in the accounting cycle that you will learn about in future courses. Steps 1 through 4 were covered in Analyzing and Recording Transactions and Steps 5 through 7 were covered in The Adjustment Process.



Our discussion here begins with journalizing and posting the closing entries (Figure 5.2). These posted entries will then translate into a **post-closing trial balance**, which is a trial balance that is prepared after all of the closing entries have been recorded.

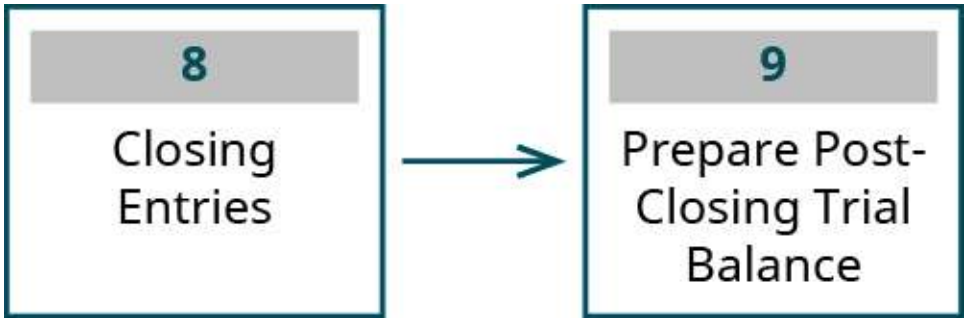


Figure 5.2 Final steps in the accounting cycle. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

THINK IT THROUGH

Should You Compromise to Please Your Supervisor?

You are an accountant for a small event-planning business. The business has been operating for several years but does not have the resources for accounting software. This means you are preparing all steps in the accounting cycle by hand.

It is the end of the month, and you have completed the post-closing trial balance. You notice that there is still a service revenue account balance listed on this trial balance. Why is it considered an error to have a revenue account on the post-closing trial balance? How do you fix this error?

Introduction to the Closing Entries

Companies are required to close their books at the end of each fiscal year so that they can prepare their annual financial statements and tax returns. However, most companies prepare monthly financial statements and close their books annually, so they have a clear picture of company performance during the year, and give users timely information to make decisions.

Closing entries prepare a company for the next accounting period by clearing any outstanding balances in certain accounts that should not transfer over to the next period. **Closing**, or clearing the balances, means returning the account to a zero balance. Having a zero balance in these accounts is important so a company can compare performance across periods, particularly with income. It also helps the company keep thorough records of account balances affecting retained earnings. Revenue, expense, and dividend accounts affect retained earnings and are closed so they can accumulate new balances in the next period, which is an application of the time period assumption.

To further clarify this concept, balances are closed to assure all revenues and expenses are recorded in the proper period and then start over the following period. The revenue and expense accounts should start at zero each period, because we are measuring how much revenue is earned and expenses incurred during the period. However, the cash balances, as well as the other balance sheet accounts, are carried over from the end of a current period to the beginning of the next period.

For example, a store has an inventory account balance of $100,000. If the store closed at 11:59 p.m. on January 31, 2019, then the inventory balance when it reopened at 12:01 a.m. on February 1, 2019, would still be $100,000. The balance sheet accounts, such as inventory, would carry over into the next period, in this case February 2019.

The accounts that need to start with a clean or $0 balance going into the next accounting period are revenue, income, and any dividends from January 2019. To determine the income (profit or loss) from the month of January, the store needs to close the income statement information from January 2019. Zeroing January 2019 would then enable the store to calculate the income (profit or loss) for the next month (February 2019), instead of merging it into January's income and thus providing invalid information solely for the month of February.

However, if the company also wanted to keep year-to-date information from month to month, a separate set of records could be kept as the company progresses through the remaining months in the year. For our purposes, assume that we are closing the books at the end of each month unless otherwise noted.

Let's look at another example to illustrate the point. Assume you own a small landscaping business. It is the end of the year, December 31, 2018, and you are reviewing your financials for the entire year. You see that you earned $120,000 this year in revenue and had expenses for rent, electricity, cable, internet, gas, and food that totaled $70,000.

You also review the following information:

	Value December 31
Bank account balance	$ 7,500
Electronics	3,250
Car	26,545
Furniture	7,200
Credit card balances	9,270
Bank loans	48,350

The next day, January 1, 2019, you get ready for work, but before you go to the office, you decide to review your financials for 2019. What are your year-to-date earnings? So far, you have not worked at all in the current year. What are your total expenses for rent, electricity, cable and internet, gas, and food for the current year? You have also not incurred any expenses yet for rent, electricity, cable, internet, gas or food. This means that the current balance of these accounts is zero, because they were closed on December 31, 2018, to complete the annual accounting period.

Next, you review your assets and liabilities. What is your current bank account balance? What is the current book value of your electronics, car, and furniture? What about your credit card balances and bank loans? Are the value of your assets and liabilities now zero because of the start of a new year? Your car, electronics, and furniture did not suddenly lose all their value, and unfortunately, you still have outstanding debt. Therefore, these accounts still have a balance in the new year, because they are not closed, and the balances are carried forward from December 31 to January 1 to start the new annual accounting period.

This is no different from what will happen to a company at the end of an accounting period. A company will see its revenue and expense accounts set back to zero, but its assets and liabilities will maintain a balance. Stockholders' equity accounts will also maintain their balances. In summary, the accountant resets the temporary accounts to zero by transferring the balances to permanent accounts.

LINK TO LEARNING

Understanding the accounting cycle and preparing trial balances is a practice valued internationally. The Philippines Center for Entrepreneurship and the government of the Philippines hold regular seminars going over this cycle with small business owners. They are also transparent with their internal trial balances in several key government offices. Check out this article talking about the seminars on the accounting cycle and this public pre-closing trial balance presented by the Philippines Department of Health.

Temporary and Permanent Accounts

All accounts can be classified as either permanent (real) or temporary (nominal) (Figure 5.3).

Permanent (real) accounts are accounts that transfer balances to the next period and include balance sheet accounts, such as assets, liabilities, and stockholders' equity. These accounts will not be set back to zero at the beginning of the next period; they will keep their balances. Permanent accounts are not part of the closing process.

Temporary (nominal) accounts are accounts that are closed at the end of each accounting period, and include income statement, dividends, and income summary accounts. The new account, Income Summary, will be discussed shortly. These accounts are temporary because they keep their balances during the current accounting period and are set back to zero when the period ends. Revenue and expense accounts are closed to Income Summary, and Income Summary and Dividends are closed to the permanent account, Retained Earnings.

	Financial Statement Presented On			Account	
Type of Account	Income Statement	Statement of Retained Earnings	Balance Sheet	Temporary	Permanent
Asset			X		X
Contra Asset			X		X
Liability			X		X
Stockholders' Equity			X		X
Dividends*		X		X	
Revenues	X			X	
Expenses	X			X	

*Contra Stockholders' Equity

Figure 5.3 Location Chart for Financial Statement Accounts. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The **income summary** account is an intermediary between revenues and expenses, and the Retained Earnings account. It stores all of the closing information for revenues and expenses, resulting in a "summary" of income or loss for the period. The balance in the Income Summary account equals the net income or loss for the period. This balance is then transferred to the Retained Earnings account.

Income summary is a nondefined account category. This means that it is not an asset, liability, stockholders' equity, revenue, or expense account. The account has a zero balance throughout the entire accounting period until the closing entries are prepared. Therefore, it will not appear on any trial balances, including the adjusted trial balance, and will not appear on any of the financial statements.

You might be asking yourself, "is the Income Summary account even necessary?" Could we just close out revenues and expenses directly into retained earnings and not have this extra temporary account? We could do this, but by having the Income Summary account, you get a balance for net income a second time. This gives you the balance to compare to the income statement, and allows you to double check that all income statement accounts are closed and have correct amounts. If you put the revenues and expenses directly into retained earnings, you will not see that check figure. No matter which way you choose to close, the same final balance is in retained earnings.

YOUR TURN

Permanent versus Temporary Accounts

Following is a list of accounts. State whether each account is a permanent or temporary account.

A. rent expense
B. unearned revenue
C. accumulated depreciation, vehicle
D. common stock
E. fees revenue
F. dividends
G. prepaid insurance
H. accounts payable

Solution

A, E, and F are temporary; B, C, D, G, and H are permanent.

Let's now look at how to prepare closing entries.

Journalizing and Posting Closing Entries

The eighth step in the accounting cycle is preparing closing entries, which includes journalizing and posting the entries to the ledger.

Four entries occur during the closing process. The first entry closes revenue accounts to the Income Summary account. The second entry closes expense accounts to the Income Summary account. The third entry closes the Income Summary account to Retained

Earnings. The fourth entry closes the Dividends account to Retained Earnings. The information needed to prepare closing entries comes from the adjusted trial balance.

Let's explore each entry in more detail using Printing Plus's information from Analyzing and Recording Transactions and The Adjustment Process as our example. The Printing Plus adjusted trial balance for January 31, 2019, is presented in Figure 5.4.

PRINTING PLUS
Adjusted Trial Balance
For the Month Ended January 31, 2019

Account Title	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Interest Receivable	140	
Supplies	400	
Equipment	3,500	
Accumulated Depreciation: Equipment		$ 75
Accounts Payable		500
Salaries Payable		1,500
Unearned Revenue		3,400
Common Stock		20,000
Dividends	100	
Interest Revenue		140
Service Revenue		10,100
Supplies Expense	100	
Depreciation Expense: Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total	$35,715	$35,715

Figure 5.4 Adjusted Trial Balance for Printing Plus. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The first entry requires revenue accounts close to the Income Summary account. To get a zero balance in a revenue account, the entry will show a debit to revenues and a credit to Income Summary. Printing Plus has $140 of interest revenue and $10,100 of service revenue, each with a credit balance on the adjusted trial balance. The closing entry will debit both interest revenue and service revenue, and credit Income Summary.

JOURNAL

Date	Account	Debit	Credit
Jan. 31, 2019	Interest Revenue	140	
	Service Revenue	10,100	
	Income Summary		10,240
	To close revenue accounts to Income Summary		

The T-accounts after this closing entry would look like the following.

Service Revenue			
		5,500	Jan. 10
		2,800	Jan. 17
		1,200	Jan. 27
		600	Jan. 31
Jan. 31 Cls.	10,100	10,100	
		0	

Interest Revenue			
		140	Jan. 31
Jan. 31 Cls.	140	140	
		0	

Income Summary		
	10,240	Jan. 31
		Cls. #1
	Bal.	**10,240**

Notice that the balances in interest revenue and service revenue are now zero and are ready to accumulate revenues in the next period. The Income Summary account has a credit balance of $10,240 (the revenue sum).

The second entry requires expense accounts close to the Income Summary account. To get a zero balance in an expense account, the entry will show a credit to expenses and a debit to Income Summary. Printing Plus has $100 of supplies expense, $75 of depreciation expense–equipment, $5,100 of salaries expense, and $300 of utility expense, each with a debit balance on the adjusted trial adjusted trial balance. The closing entry will credit Supplies Expense, Depreciation Expense–Equipment, Salaries Expense, and Utility Expense, and debit Income Summary.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Income Summary	5,575	
	Supplies Expense		100
	Depreciation Expense: Equipment		75
	Salaries Expense		5,100
	Utility Expense		300
	To close expense accounts to Income Summary		

The T-accounts after this closing entry would look like the following.

Supplies Expense			
Jan. 31	100		
	100	100	Jan. 31 Cls.
	0		

Salaries Expense			
Jan. 20	3,600		
Jan. 31	1,500		
	5,100	5,100	Jan. 31 Cls.
	0		

Depreciation Expense: Equipment			
Jan. 31	75		
	75	75	Jan. 31 Cls.
	0		

Utility Expense			
Jan. 12	300		
	300	300	Jan. 31 Cls.
	0		

Income Summary					
Jan. 31	Cls. #2	5,575	10,240	Jan. 31	Cls. #1
			Bal. 4,665		

Notice that the balances in the expense accounts are now zero and are ready to accumulate expenses in the next period. The Income Summary account has a new credit balance of $4,665, which is the difference between revenues and expenses (Figure 5.5). The balance in Income Summary is the same figure as what is reported on Printing Plus's Income Statement.

PRINTING PLUS Income Statement For the Month Ended January 31, 2019		
Revenues		
Interest Revenue	$ 140	
Service Revenue	10,100	
Total Revenues		$10,240
Expenses		
Supplies Expense	100	
Depreciation Expense: Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total Expenses		5,575
Net Income		$ 4,665

Figure 5.5 Income Statement for Printing Plus. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Why are these two figures the same? The income statement summarizes your income, as does income summary. If both summarize your income in the same period, then they must be equal. If they do not match, then you have an error.

The third entry requires Income Summary to close to the Retained Earnings account. To get a zero balance in the Income Summary account, there are guidelines to consider.

- If the balance in Income Summary before closing is a credit balance, you will debit Income Summary and credit Retained Earnings in the closing entry. This situation occurs when a company has a net income.
- If the balance in Income Summary before closing is a debit balance, you will credit Income Summary and debit Retained Earnings in the closing entry. This situation occurs when a company has a net loss.

Remember that net income will increase retained earnings, and a net loss will decrease retained earnings. The Retained Earnings account increases on the credit side and decreases on the debit side.

Printing Plus has a $4,665 credit balance in its Income Summary account before closing, so it will debit Income Summary and credit Retained Earnings.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Income Summary	4,665	
	Retained Earnings		4,665
	To close Income Summary to Retained Earnings		

The T-accounts after this closing entry would look like the following.

Retained Earnings	
	4,665 Jan. 31 Cls. #3
	Bal. 4,665

Income Summary			
Jan. 31 Cls. #2	5,575	10,240	Jan. 31 Cls. #1
Jan. 31 Cls.	4,665	4,665	
		0	

Notice that the Income Summary account is now zero and is ready for use in the next period. The Retained Earnings account balance is currently a credit of $4,665.

The fourth entry requires Dividends to close to the Retained Earnings account. Remember from your past studies that dividends are not expenses, such as salaries paid to your employees or staff. Instead, declaring and paying dividends is a method utilized by corporations to return part of the profits generated by the company to the owners of the company—in this case, its shareholders.

If dividends were not declared, closing entries would cease at this point. If dividends are declared, to get a zero balance in the Dividends account, the entry will show a credit to Dividends and a debit to Retained Earnings. As you will learn in Corporation Accounting, there are three components to the declaration and payment of dividends. The first part is the date of declaration, which creates the obligation or liability to pay the dividend. The second part is the date of record that determines who receives the dividends, and the third part is the date of payment, which is the date that payments are made. Printing Plus has $100 of dividends with a debit balance on the adjusted trial balance. The closing entry will credit Dividends and debit Retained Earnings.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 31, 2019	Retained Earnings	100	
	Dividends		100
	To close dividends account to Retained Earnings		

The T-accounts after this closing entry would look like the following.

Retained Earnings			
Jan. 31 Cls. #4	100	4,665	Jan. 31 Cls. #3
		Bal.	**4,565**

Dividends			
Jan. 14	100		
	100	100	Jan. 31 Cls.
	0		

Why was income summary not used in the dividends closing entry? Dividends are not an income statement account. Only income statement accounts help us summarize income, so only income statement accounts should go into income summary.

Remember, dividends are a contra stockholders' equity account. It is contra to retained earnings. If we pay out dividends, it means retained earnings decreases. Retained earnings decreases on the debit side. The remaining balance in Retained Earnings is $4,565 (Figure 5.6). This is the same figure found on the statement of retained earnings.

PRINTING PLUS
Statement of Retained Earnings
For the Month Ended January 31, 2019

Beginning Retained Earnings (Jan. 1)	$ 0
Net Income	4,665
Dividends	(100)
Ending Retained Earnings (Jan. 31)	$4,565

Figure 5.6 Statement of Retained Earnings for Printing Plus. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The statement of retained earnings shows the period-ending retained earnings after the closing entries have been posted. When you compare the retained earnings ledger (T-account) to the statement of retained earnings, the figures must match. It is important to understand retained earnings is *not* closed out, it is only updated. Retained Earnings is the only account that appears in the closing entries that does not close. You should recall from your previous material that retained earnings are the earnings retained by the company over time—not cash flow but earnings. Now that we have closed the temporary accounts, let's review what the post-closing ledger (T-accounts) looks like for Printing Plus.

T-Account Summary

The T-account summary for Printing Plus after closing entries are journalized is presented in Figure 5.7.

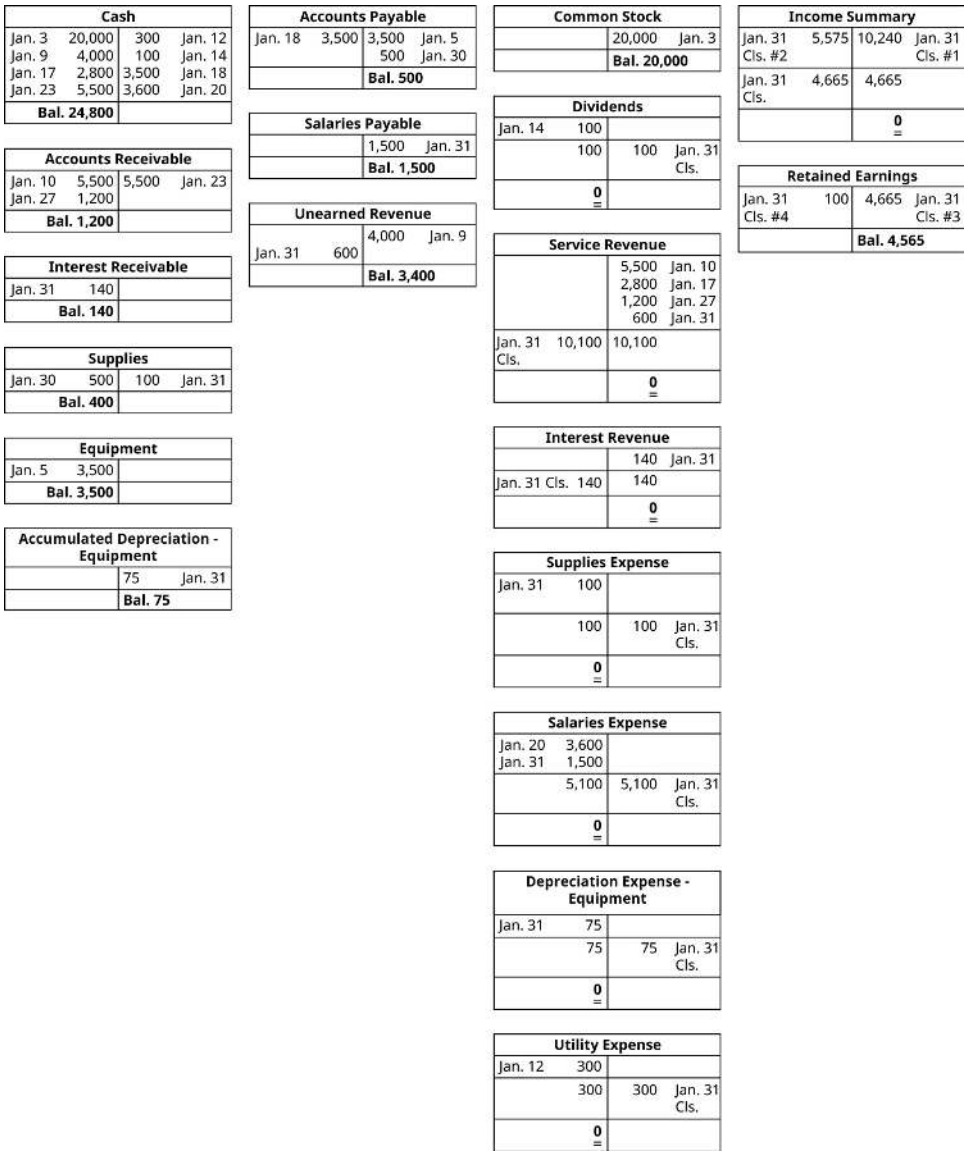


Figure 5.7T-Account Summary. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Notice that revenues, expenses, dividends, and income summary all have zero balances. Retained earnings maintains a $4,565 credit balance. The post-closing T-accounts will be transferred to the post-closing trial balance, which is step 9 in the accounting cycle.

THINK IT THROUGH

Closing Entries

A company has revenue of $48,000 and total expenses of $52,000. What would the third closing entry be? Why?

YOUR TURN

Frasker Corp. Closing Entries

Prepare the closing entries for Frasker Corp. using the adjusted trial balance provided.

FRASKER CORPORATION Adjusted Trial Balance For the Month Ended June 30, 2018		
Cash	$ 5,840	
Accounts Receivable	6,575	
Prepaid Machine Rental	6,000	
Office Supplies	435	
Accounts Payable		$ 2,840
Common Stock		10,000
Retained Earnings		4,350
Dividends	15,000	
Fees Earned		22,350
Salaries Expense	2,970	
Advertising Expense	325	
Machine Rental Expense	1,000	
Office Rent Expense	1,250	
Utility Expense	145	
	$39,540	$39,540

Solution

June 30	Fee Earned	$22,350	
	Income Summary		$22,350
	To close all income statement accounts with credit balances		
June 30	Income Summary	5,690	
	Salaries Expense		2,970
	Advertising Expense		325
	Machine Rental Expense		1,000
	Office Rent Expense		1,250
	Utilities Expense		145
	To close out all income statement accounts with debit balances		
June 30	Retained Earnings	16,660	
	Income Summary		16,660
	To close out income summary and update retained earnings		
June 30	Retained Earnings	15,000	
	Dividends		15,000
	To close out dividends and update retained earnings		

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4.7: Prepare a Post-Closing Trial Balance

The ninth, and typically final, step of the process is to prepare a post-closing trial balance. The word "post" in this instance means "after." You are preparing a trial balance *after* the closing entries are complete.

Like all trial balances, the post-closing trial balance has the job of verifying that the debit and credit totals are equal. The post-closing trial balance has one additional job that the other trial balances do not have. The post-closing trial balance is also used to double-check that the only accounts with balances after the closing entries are permanent accounts. If there are any temporary accounts on this trial balance, you would know that there was an error in the closing process. This error must be fixed before starting the new period.

The process of preparing the post-closing trial balance is the same as you have done when preparing the unadjusted trial balance and adjusted trial balance. Only permanent account balances should appear on the post-closing trial balance. These balances in post-closing T-accounts are transferred over to either the debit or credit column on the post-closing trial balance. When all accounts have been recorded, total each column and verify the columns equal each other.

The post-closing trial balance for Printing Plus is shown in Figure 5.8.

PRINTING PLUS
Post-Closing Trial Balance
For the Month Ended January 31, 2019

Account	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Interest Receivable	140	
Supplies	400	
Equipment	3,500	
Accumulated Depreciation: Equipment		$ 75
Accounts Payable		500
Salaries Payable		1,500
Unearned Revenue		3,400
Common Stock		20,000
Retained Earnings		4,565
Total	$30,040	$30,040

Figure 5.8 Printing Plus's Post-Closing Trial Balance. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Notice that only permanent accounts are included. All temporary accounts with zero balances were left out of this statement. Unlike previous trial balances, the retained earnings figure is included, which was obtained through the closing process.

At this point, the accounting cycle is complete, and the company can begin a new cycle in the next period. In essence, the company's business is always in operation, while the accounting cycle utilizes the cutoff of month-end to provide financial information to assist and review the operations.

It is worth mentioning that there is one step in the process that a company may or may not include, step 10, reversing entries. Reversing entries reverse an adjusting entry made in a prior period at the start of a new period. We do not cover reversing entries in this chapter, but you might approach the subject in future accounting courses.

Now that we have completed the accounting cycle, let's take a look at another way the adjusted trial balance assists users of information with financial decision-making.

LINK TO LEARNING

If you like quizzes, crossword puzzles, fill-in-the-blank, matching exercise, and word scrambles to help you learn the material in this course, go to My Accounting Course for more. This website covers a variety of accounting topics including financial accounting basics, accounting principles, the accounting cycle, and financial statements, all topics introduced in the early part of this course.

CONCEPTS IN PRACTICE

The Importance of Understanding How to Complete the Accounting Cycle

Many students who enroll in an introductory accounting course do not plan to become accountants. They will work in a variety of jobs in the business field, including managers, sales, and finance. In a real company, most of the mundane work is done by computers. Accounting software can perform such tasks as posting the journal entries recorded, preparing trial balances, and preparing financial statements. Students often ask why they need to do all of these steps by hand in their introductory class, particularly if they are never going to be an accountant. It is very important to understand that no matter what your position, if you work in business you need to be able to read financial statements, interpret them, and know how to use that information to better your business. If you have never followed the full process from beginning to end, you will never understand how one of your decisions can impact the final numbers that appear on your financial statements. You will not understand how your decisions can affect the outcome of your company.

As mentioned previously, once you understand the effect your decisions will have on the bottom line on your income statement and the balances in your balance sheet, you can use accounting software to do all of the mundane, repetitive steps and use your time to evaluate the company based on what the financial statements show. Your stockholders, creditors, and other outside professionals will use your financial statements to evaluate your performance. If you evaluate your numbers as often as monthly, you will be able to identify your strengths and weaknesses before any outsiders see them and make any necessary changes to your plan in the following month

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CHAPTER OVERVIEW

5: Merchandising

5.1: Compare and Contrast Merchandising versus Service Activities and Transactions

5.2: Analyze and Record Transactions for Merchandise Purchases Using the Perpetual Inventory System

5.3: Analyze and Record Transactions for the Sale of Merchandise Using the Perpetual Inventory System

5.4: Discuss and Record Transactions Applying the Two Commonly Used Freight-In Methods

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5.1: Compare and Contrast Merchandising versus Service Activities and Transactions

Every week, you run errands for your household. These errands may include buying products and services from local retailers, such as gas, groceries, and clothing. As a consumer, you are focused solely on purchasing your items and getting home to your family. You are probably not thinking about how your purchases impact the businesses you frequent. Whether the business is a service or a merchandising company, it tracks sales from customers, purchases from manufacturers or other suppliers, and costs that affect their everyday operations. There are some key differences between these business types in the manner and detail required for transaction recognition.

Comparison of Merchandising Transactions versus Service Transactions

Some of the biggest differences between a service company and a merchandising company are what they sell, their typical financial transactions, their operating cycles, and how these translate to financial statements.

A **service company** provides intangible services to customers and does not have inventory. Some examples of service companies include lawyers, doctors, consultants, and accountants. Service companies often have simple financial transactions that involve taking customer deposits, billing clients after services have been provided, providing the service, and processing payments. These activities may occur frequently within a company's accounting cycle and make up a portion of the service company's operating cycle.

An **operating cycle** is the amount of time it takes a company to use its cash to provide a product or service and collect payment from the customer. Completing this cycle faster puts the company in a more stable financial position. A typical operating cycle for a service company begins with having cash available, providing service to a customer, and then receiving cash from the customer for the service (Figure 6.2).

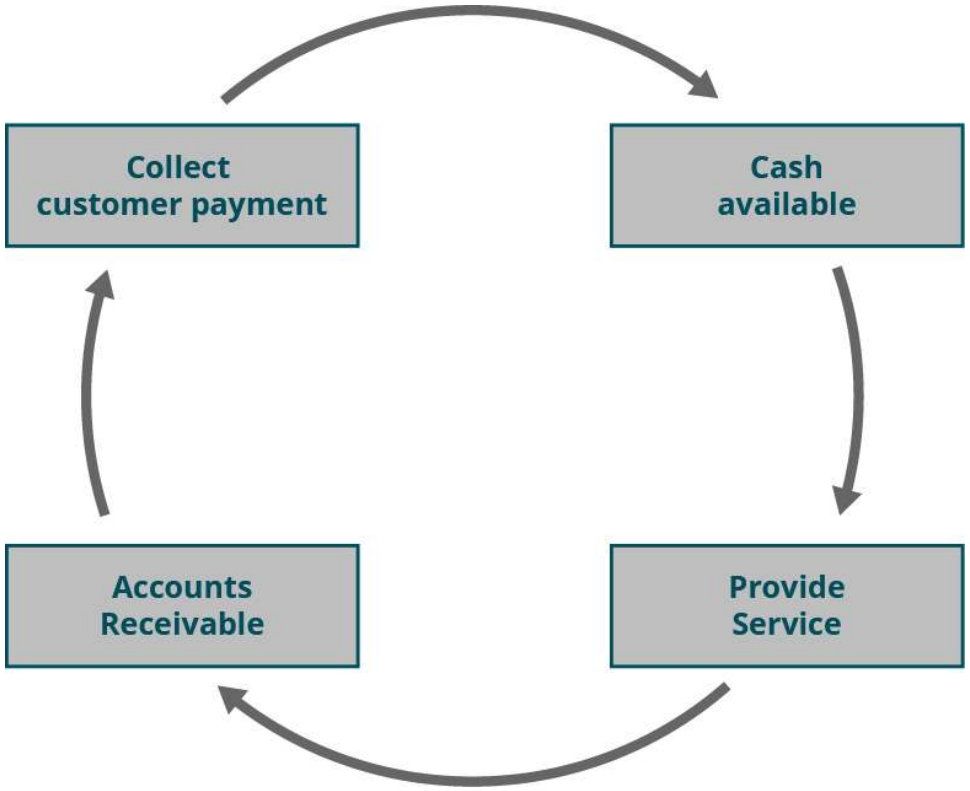


Figure 6.2 Typical Operating Cycle for a Service Firm. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The income statement format is fairly simple as well (see Figure 6.3). Revenues (sales) are reported first, followed by any period operating expenses. The outcome of sales less expenses, which is net income (loss), is calculated from these accounts.

APPLE GOODS Income Statement Year Ended December 31, 2018	
Sales	$300,000
Expenses	175,000
Net Income (Loss)	125,000

Figure 6.3 Service Company Income Statement. Expenses are subtracted directly from Sales to produce net income (loss). (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

A **merchandising company** resells finished goods (inventory) produced by a manufacturer (supplier) to customers. Some examples of merchandising companies include **Walmart**, **Macy's**, and **Home Depot**. Merchandising companies have financial transactions that include: purchasing merchandise, paying for merchandise, storing inventory, selling merchandise, and collecting customer payments. A typical operating cycle for a merchandising company starts with having cash available, purchasing inventory, selling the merchandise to customers, and finally collecting payment from customers (Figure 6.4).

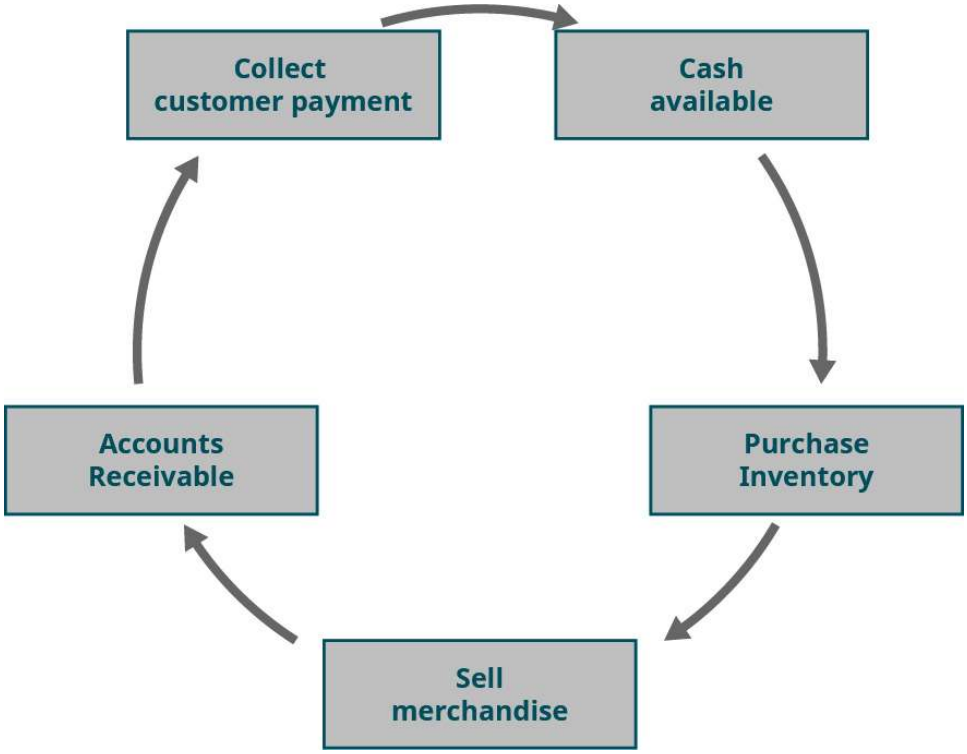


Figure 6.4 Typical Operating Cycle for a Merchandising Company. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Their income statement format is a bit more complicated than for a service company and is discussed in greater detail in Describe and Prepare Multi-Step and Simple Income Statements for Merchandising Companies. Note that unlike a service company, the merchandiser, also sometimes labeled as a retailer, must first resolve any sale reductions and merchandise costs, known as Cost of Goods Sold, before determining other expenses and net income (loss). A simple retailer income statement is shown in Figure 6.5 for comparison.

AIR SUPPLY PLUS Income Statement Year Ended December 31, 2018	
Net Sales	$350,000
Cost of Goods Sold	50,000
Gross Margin	300,000
Expenses	100,000
Net Income (Loss)	$200,000

Figure 6.5 Merchandise Company Income Statement. Cost of Goods Sold is deducted from net sales to calculate gross margin. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Characteristics of Merchandising Transactions

Merchandising transactions are separated into two categories: purchases and sales. In general, a purchase transaction occurs between a manufacturer and the merchandiser, also called a retailer. A sales transaction occurs between a customer and the merchandiser or retailer. We will now discuss the characteristics that create purchase and sales transactions for a retailer. A merchandiser will need to purchase merchandise for its business to continue operations and can use several purchase situations to accomplish this.

Purchases with Cash or on Credit

A retailer typically conducts business with a manufacturer or with a supplier who buys from a manufacturer. The retailer will purchase their finished goods for resale. When the purchase occurs, the retailer may pay for the merchandise with cash or on credit. If the retailer pays for the merchandise with cash, they would be trading one current asset, Cash, for another current asset, Merchandise Inventory or just Inventory, depending upon the company's account titles. In this example, they would record a debit entry to Merchandise Inventory and a credit entry to Cash. If they decide to pay on credit, a liability would be created, and Accounts Payable would be credited rather than Cash. For example, a clothing store may pay a jeans manufacturer cash for 50 pairs of jeans, costing $25 each. The following entry would occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Merchandise Inventory	1,250	
	Cash		1,250
	To recognize purchase with cash		

If this same company decides to purchase merchandise on credit, Accounts Payable is credited instead of Cash.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Merchandise Inventory	1,250	
	Accounts Payable		1,250
	To recognize purchase on credit		

Merchandise Inventory is a current asset account that houses all purchase costs associated with the transaction. This includes the cost of the merchandise, shipping charges, insurance fees, taxes, and any other costs that gets the products ready for sale. **Gross purchases** are defined as the original amount of the purchase without considering reductions for purchase discounts, returns, or allowances. Once the purchase reductions are adjusted at the end of a period, net purchases are calculated. **Net purchases** (see Figure 6.6) equals gross purchases less purchase discounts, purchase returns, and purchase allowances.

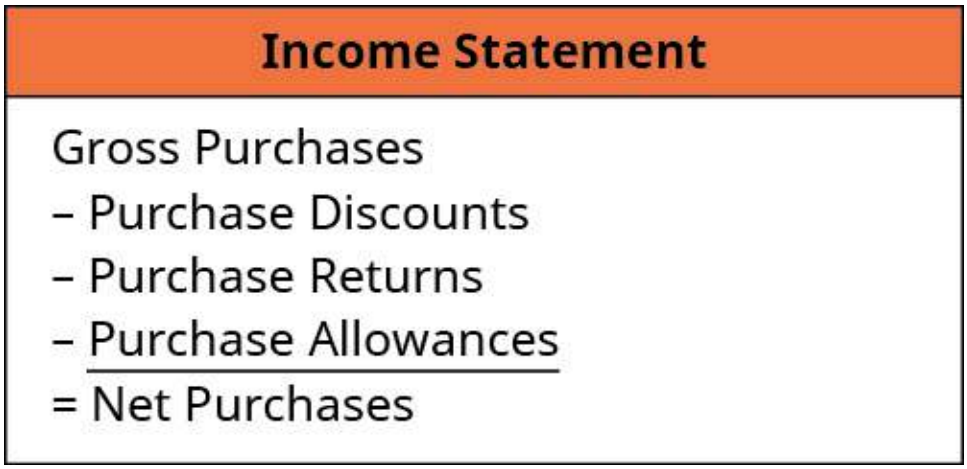


Figure 6.6 Purchase Transactions' Effects on Gross Purchases. Deducting purchase discounts, returns, and allowances from gross purchases will result in net purchases. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Purchase Discounts

If a retailer, pays on credit, they will work out payment terms with the manufacturer. These payment terms establish the purchase cost, an invoice date, any discounts, shipping charges, and the final payment due date.

Purchase discounts provide an incentive for the retailer to pay early on their accounts by offering a reduced rate on the final purchase cost. Receiving payment in a timely manner allows the manufacturer to free up cash for other business opportunities and decreases the risk of nonpayment.

To describe the discount terms, the manufacturer can write descriptions such as 2/10, n/30 on the invoice. The "2" represents a discount rate of 2%, the "10" represents the discount period in days, and the "n/30" means "net of 30" days, representing the entire payment period without a discount application. So, "2/10, n/30" reads as, "The company will receive a 2% discount on their purchase if they pay in 10 days. Otherwise, they have 30 days from the date of the sale to pay in full, no discount received." In some cases, if the retailer exceeds the full payment period (30 days in this example), the manufacturer may charge interest as a penalty for late payment. The number of days allowed for both the discount period and the full payment period begins counting from the invoice date.

If a merchandiser pays an invoice within the discount period, they receive a discount, which affects the cost of the inventory. Let's say a retailer pays within the discount window. They would need to show a credit to the Merchandise Inventory account, recognizing the decreased final cost of the merchandise. This aligns with the cost principle, which requires a company to record an asset's value at the cost of acquisition. In addition, since cash is used to pay the manufacturer, Cash is credited. The debit to Accounts Payable does not reflect the discount taken: it reflects fulfillment of the liability in full, and the credits to Merchandise Inventory and Cash reflect the discount taken, as demonstrated in the following example.

If the retailer does not pay within the discount window, they do not receive a discount but are still required to pay the full invoice price at the end of the term. In this case, Accounts Payable is debited and Cash is credited, but no reductions are made to Merchandise Inventory.

For example, suppose a kitchen appliances retailer purchases merchandise for their store from a manufacturer on September 1 in the amount of $1,600. Credit terms are 2/10, n/30 from the invoice date of September 1. The retailer makes payment on September 5 and receives the discount. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Sept. 5	Accounts Payable	1,600	
	Cash		1,568
	Merchandise Inventory		32
	To recognize purchase payment with discount taken		

Let's consider the same situation except the retailer did not make the discount window and paid in full on September 30. The entry would recognize the following instead.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Payable	1,600	
	Cash		1,600
	To recognize purchase payment without discount applied		

There are two kinds of purchase discounts, cash discounts and trade discounts. **Cash discount** provides a discount on the final price after purchase if a retailer pays within a discount window. On the other hand, a **trade discount** is a reduction to the advertised manufacturer's price that occurs during negotiations of a final purchase price before the inventory is purchased. The trade discount may become larger if the retailer purchases more in one transaction. While the cash discount is recognized in journal entries, a trade discount is not, since it is negotiated before purchase.

For example, assume that a retailer is considering an order for $4,000 in inventory on September 1. The manufacturer offers the retailer a 15% discount on the price if they place the order by September 5. Assume that the retailer places the $4,000 order on September 3. The purchase price would be $4,000 less the 15% discount of $600, or $3,400. Since the trade discount is based on when the order was placed and not on any potential payment discounts, the initial journal entry to record the purchase would reflect the discounted amount of $3,400. Even if the retailer receives a trade discount, they may still be eligible for an additional purchase discount if they pay within the discount window of the invoice.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Merchandise Inventory	3,400	
	Accounts Payable		3,400
	To record purchase on credit		

Purchase Returns and Allowances

If a retailer is unhappy with their purchase—for example, if the order is incorrect or if the products are damaged—they may receive a partial or full refund from the manufacturer in a **purchase returns and allowances** transaction. A purchase return occurs when merchandise is returned and a full refund is issued. A purchase allowance occurs when merchandise is kept and a partial refund is issued. In either case, a manufacturer will issue a debit memo to acknowledge the change in contract terms and the reduction in the amount owed.

To recognize a return or allowance, the retailer will reduce Accounts Payable (or increase Cash) and reduce Merchandise Inventory. Accounts Payable decreases if the retailer has yet to pay on their account, and Cash increases if they had already paid and received a subsequent refund. Merchandise Inventory decreases to show the reduction of inventory cost from the retailer's inventory stock. Note that if a retailer receives a refund before they make a payment, any discount taken must be from the new cost of the merchandise less the refund.

To illustrate, assume that Carter Candle Company received a shipment from a manufacturer that had 150 candles that cost $150. Assume that they have not yet paid for these candles and 100 of the candles are badly damaged and must be returned. The other 50 candles are marketable, but are not the right style. The candle company returned the 100 defective candles for a full refund and requested and received an allowance of $20 for the 50 improper candles they kept. The first entry shows the return and the second entry shows the allowance.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Payable	100	
	Merchandise Inventory		100
	To recognize purchase return for full refund		
	Accounts Payable	20	
	Merchandise Inventory		20
	To recognize purchase allowance with partial refund		

It is possible to show these entries as one, since they affect the same accounts and were requested at the same time. From a manager's standpoint, though, it may be better to record these as separate transactions to better understand the specific reasons for the reduction to inventory (either return or allowance) and restocking needs.

ETHICAL CONSIDERATIONS

Internal Controls over Merchandise Returns[1]

Returning merchandise requires more than an accountant making journal entries or a clerk restocking items in a warehouse or store. An ethical accountant understands that there must be internal controls governing the return of items. As used in accounting, the term "internal control" describes the methodology of implementing accounting and operational checkpoints in a system to ensure compliance with sound business and operational practices while permitting the proper recording of accounting information. All transactions require both operational and accounting actions to ensure that the amounts have been recorded in the accounting records and that operational requirements have been met.

Merchandise return controls require that there be a separation of duties between the employee approving the return and the person recording the return of merchandise in the accounting records. Basically, the person performing the return should not be the person recording the event in the accounting records. This is called *separation of duties* and is just one example of an internal control that should be used when merchandise is returned.

Every company faces different challenges with returns, but one of the most common challenges includes fake or fictitious returns. The use of internal controls is a protective action the company undertakes, with the assistance of professional accountants, to ensure that fictitious returns do not occur. The internal controls may include prescribed actions of employees, special tags on merchandise, specific store layouts that ensure customers pass checkout points before leaving the store, cameras to record activity in the facility, and other activities and internal controls that go beyond accounting and journal entries to ensure that assets of a company are protected.

Characteristics of Sales Transactions

Business owners may encounter several sales situations that can help meet customer needs and control inventory operations. For example, some customers will expect the opportunity to buy using short-term credit and often will assume that they will receive a discount for paying within a brief period. The mechanics of sales discounts are demonstrated later in this section.

Sales with Cash or on Credit

As previously mentioned, a sale is usually considered a transaction between a merchandiser or retailer and a customer. When a sale occurs, a customer has the option to pay with cash or credit. For our purposes, let's consider "credit" as credit extended from the business directly to the customer.

Whether or not a customer pays with cash or credit, a business must record two accounting entries. One entry recognizes the sale and the other recognizes the cost of the sale. The sales entry consists of a debit to either Cash or Accounts Receivable (if paying on credit), and a credit to the revenue account, Sales.

The amount recorded in the Sales account is the gross amount. **Gross sales** is the original amount of the sale without factoring in any possible reductions for discounts, returns, or allowances. Once those reductions are recorded at the end of a period, net sales are calculated. **Net sales** (see Figure 6.7) equals gross sales less sales discounts, sales returns, and sales allowances. Recording the sale as it occurs allows the company to align with the revenue recognition principle. The revenue recognition principle requires companies to record revenue when it is earned, and revenue is earned when a product or service has been provided.

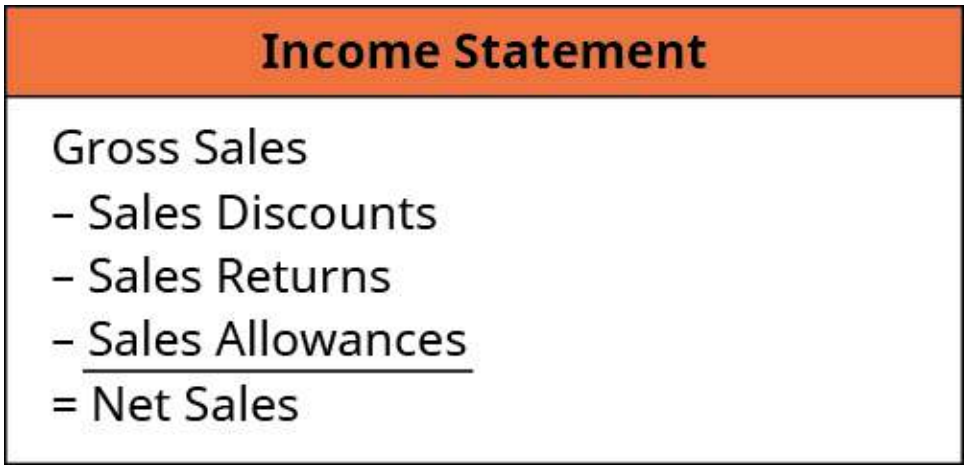


Figure 6.7 Sales Transactions' Effect on Gross Sales. Deducting sales discounts, returns, and allowances from gross sales, will result in net sales. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The second accounting entry that is made during a sale describes the cost of sales. The cost of sales entry includes decreasing Merchandise Inventory and increasing Cost of Goods Sold (COGS). The decrease to Merchandise Inventory reflects the reduction in the inventory account value due to the sold merchandise. The increase to COGS represents the expense associated with the sale. The **cost of goods sold (COGS)** is an expense account that houses all costs associated with getting the product ready for sale. This could include purchase costs, shipping, taxes, insurance, stocking fees, and overhead related to preparing the product for sale. By recording the cost of sale when the sale occurs, the company aligns with the matching principle. The matching principlerequires companies to match revenues generated with related expenses in the period in which they are incurred.

For example, when a shoe store sells 150 pairs of athletic cleats to a local baseball league for $1,500 (cost of $900), the league may pay with cash or credit. If the baseball league elects to pay with cash, the shoe store would debit Cash as part of the sales entry. If the baseball league decides to use a line of credit extended by the shoe store, the shoe store would debit Accounts Receivable as part of the sales entry instead of Cash. With the sales entry, the shoe store must also recognize the $900 cost of the shoes sold and the $900 reduction in Merchandise Inventory.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cash	1,500	
	Sales		1,500
	To recognize cash sale		
	Cost of Goods Sold	900	
	Merchandise Inventory		900
	To recognize the cost of sale		

You may have noticed that sales tax has not been discussed as part of the sales entry. Sales taxes are liabilities that require a portion of every sales dollar be remitted to a government entity. This would reduce the amount of cash the company keeps after the sale. Sales tax is relevant to consumer sales and is discussed in detail in Current Liabilities.

There are a few transactional situations that may occur after a sale is made that have an effect on reported sales at the end of a period.

Sales Discounts

Sales discounts are incentives given to customers to entice them to pay off their accounts early. Why would a retailer offer this? Wouldn't they rather receive the entire amount owed? The discount serves several purposes that are similar to the rationale manufacturers consider when offering discounts to retailers. It can help solidify a long-term relationship with the customer, encourage the customer to purchase more, and decreases the time it takes for the company to see a liquid asset (cash). Cash can be used for other purposes immediately such as reinvesting in the business, paying down loans quicker, and distributing dividends to shareholders. This can help grow the business at a more rapid rate.

Similar to credit terms between a retailer and a manufacturer, a customer could see credit terms offered by the retailer in the form of 2/10, n/30. This particular example shows that if a customer pays their account within 10 days, they will receive a 2% discount. Otherwise, they have 30 days to pay in full but do not receive a discount. If the customer does not pay within the discount window, but pays within 30 days, the retailing company records a credit to Accounts Receivable, and a debit to Cash for the full amount stated on the invoice. If the customer is able to pay the account within the discount window, the company records a credit to Accounts Receivable, a debit to Cash, and a debit to Sales Discounts.

The **sales discounts** account is a contra revenue account that is deducted from gross sales at the end of a period in the calculation of net sales. Sales Discounts has a normal debit balance, which offsets Sales that has a normal credit balance.

Let's assume that a customer purchased 10 emergency kits from a retailer at $100 per kit on credit. The retailer offered the customer 2/10, n/30 terms, and the customer paid within the discount window. The retailer recorded the following entry for the initial sale.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Receivable	1,000	
	Sales		1,000
	To reflect the sale on credit		

Since the retail doesn't know at the point of sale whether or not the customer will qualify for the sales discount, the entire account receivable of $1,000 is recorded on the retailer's journal.

Also assume that the retail's costs of goods sold in this example were $560 and we are using the perpetual inventory method. The journal entry to record the sale of the inventory follows the entry for the sale to the customer.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cost of Goods Sold	560	
	Merchandise inventory		560
	To reflect the sale of inventory		

Since the customer paid the account in full within the discount qualification period of ten days, the following journal entry on the retailer's books reflects the payment.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cash	980	
	Sales Discounts	20	
	Accounts Receivable		1,000
	To recognize a sales discount and collection of receivable ($1,000 × 2%)		

Now, assume that the customer paid the retailer within the 30-day period but did not qualify for the discount. The following entry reflects the payment without the discount.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cash	1,000	
	Accounts Receivable		1,000
	To reflect the collection of accounts receivable		

Please note that the entire $1,000 account receivable created is eliminated under both payment options. When the discount is missed, the retail received the entire $1,000. However, when the discount was received by the customer, the retailer received $980, and the remaining $20 is recorded in the sales discount account.

ETHICAL CONSIDERATIONS

Ethical Discounts

Should employees or companies provide discounts to employees of other organizations? An accountant's employing organization usually has a code of ethics or conduct that addresses policies for employee discounts. While many companies offer their employees discounts as a benefit, some companies also offer discounts or free products to non-employees who work for governmental organizations. Accountants may need to work in situations where other entities' codes of ethics/conduct do not permit employees to accept discounts or free merchandise. What should the accountant's company do when an outside organization's code of ethics and conduct does not permit its employees to accept discounts or free merchandise?

The long-term benefits of discounts are contrasted with organizational codes of ethics and conduct that limit others from accepting discounts from your organization. The International Association of Chiefs of Police's Law Enforcement Code of Ethics limits the ability of police officers to accept discounts.[2] These discounts may be as simple as a free cup of coffee, other gifts, rewards points, and hospitality points or discounts for employees or family members of the governmental organization's employees. Providing discounts may create ethical dilemmas. The ethical dilemma may not arise from the accountant's employer, but from the employer of the person outside the organization receiving the discount.

The World Customs Organization's *Model Code of Ethics and Conduct* states that "customs employees are called upon to use their best judgment to avoid situations of real or perceived conflict. In doing so, they should consider the following criteria on gifts, hospitality and other benefits, bearing in mind the full context of this Code. Public servants shall not accept or solicit any gifts, hospitality or other benefits that may have a real or apparent influence on their objectivity in carrying out their official duties or that may place them under obligation to the donor."[3]

At issue is that the employee of the outside organization is placed in a conflict between their personal interests and the interest of their employer. The accountant's employer's discount has created this conflict. In these situations, it is best for the accountant's employer to respect the other organization's code of conduct. As well, it might be illegal for the accountant's employer to provide discounts to a governmental organization's employees. The professional accountant should always be aware of the discount policy of any outside company prior to providing discounts to the employees of other companies or organizations.

Sales Returns and Allowances

If a customer purchases merchandise and is dissatisfied with their purchase, they may receive a refund or a partial refund, depending on the situation. When the customer returns merchandise and receives a full refund, it is considered a sales return. When the customer keeps the defective merchandise and is given a partial refund, it is considered a sales allowance. The biggest difference is that a customer returns merchandise in a sales return and keeps the merchandise in a sales allowance.

When a customer returns the merchandise, a retailer issues a credit memo to acknowledge the change in contract and reduction to Accounts Receivable, if applicable. The retailer records an entry acknowledging the return by reducing either Cash or Accounts Receivable and increasing Sales Returns and Allowances. Cash would decrease if the customer had already paid for the merchandise and cash was thus refunded to the customer. Accounts Receivable would decrease if the customer had not yet paid on their account. Like Sales Discounts, the **sales returns and allowances** account is a contra revenue account with a normal debit balance that reduces the gross sales figure at the end of the period.

Beyond recording the return, the retailer must also determine if the returned merchandise is in "sellable condition." An item is in sellable condition if the merchandise is good enough to warrant a sale to another customer in the future. If so, the company would record a decrease to Cost of Goods Sold (COGS) and an increase to Merchandise Inventory to return the merchandise back to the inventory for resale. This is recorded at the merchandise's costs of goods sold value. If the merchandise is in sellable condition but will not realize the original cost of the good, the company must estimate the loss at this time.

On the other hand, when the merchandise is returned and is not in sellable condition, the retailer must estimate the value of the merchandise in its current condition and record a loss. This would increase Merchandise Inventory for the assessed value of the merchandise in its current state, decrease COGS for the original expense amount associated with the sale, and increase Loss on Defective Merchandise for the unsellable merchandise lost value.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Merchandise Inventory	$$$	
	Loss on Defective Merchandise	$$$	
	Cost of Goods Sold		$$$
	To account for merchandise in unsellable condition		

Let's say a customer purchases 300 plants on credit from a nursery for $3,000 (with a cost of $1,200). The first entry reflects the initial sale by the nursery. The second entry reflects the cost of goods sold.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts receivable	3,000	
	Sales		3,000
	To recognize the sale of 300 plants		
	Cost of goods sold	1,200	
	Merchandise inventory		1,200
	To reflect the cost of goods sold for sale of 300 plants		

Upon receipt, the customer discovers the plants have been infested with bugs and they send all the plants back. Assuming that the customer had not yet paid the nursery any of the $3,000 accounts receivable and assuming that the nursery determines the condition of the returned plants to be sellable, the retailer would record the following entries.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Sales Returns and Allowances	3,000	
	Accounts Receivable		3,000
	To recognize a sales return		
	Merchandise Inventory	1,200	
	Cost of Goods Sold		1,200
	To return inventory to stock for resale		

For another example, let's say the plant customer was only dissatisfied with 100 of the plants. After speaking with the nursery, the customer decides to keep 200 of the plants for a partial refund of $1,000. The nursery would record the following entry for sales allowance associated with 100 plants.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Sales Returns and Allowances	1,000	
	Accounts Receivable		1,000
	To record a sales allowance for 100 plants		

The nursery would also record a corresponding entry for the inventory and the cost of goods sold for the 100 returned plants.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Merchandise Inventory	400	
	Cost of Goods Sold		400
	To reflect the return of 100 plants		

For both the return and the allowance, if the customer had already paid their account in full, Cash would be affected rather than Accounts Receivable.

There are differing opinions as to whether sales returns and allowances should be in separate accounts. Separating the accounts would help a retailer distinguish between items that are returned and those that the customer kept. This can better identify quality control issues, track whether a customer was satisfied with their purchase, and report how many resources are spent on processing returns. Most companies choose to combine returns and allowances into one account, but from a manager's perspective, it may be easier to have the accounts separated to make current determinations about inventory.

You may have noticed our discussion of credit sales did not include third-party credit card transactions. This is when a customer pays with a credit or debit card from a third-party, such as **Visa**, **MasterCard**, **Discover**, or **American Express**. These entries and discussion are covered in more advanced accounting courses. A more comprehensive example of merchandising purchase and sale transactions occurs in Calculate Activity-Based Product Costs and Compare and Contrast Traditional and Activity-Based Costing Systems, applying the perpetual inventory method.

LINK TO LEARNING

Major retailers must find new ways to manage inventory and reduce operating cycles to stay competitive. Companies such as **Amazon.com Inc.**, have been able to reduce their operating cycles and increase their receivable collection rates to a level better than many of their nearest competitors. Check out Stock Analysis on Net to find out how they do this and to see a comparison of operating cycles for top retail brands.

Footnotes

- 1 Committee of Sponsoring Organizations of the Treadway Commission (COSO). *Internal Control—Integrated Framework*. May 2013. https://na.theiia.org/standards-guid...ve_Summary.pdf
- 2 International Association of Chiefs of Police (IACP). Law Enforcement Code of Ethics. October, 1957. https://www.theiacp.org/resources/la...code-of-ethics
- 3 World Customs Organization. *Model Code of Ethics and Conduct*. n.d. http://www.wcoomd.org/~/media/wco/pu...duct.pdf?la=en

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5.2: Analyze and Record Transactions for Merchandise Purchases Using the Perpetual Inventory System

The following example transactions and subsequent journal entries for merchandise purchases are recognized using a perpetual inventory system. The periodic inventory system recognition of these example transactions and corresponding journal entries are shown in Appendix: Analyze and Record Transactions for Merchandise Purchases and Sales Using the Periodic Inventory System.

Basic Analysis of Purchase Transaction Journal Entries

To better illustrate merchandising activities, let's follow California Business Solutions (CBS), a retailer providing electronic hardware packages to meet small business needs. Each electronics hardware package (see Figure 6.9) contains a desktop computer, tablet computer, landline telephone, and a 4-in-1 desktop printer with a printer, copier, scanner, and fax machine.

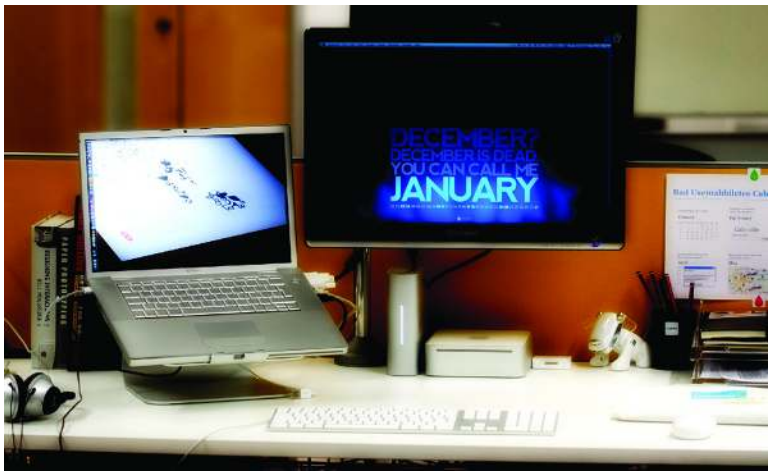


Figure 6.9 California Business Solutions. Providing businesses electronic hardware solutions. (credit: modification of "Professionnal desk" by "reynermedia"/Flickr, CC BY 2.0)

CBS purchases each electronic product from a manufacturer. The following are the per-item purchase prices from the manufacturer.

Product	Price per Unit
Desktop computer	$400
Tablet computer	60
Landline telephone	60
4-in-1 desktop printer	100

Cash and Credit Purchase Transaction Journal Entries

On April 1, CBS purchases 10 electronic hardware packages at a cost of $620 each. CBS has enough cash-on-hand to pay immediately with cash. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 1	Merchandise Inventory: Packages	6,200	
	Cash		6,200
	To recognize purchase of 10 packages		

Merchandise Inventory-Packages increases (debit) for 6,200 ($620 × 10), and Cash decreases (credit) because the company paid with cash. It is important to distinguish each inventory item type to better track inventory needs.

On April 7, CBS purchases 30 desktop computers on credit at a cost of $400 each. The credit terms are n/15 with an invoice date of April 7. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 7	Merchandise Inventory: Desktop Computers Accounts Payable *To recognize purchase of 30 computers on credit, n/15*	12,000	12,000

Merchandise Inventory is specific to desktop computers and is increased (debited) for the value of the computers by $12,000 ($400 × 30). Since the computers were purchased on credit by CBS, Accounts Payable increases (credit).

On April 17, CBS makes full payment on the amount due from the April 7 purchase. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 17	Accounts Payable Cash *To recognize payment in full*	12,000	12,000

Accounts Payable decreases (debit), and Cash decreases (credit) for the full amount owed. The credit terms were n/15, which is net due in 15 days. No discount was offered with this transaction. Thus the full payment of $12,000 occurs.

Purchase Discount Transaction Journal Entries

On May 1, CBS purchases 67 tablet computers at a cost of $60 each on credit. The payment terms are 5/10, n/30, and the invoice is dated May 1. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 1	Merchandise Inventory: Tablet Computers Accounts Payable *To recognize purchase of 67 tablets, 5/10, n/30*	4,020	4,020

Merchandise Inventory-Tablet Computers increases (debit) in the amount of $4,020 (67 × $60). Accounts Payable also increases (credit) but the credit terms are a little different than the previous example. These credit terms include a discount opportunity (5/10), meaning, CBS has 10 days from the invoice date to pay on their account to receive a 5% discount on their purchase.

On May 10, CBS pays their account in full. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 10	Accounts Payable Merchandise Inventory: Tablet Computers Cash *To recognize payment, less purchase discount*	4,020	 201 3,819

Accounts Payable decreases (debit) for the original amount owed of $4,020 before any discounts are taken. Since CBS paid on May 10, they made the 10-day window and thus received a discount of 5%. Cash decreases (credit) for the amount owed, less the discount. Merchandise Inventory-Tablet Computers decreases (credit) for the amount of the discount ($4,020 × 5%). Merchandise Inventory decreases to align with the Cost Principle, reporting the value of the merchandise at the reduced cost.

Let's take the same example purchase with the same credit terms, but now CBS paid their account on May 25. The following entry would occur instead.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 25	Accounts Payable Cash *To recognize payment for tablets, no discount*	4,020	4,020

Accounts Payable decreases (debit) and Cash decreases (credit) for $4,020. The company paid on their account outside of the discount window but within the total allotted timeframe for payment. CBS does not receive a discount in this case but does pay in

full and on time.

Purchase Returns and Allowances Transaction Journal Entries

On June 1, CBS purchased 300 landline telephones with cash at a cost of $60 each. On June 3, CBS discovers that 25 of the phones are the wrong color and returns the phones to the manufacturer for a full refund. The following entries occur with the purchase and subsequent return.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jun. 1	Merchandise Inventory: Phones	18,000	
	Cash		18,000
	To recognize phone purchase with cash		

Both Merchandise Inventory-Phones increases (debit) and Cash decreases (credit) by $18,000 ($60 × 300).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jun. 3	Cash	1,500	
	Merchandise Inventory: Phones		1,500
	To recognize return of 25 phones, cash refund		

Since CBS already paid in full for their purchase, a full cash refund is issued. This increases Cash (debit) and decreases (credit) Merchandise Inventory-Phones because the merchandise has been returned to the manufacturer or supplier.

On June 8, CBS discovers that 60 more phones from the June 1 purchase are slightly damaged. CBS decides to keep the phones but receives a purchase allowance from the manufacturer of $8 per phone. The following entry occurs for the allowance.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jun. 8	Cash	480	
	Merchandise Inventory: Phones		480
	To recognize allowance for 60 phones		

Since CBS already paid in full for their purchase, a cash refund of the allowance is issued in the amount of $480 (60 × $8). This increases Cash (debit) and decreases (credit) Merchandise Inventory-Phones because the merchandise is less valuable than before the damage discovery.

CBS purchases 80 units of the 4-in-1 desktop printers at a cost of $100 each on July 1 on credit. Terms of the purchase are 5/15, n/40, with an invoice date of July 1. On July 6, CBS discovers 15 of the printers are damaged and returns them to the manufacturer for a full refund. The following entries show the purchase and subsequent return.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 1	Merchandise Inventory: Printers	8,000	
	Accounts Payable		8,000
	To recognize printer purchase on credit, 5/15, n/40		

Both Merchandise Inventory-Printers increases (debit) and Accounts Payable increases (credit) by $8,000 ($100 × 80).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 6	Accounts Payable	1,500	
	Merchandise Inventory: Printers		1,500
	To recognize return of 15 printers, AP reduction		

Both Accounts Payable decreases (debit) and Merchandise Inventory-Printers decreases (credit) by $1,500 (15 × $100). The purchase was on credit and the return occurred before payment, thus decreasing Accounts Payable. Merchandise Inventory decreases due to the return of the merchandise back to the manufacturer.

On July 10, CBS discovers that 4 more printers from the July 1 purchase are slightly damaged but decides to keep them, with the manufacturer issuing an allowance of $30 per printer. The following entry recognizes the allowance.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 10	Accounts Payable Merchandise Inventory: Printers *To recognize allowance for 4 printers, AP reduction*	120	 120

Both Accounts Payable decreases (debit) and Merchandise Inventory-Printers decreases (credit) by $120 (4 × $30). The purchase was on credit and the allowance occurred before payment, thus decreasing Accounts Payable. Merchandise Inventory decreases due to the loss in value of the merchandise.

On July 15, CBS pays their account in full, less purchase returns and allowances. The following payment entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 15	Accounts Payable Merchandise Inventory: Printers Cash *To recognize payment, less discount, return and allowance*	6,380	 319 6,061

Accounts Payable decreases (debit) for the amount owed, less the return of $1,500 and the allowance of $120 ($8,000 – $1,500 – $120). Since CBS paid on July 15, they made the 15-day window, thus receiving a discount of 5%. Cash decreases (credit) for the amount owed, less the discount. Merchandise Inventory-Printers decreases (credit) for the amount of the discount ($6,380 × 5%). Merchandise Inventory decreases to align with the Cost Principle, reporting the value of the merchandise at the reduced cost.

Summary of Purchase Transaction Journal Entries

The chart in Figure 6.10 represents the journal entry requirements based on various merchandising purchase transactions using the perpetual inventory system.

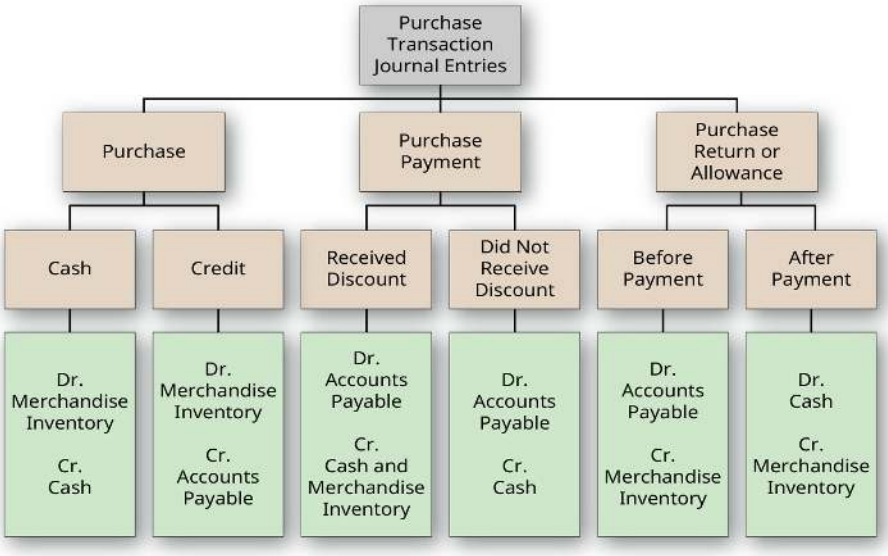


Figure 6.10 Purchase Transaction Journal Entries Using a Perpetual Inventory System. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Note that Figure 6.10 considers an environment in which inventory physical counts and matching books records align. This is not always the case given concerns with shrinkage (theft), damages, or obsolete merchandise. In this circumstance, an adjustment is recorded to inventory to account for the differences between the physical count and the amount represented on the books.

YOUR TURN

Recording a Retailer's Purchase Transactions

Record the journal entries for the following purchase transactions of a retailer.

Dec. 3	Purchased $500 worth of inventory on credit with terms 2/10, n/30, and invoice dated December 3.
Dec. 6	Returned $150 worth of damaged inventory to the manufacturer and received a full refund.
Dec. 9	Paid the account in full

Solution

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 3	Merchandise Inventory	500	
	Accounts Payable		500
	To recognize inventory purchase, 2/10, n/30		
Dec. 6	Accounts Payable	150	
	Merchandise Inventory		150
	To recognize inventory return		
Dec. 9	Accounts Payable	350	
	Merchandise Inventory		7
	Cash		343
	To recognize payment, less discount and return		

LINK TO LEARNING

Bean Counter is a website that offers free, fun and interactive games, simulations, and quizzes about accounting. You can "Fling the Teacher," "Walk the Plank," and play "Basketball" while learning the fundamentals of accounting topics. Check out Bean Counter to see what you can learn

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5.3: Analyze and Record Transactions for the Sale of Merchandise Using the Perpetual Inventory System

The following example transactions and subsequent journal entries for merchandise sales are recognized using a perpetual inventory system. The periodic inventory system recognition of these example transactions and corresponding journal entries are shown in Appendix: Analyze and Record Transactions for Merchandise Purchases and Sales Using the Periodic Inventory System.

Basic Analysis of Sales Transaction Journal Entries

Let's continue to follow California Business Solutions (CBS) and their sales of electronic hardware packages to business customers. As previously stated, each package contains a desktop computer, tablet computer, landline telephone, and a 4-in-1 printer. CBS sells each hardware package for $1,200. They offer their customers the option of purchasing extra individual hardware items for every electronic hardware package purchase. Figure 6.11 lists the products CBS sells to customers; the prices are per-package, and per unit.

Product	Sales Price per-package, per unit	Cost to CBS per-package, per unit
Electronic hardware package	$1,200	$620
Desktop computer	750	400
Tablet computer	300	60
Landline telephone	150	60
4-in-1 printer	350	100

Figure 6.11 CBS's Product Line. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Cash and Credit Sales Transaction Journal Entries

On July 1, CBS sells 10 electronic hardware packages to a customer at a sales price of $1,200 each. The customer pays immediately with cash. The following entries occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 1	Cash	12,000	
	Sales		12,000
	To recognize sale of 10 packages		
July 1	Cost of Goods Sold	6,200	
	Merchandise Inventory: Packages		6,200
	To recognize cost of sale, 10 packages		

In the first entry, Cash increases (debit) and Sales increases (credit) for the selling price of the packages, $12,000 ($1,200 × 10). In the second entry, the cost of the sale is recognized. COGS increases (debit) and Merchandise Inventory-Packages decreases (credit) for the cost of the packages, $6,200 ($620 × 10).

On July 7, CBS sells 20 desktop computers to a customer on credit. The credit terms are n/15 with an invoice date of July 7. The following entries occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 7	Accounts Receivable	15,000	
	Sales		15,000
	To recognize sale of 20 desktop computers, n/15		
July 7	Cost of Goods Sold	8,000	
	Merchandise Inventory: Desktop Computers		8,000
	To recognize cost of sale, 20 desktop computers		

Since the computers were purchased on credit by the customer, Accounts Receivable increases (debit) and Sales increases (credit) for the selling price of the computers, $15,000 ($750 × 20). In the second entry, Merchandise Inventory-Desktop Computers decreases (credit), and COGS increases (debit) for the cost of the computers, $8,000 ($400 × 20).

On July 17, the customer makes full payment on the amount due from the July 7 sale. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 17	Cash	15,000	
	Accounts Receivable		15,000
	To recognize payment in full		

Accounts Receivable decreases (credit) and Cash increases (debit) for the full amount owed. The credit terms were n/15, which is net due in 15 days. No discount was offered with this transaction; thus the full payment of $15,000 occurs.

Sales Discount Transaction Journal Entries

On August 1, a customer purchases 56 tablet computers on credit. The payment terms are 2/10, n/30, and the invoice is dated August 1. The following entries occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 1	Accounts Receivable	16,800	
	Sales		16,800
	To recognize sale of 56 tablet computers, 2/10, n/30		
Aug. 1	Cost of Goods Sold	3,360	
	Merchandise Inventory: Tablet Computers		3,360
	To recognize cost of sale, 56 tablet computers		

In the first entry, both Accounts Receivable (debit) and Sales (credit) increase by $16,800 ($300 × 56). These credit terms are a little different than the earlier example. These credit terms include a discount opportunity (2/10), meaning the customer has 10 days from the invoice date to pay on their account to receive a 2% discount on their purchase. In the second entry, COGS increases (debit) and Merchandise Inventory–Tablet Computers decreases (credit) in the amount of $3,360 (56 × $60).

On August 10, the customer pays their account in full. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 10	Cash	16,464	
	Sales Discounts	336	
	Accounts Receivable		16,800
	To recognize payment, less sales discount		

Since the customer paid on August 10, they made the 10-day window and received a discount of 2%. Cash increases (debit) for the amount paid to CBS, less the discount. Sales Discounts increases (debit) for the amount of the discount ($16,800 × 2%), and Accounts Receivable decreases (credit) for the original amount owed, before discount. Sales Discounts will reduce Sales at the end of the period to produce net sales.

Let's take the same example sale with the same credit terms, but now assume the customer paid their account on August 25. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 25	Cash	16,800	
	Accounts Receivable		16,800
	To recognize payment for tablets, no discount		

Cash increases (debit) and Accounts Receivable decreases (credit) by $16,800. The customer paid on their account outside of the discount window but within the total allotted timeframe for payment. The customer does not receive a discount in this case but does pay in full and on time.

YOUR TURN

Recording a Retailer's Sales Transactions

Record the journal entries for the following sales transactions by a retailer.

Jan. 5	Sold $2,450 of merchandise on credit (cost of $1,000), with terms 2/10, n/30, and invoice dated January 5.
Jan. 9	The customer returned $500 worth of slightly damaged merchandise to the retailer and received a full refund. The retailer returned the merchandise to its inventory at a cost of $130.
Jan. 14	Account paid in full.

Solution

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 5	Accounts Receivable	2,450	
	Sales		2,450
	To recognize sale on credit, 2/10, n/30		
Jan. 5	Cost of Goods Sold	1,000	
	Merchandise Inventory		1,000
	To recognize cost of sale		
Jan. 9	Sales Returns and Allowances	500	
	Accounts Receivable		500
	To recognize customer return		
Jan. 9	Merchandise Inventory	130	
	Cost of Goods Sold		130
	To recognize merchandise return to inventory		
Jan. 14	Cash	1,911	
	Sales Discounts	39	
	Accounts Receivable		1,950
	To recognize payment, less discount and return		

Sales Returns and Allowances Transaction Journal Entries

On September 1, CBS sold 250 landline telephones to a customer who paid with cash. On September 3, the customer discovers that 40 of the phones are the wrong color and returns the phones to CBS in exchange for a full refund. CBS determines that the returned merchandise can be resold and returns the merchandise to inventory at its original cost. The following entries occur for the sale and subsequent return.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Sept. 1	Cash	37,500	
	Sales		37,500
	To recognize sale of 250 phones with cash		
Sept. 1	Cost of Goods Sold	15,000	
	Merchandise Inventory: Phones		15,000
	To recognize cost of sale, 250 phones		

In the first entry on September 1, Cash increases (debit) and Sales increases (credit) by $37,500 (250 × $150), the sales price of the phones. In the second entry, COGS increases (debit), and Merchandise Inventory-Phones decreases (credit) by $15,000 (250 × $60), the cost of the sale.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Sept. 3	Sales Returns and Allowances	6,000	
	Cash		6,000
	To recognize return of 40 phones, cash refund		
Sept. 3	Merchandise Inventory: Phones	2,400	
	Cost of Goods Sold		2,400
	To return merchandise to inventory, sellable condition		

Since the customer already paid in full for their purchase, a full cash refund is issued on September 3. This increases Sales Returns and Allowances (debit) and decreases Cash (credit) by $6,000 (40 × $150). The second entry on September 3 returns the phones back to inventory for CBS because they have determined the merchandise is in sellable condition at its original cost. Merchandise Inventory–Phones increases (debit) and COGS decreases (credit) by $2,400 (40 × $60).

On September 8, the customer discovers that 20 more phones from the September 1 purchase are slightly damaged. The customer decides to keep the phones but receives a sales allowance from CBS of $10 per phone. The following entry occurs for the allowance.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Sept. 8	Sales Returns and Allowances	200	
	Cash		200
	To recognize allowance for 20 phones		

Since the customer already paid in full for their purchase, a cash refund of the allowance is issued in the amount of $200 (20 × $10). This increases (debit) Sales Returns and Allowances and decreases (credit) Cash. CBS does not have to consider the condition of the merchandise or return it to their inventory because the customer keeps the merchandise.

A customer purchases 55 units of the 4-in-1 desktop printers on October 1 on credit. Terms of the sale are 10/15, n/40, with an invoice date of October 1. On October 6, the customer returned 10 of the printers to CBS for a full refund. CBS returns the printers to their inventory at the original cost. The following entries show the sale and subsequent return.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 1	Accounts Receivable	19,250	
	Sales		19,250
	To recognize sale of 55 printers on credit, 10/15, n/40		
Oct. 1	Cost of Goods Sold	5,500	
	Merchandise Inventory: Printers		5,500
	To recognize cost of sale, 55 printers		

In the first entry on October 1, Accounts Receivable increases (debit) and Sales increases (credit) by $19,250 (55 × $350), the sales price of the printers. Accounts Receivable is used instead of Cash because the customer purchased on credit. In the second entry, COGS increases (debit) and Merchandise Inventory–Printers decreases (credit) by $5,500 (55 × $100), the cost of the sale.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 6	Sales Returns and Allowances	3,500	
	Accounts Receivable		3,500
	To recognize return of 10 printers		
Oct. 6	Merchandise Inventory: Printers	1,000	
	Cost of Goods Sold		1,000
	To return merchandise to inventory, sellable condition		

The customer has not yet paid for their purchase as of October 6. Therefore, the return increases Sales Returns and Allowances (debit) and decreases Accounts Receivable (credit) by $3,500 (10 × $350). The second entry on October 6 returns the printers back to inventory for CBS because they have determined the merchandise is in sellable condition at its original cost. Merchandise Inventory–Printers increases (debit) and COGS decreases (credit) by $1,000 (10 × $100).

On October 10, the customer discovers that 5 printers from the October 1 purchase are slightly damaged, but decides to keep them, and CBS issues an allowance of $60 per printer. The following entry recognizes the allowance.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 10	Sales Returns and Allowances Accounts Receivable *To recognize allowance for 5 printers*	300	300

Sales Returns and Allowances increases (debit) and Accounts Receivable decreases (credit) by $300 (5 × $60). A reduction to Accounts Receivable occurs because the customer has yet to pay their account on October 10. CBS does not have to consider the condition of the merchandise or return it to their inventory because the customer keeps the merchandise.

On October 15, the customer pays their account in full, less sales returns and allowances. The following payment entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 15	Cash Sales Discounts Accounts Receivable *To recognize payment, less sales discount, return and allowance*	13,905 1,545	 15,450

Accounts Receivable decreases (credit) for the original amount owed, less the return of $3,500 and the allowance of $300 ($19,250 – $3,500 – $300). Since the customer paid on October 15, they made the 15-day window, thus receiving a discount of 10%. Sales Discounts increases (debit) for the discount amount ($15,450 × 10%). Cash increases (debit) for the amount owed to CBS, less the discount.

Summary of Sales Transaction Journal Entries

The chart in Figure 6.12 represents the journal entry requirements based on various merchandising sales transactions.

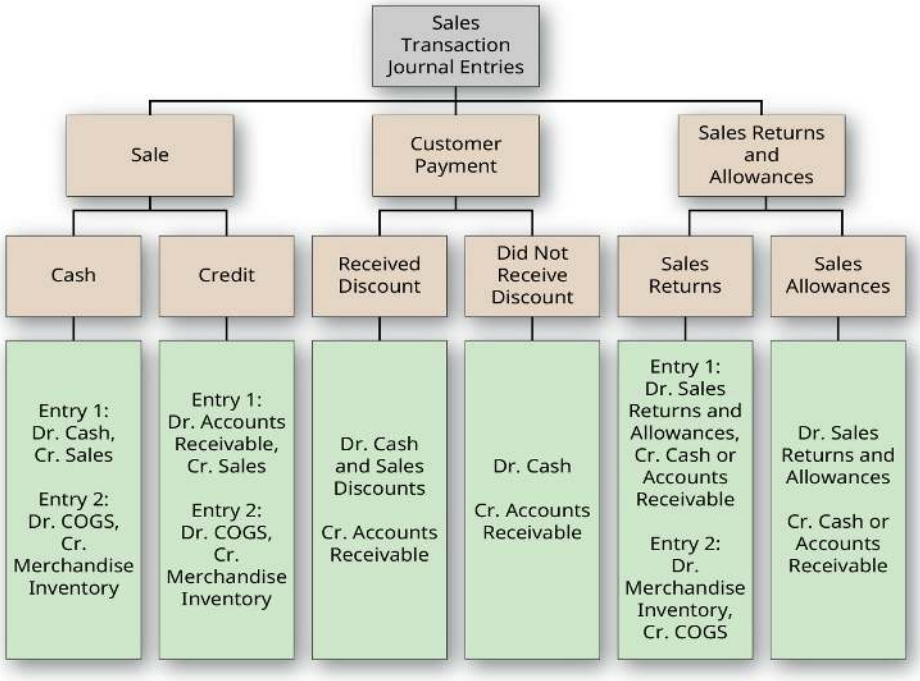


Figure 6.12Journal Entry Requirements for Merchandise Sales Transaction. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

YOUR TURN

Recording a Retailer's Sales Transactions

Record the journal entries for the following sales transactions of a retailer.

May 10	Sold $8,600 of merchandise on credit (cost of $2,650), with terms 5/10, n/30, and invoice dated May 10.
May 13	The customer returned $1,250 worth of slightly damaged merchandise to the retailer and received a full refund. The retailer returned the merchandise to its inventory at a cost of $380.
May 15	The customer discovered some merchandise were the wrong color and received an allowance from the retailer of $230.
May 20	The customer paid the account in full, less the return and allowance.

Solution

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 10	Accounts Receivable	8,600	
	Sales		8,600
	To recognize sale on credit, 5/10, n/30		
May 10	Cost of Goods Sold	2,650	
	Merchandise Inventory		2,650
	To recognize cost of sale		
May 13	Sales Returns and Allowances	1,250	
	Accounts Receivable		1,250
	To recognize customer return		
May 13	Merchandise Inventory	380	
	Cost of Goods Sold		380
	To recognize merchandise return to inventory		
May 15	Sales Returns and Allowances	230	
	Accounts Receivable		230
	To recognize customer allowance		
May 20	Cash	6,764	
	Sales Discounts	356	
	Accounts Receivable		7,120
	To recognize payment, less discount, allowance and return		

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5.4: Discuss and Record Transactions Applying the Two Commonly Used Freight-In Methods

When you buy merchandise online, shipping charges are usually one of the negotiated terms of the sale. As a consumer, anytime the business pays for shipping, it is welcomed. For businesses, shipping charges bring both benefits and challenges, and the terms negotiated can have a significant impact on inventory operations.



Figure 6.13 Shipping Merchandise. (credit: "Guida Siebert Dairy Milk Delivery Truck tractor trailer!" by Mike Mozart/Flickr, CC BY 2.0)

IFRS CONNECTION

Shipping Term Effects

Companies applying US GAAP as well as those applying IFRS can choose either a perpetual or periodic inventory system to track purchases and sales of inventory. While the tracking systems do not differ between the two methods, they have differences in when sales transactions are reported. If goods are shipped FOB shipping point, under IFRS, the total selling price of the item would be allocated between the item sold (as sales revenue) and the shipping (as shipping revenue). Under US GAAP, the seller can elect whether the shipping costs will be an additional component of revenue (separate performance obligation) or whether they will be considered fulfillment costs (expensed at the time shipping as shipping expense). In an FOB destination scenario, the shipping costs would be considered a fulfillment activity and expensed as incurred rather than be treated as a part of revenue under both IFRS and US GAAP.

Example

Wally's Wagons sells and ships 20 deluxe model wagons to Sam's Emporium for $5,000. Assume $400 of the total costs represents the costs of shipping the wagons and consider these two scenarios: (1) the wagons are shipped FOB shipping point or (2) the wagons are shipped FOB destination. If Wally's is applying IFRS, the $400 shipping is considered a separate performance obligation, or shipping revenue, and the other $4,600 is considered sales revenue. Both revenues are recorded at the time of shipping and the $400 shipping revenue is offset by a shipping expense. If Wally's used US GAAP instead, they would choose between using the same treatment as described under IFRS or considering the costs of shipping to be costs of fulfilling the order and expense those costs at the time they are incurred. In this latter case, Wally's would record Sales Revenue of $5,000 at the time the wagons are shipped and $400 as shipping expense at the time of shipping. Notice that in both cases, the total net revenues are the same $4,600, but the distribution of those revenues is different, which impacts analyses of sales revenue versus total revenues. What happens if the wagons are shipped FOB destination instead? Under both IFRS and US GAAP, the $400 shipping would be treated as an order fulfillment cost and recorded as an expense at the time the goods are shipped. Revenue of $5,000 would be recorded at the time the goods are received by Sam's emporium.

Financial Statement Presentation of Cost of Goods Sold

IFRS allows greater flexibility in the presentation of financial statements, including the income statement. Under IFRS, expenses can be reported in the income statement either by nature (for example, rent, salaries, depreciation) or by function (such as COGS or Selling and Administrative). US GAAP has no specific requirements regarding the presentation of expenses, but the SEC requires

that expenses be reported by function. Therefore, it may be more challenging to compare merchandising costs (cost of goods sold) across companies if one company's income statement shows expenses by function and another company shows them by nature.

The Basics of Freight-in Versus Freight-out Costs

Shipping is determined by contract terms between a buyer and seller. There are several key factors to consider when determining who pays for shipping, and how it is recognized in merchandising transactions. The establishment of a transfer point and ownership indicates who pays the shipping charges, who is responsible for the merchandise, on whose balance sheet the assets would be recorded, and how to record the transaction for the buyer and seller.

Ownership of inventory refers to which party owns the inventory at a particular point in time—the buyer or the seller. One particularly important point in time is the **point of transfer**, when the responsibility for the inventory transfers from the seller to the buyer. Establishing ownership of inventory is important to determine who pays the shipping charges when the goods are in transit as well as the responsibility of each party when the goods are in their possession. **Goods in transit** refers to the time in which the merchandise is transported from the seller to the buyer (by way of delivery truck, for example). One party is responsible for the goods in transit and the costs associated with transportation. Determining whether this responsibility lies with the buyer or seller is critical to determining the reporting requirements of the retailer or merchandiser.

Freight-in refers to the shipping costs for which the buyer is responsible when receiving shipment from a seller, such as delivery and insurance expenses. When the buyer is responsible for shipping costs, they recognize this as part of the purchase cost. This means that the shipping costs stay with the inventory until it is sold. The cost principle requires this expense to stay with the merchandise as it is part of getting the item ready for sale from the buyer's perspective. The shipping expenses are held in inventory until sold, which means these costs are reported on the balance sheet in Merchandise Inventory. When the merchandise is sold, the shipping charges are transferred with all other inventory costs to Cost of Goods Sold on the income statement.

For example, California Business Solutions (CBS) may purchase computers from a manufacturer and part of the agreement is that CBS (the buyer) pays the shipping costs of $1,000. CBS would record the following entry to recognize freight-in.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Receivable	4,500	
	Sales		4,500
	To recognize sale, FOB Destination, 30 × $150		
	Cost of Goods Sold	1,800	
	Merchandise Inventory		1,800
	To recognize cost of sale, 30 × $60		
	Delivery Expense	120	
	Cash		120
	To recognize freight-out shipping costs		

Merchandise Inventory increases (debit), and Cash decreases (credit), for the entire cost of the purchase, including shipping, insurance, and taxes. On the balance sheet, the shipping charges would remain a part of inventory.

Freight-out refers to the costs for which the seller is responsible when shipping to a buyer, such as delivery and insurance expenses. When the seller is responsible for shipping costs, they recognize this as a delivery expense. The delivery expense is specifically associated with selling and not daily operations; thus, delivery expenses are typically recorded as a selling and administrative expense on the income statement in the current period.

For example, CBS may sell electronics packages to a customer and agree to cover the $100 cost associated with shipping and insurance. CBS would record the following entry to recognize freight-out.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Delivery Expense	100	
	Cash		100
	To recognize freight-out shipping costs		

Delivery Expense increases (debit) and Cash decreases (credit) for the shipping cost amount of $100. On the income statement, this $100 delivery expense will be grouped with Selling and Administrative expenses.

LINK TO LEARNING

Shipping term agreements provide clarity for buyers and sellers with regards to inventory responsibilities. Use the animation on FOB Shipping Point and FOB Destination to learn more.

Discussion and Application of FOB Destination

As you've learned, the seller and buyer will establish terms of purchase that include the purchase price, taxes, insurance, and shipping charges. So, who pays for shipping? On the purchase contract, shipping terms establish who owns inventory in transit, the point of transfer, and who pays for shipping. The shipping terms are known as "free on board," or simply FOB. Some refer to FOB as the point of transfer, but really, it incorporates more than simply the point at which responsibility transfers. There are two FOB considerations: FOB Destination and FOB Shipping Point.

If **FOB destination point** is listed on the purchase contract, this means the seller pays the shipping charges (freight-out). This also means goods in transit belong to, and are the responsibility of, the seller. The point of transfer is when the goods reach the buyer's place of business.

To illustrate, suppose CBS sells 30 landline telephones at $150 each on credit at a cost of $60 per phone. On the sales contract, FOB Destination is listed as the shipping terms, and shipping charges amount to $120, paid as cash directly to the delivery service. The following entries occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Receivable	4,500	
	Sales		4,500
	To recognize sale, FOB Destination, 30 × $150		
	COGS	1,800	
	Merchandise Inventory		1,800
	To recognize cost of sale, 30 × $60		
	Delivery Expense	120	
	Cash		120
	To recognize freight-out shipping costs		

Accounts Receivable (debit) and Sales (credit) increases for the amount of the sale (30 × $150). Cost of Goods Sold increases (debit) and Merchandise Inventory decreases (credit) for the cost of sale (30 × $60). Delivery Expense increases (debit) and Cash decreases (credit) for the delivery charge of $120.

Discussion and Application of FOB Shipping Point

If **FOB shipping point** is listed on the purchase contract, this means the buyer pays the shipping charges (freight-in). This also means goods in transit belong to, and are the responsibility of, the buyer. The point of transfer is when the goods leave the seller's place of business.

Suppose CBS buys 40 tablet computers at $60 each on credit. The purchase contract shipping terms list FOB Shipping Point. The shipping charges amount to an extra $5 per tablet computer. All other taxes, fees, and insurance are included in the purchase price of $60. The following entry occurs to recognize the purchase.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Merchandise Inventory	2,600	
	Accounts Payable		2,600
	To recognize purchase on credit, FOB Shipping Point, 40 × $65		

Merchandise Inventory increases (debit) and Accounts Payable increases (credit) by the amount of the purchase, including all shipping, insurance, taxes, and fees [(40 × $60) + (40 × $5)].

Figure 6.14 shows a comparison of shipping terms.

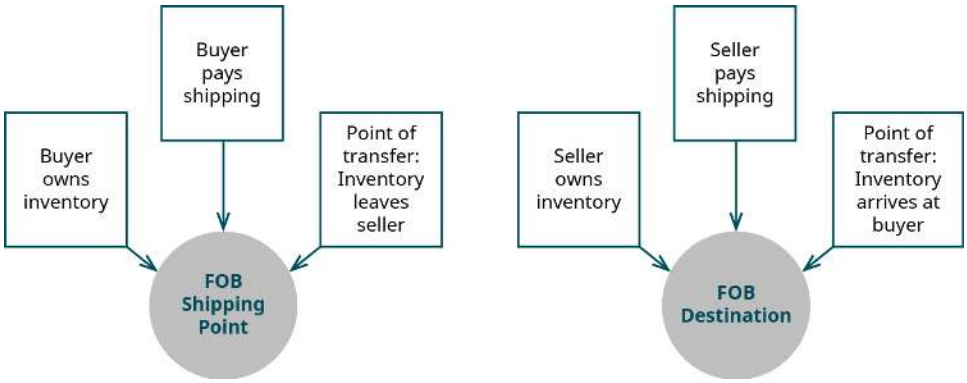


Figure 6.14 FOB Shipping Point versus FOB Destination. A comparison of shipping terms. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

THINK IT THROUGH

Choosing Suitable Shipping Terms

You are a seller and conduct business with several customers who purchase your goods on credit. Your standard contract requires an FOB Shipping Point term, leaving the buyer with the responsibility for goods in transit and shipping charges. One of your long-term customers asks if you can change the terms to FOB Destination to help them save money.

Do you change the terms, why or why not? What positive and negative implications could this have for your business, and your customer? What, if any, restrictions might you consider if you did change the terms

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CHAPTER OVERVIEW

6: Inventory

6.1: Describe and Demonstrate the Basic Inventory Valuation Methods and Their Cost Flow Assumptions
6.2: Calculate the Cost of Goods Sold and Ending Inventory Using the Perpetual Method

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6.1: Describe and Demonstrate the Basic Inventory Valuation Methods and Their Cost Flow Assumptions

Accounting for inventory is a critical function of management. Inventory accounting is significantly complicated by the fact that it is an ongoing process of constant change, in part because (1) most companies offer a large variety of products for sale, (2) product purchases occur at irregular times, (3) products are acquired for differing prices, and (4) inventory acquisitions are based on sales projections, which are always uncertain and often sporadic. Merchandising companies must meticulously account for every individual product that they sell, equipping them with essential information, for decisions such as these:

- What is the quantity of each product that is available to customers?
- When should inventory of each product item be replenished and at what quantity?
- How much should the company charge customers for each product to cover all costs plus profit margin?
- How much of the inventory cost should be allocated toward the units sold (cost of goods sold) during the period?
- How much of the inventory cost should be allocated toward the remaining units (ending inventory) at the end of the period?
- Is each product moving robustly or have some individual inventory items' activity decreased?
- Are some inventory items obsolete?

The company's financial statements report the combined cost of all items sold as an offset to the proceeds from those sales, producing the net number referred to as **gross margin** (or gross profit). This is presented in the first part of the results of operations for the period on the multi-step income statement. The unsold inventory at period end is an asset to the company and is therefore included in the company's financial statements, on the balance sheet, as shown in Figure 10.2. The total cost of all the inventory that remains at period end, reported as **merchandise inventory** on the balance sheet, plus the total cost of the inventory that was sold or otherwise removed (through shrinkage, theft, or other loss), reported as cost of goods sold on the income statement (see Figure 10.2), represent the entirety of the inventory that the company had to work with during the period, or goods available for sale.

SIERRA SPORTS
Balance Sheet (partial)
December 31, 2017

Assets	
Current Assets	
Cash	$21,580
Accounts Receivable	2,000
Inventory	60,000

SIERRA SPORTS
Income Statement (partial)
For Year Ended December 31, 2017

Revenues	
Total Revenues	$19,500
Cost of Goods Sold	9,000
Gross Profit	10,500

Figure 10.2 Financial Statement Effects of Inventory Transactions. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Fundamentals of Inventory

Although our discussion will consider inventory issues from the perspective of a retail company, using a resale or merchandising operation, inventory accounting also encompasses recording and reporting of manufacturing operations. In the manufacturing environment, there would be separate inventory calculations for the various process levels of inventory, such as raw materials, work in process, and finished goods. The manufacturer's finished goods inventory is equivalent to the merchandiser's inventory account in that it includes finished goods that are available for sale.

In merchandising companies, inventory is a company asset that includes beginning inventory plus **purchases**, which include all additions to inventory during the period. Every time the company sells products to customers, they dispose of a portion of the company's inventory asset. **Goods available for sale** refers to the total cost of all inventory that the company had on hand at any time during the period, including beginning inventory and all inventory purchases. These goods were normally either sold to customers during the period (occasionally lost due to spoilage, theft, damage, or other types of shrinkages) and thus reported as cost of goods sold, an expense account on the income statement, or these goods are still in inventory at the end of the period and reported as ending merchandise inventory, an asset account on the balance sheet. As an example, assume that Harry's Auto Parts

Store sells oil filters. Suppose that at the end of January 31, 2018, they had 50 oil filters on hand at a cost of $7 per unit. This means that at the beginning of February, they had 50 units in inventory at a total cost of $350 (50 × $7). During the month, they purchased 20 filters at a cost of $7, for a total cost of $140 (20 × $7). At the end of the month, there were 18 units left in inventory. Therefore, during the month of February, they sold 52 units. Figure 10.3 illustrates how to calculate the goods available for sale and the cost of goods sold.

	Number of Units	Cost per Unit	Total Cost
Beginning Inventory, January 31, 2018	50	$7	$350
+ purchases during February 2018	20	$7	140
Total Goods Available for Sale	**70**		**$490**
– Ending Inventory, February 28, 2018	18	$7	126
Cost of Goods Sold for February 2018	**52**		**$364**

Figure 10.3 Fundamentals of Inventory Accounting. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Inventory costing is accomplished by one of four specific costing methods: (1) specific identification, (2) first-in, first-out, (3) last-in, first-out, and (4) weighted-average cost methods. All four methods are techniques that allow management to distribute the costs of inventory in a logical and consistent manner, to facilitate matching of costs to offset the related revenue item that is recognized during the period, in accordance with GAAP expense recognition and matching concepts. Note that a company's cost allocation process represents management's chosen method for expensing product costs, based strictly on estimates of the flow of inventory costs, which is unrelated to the actual flow of the physical inventory. Use of a cost allocation strategy eliminates the need for often cost-prohibitive individual tracking of costs of each specific inventory item, for which purchase prices may vary greatly. In this chapter, you will be provided with some background concepts and explanations of terms associated with inventory as well as a basic demonstration of each of the four allocation methods, and then further delineation of the application and nuances of the costing methods.

A critical issue for inventory accounting is the frequency for which inventory values are updated. There are two primary methods used to account for inventory balance timing changes: the periodic inventory method and the perpetual inventory method. These two methods were addressed in depth in Merchandising Transactions).

Periodic Inventory Method

A **periodic inventory system** updates the inventory balances at the end of the reporting period, typically the end of a month, quarter, or year. At that point, a journal entry is made to adjust the merchandise inventory asset balance to agree with the physical count of inventory, with the corresponding adjustment to the expense account, cost of goods sold. This adjustment shifts the costs of all inventory items that are no longer held by the company to the income statement, where the costs offset the revenue from inventory sales, as reflected by the gross margin. As sales transactions occur throughout the period, the periodic system requires that only the sales entry be recorded because costs will only be updated during end-of-period adjustments when financial statements are prepared. However, any additional goods for sale acquired during the month are recorded as purchases. Following are examples of typical journal entries for periodic transactions. The first is an example entry for an inventory sales transaction when using periodic inventory, and the second records the purchase of additional inventory when using the periodic method. Note: Periodic requires no corresponding cost entry at the time of sale, since the inventory is adjusted only at period end.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Receivable	XXX	
	Sales Revenue		XXX

A purchase of inventory for sale by a company under the periodic inventory method would necessitate the following journal entry. (This is discussed in more depth in Merchandising Transactions.)

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Purchases	XXX	
	Cash (or Accounts Payable)		XXX

Perpetual Inventory Method

A **perpetual inventory system** updates the inventory account balance on an ongoing basis, at the time of each individual sale. This is normally accomplished by use of auto-ID technology, such as optical-scan barcode or radio frequency identification (RFIF) labels. As transactions occur, the perpetual system requires that every sale is recorded with two entries, first recording the sales transaction as an increase to Accounts Receivable and a decrease to Sales Revenue, and then recording the cost associated with the sale as an increase to Cost of Goods Sold and a decrease to Merchandise Inventory. The journal entries made at the time of sale immediately shift the costs relating to the goods being sold from the merchandise inventory account on the balance sheet to the cost of goods sold account on the income statement. Little or no adjustment is needed to inventory at period end because changes in the inventory balances are recorded as both the sales and purchase transactions occur. Any necessary adjustments to the ending inventory account balances would typically be caused by one of the types of shrinkage you've learned about. These are example entries for an inventory sales transaction when using perpetual inventory updating:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Receivable	XXX	
	Sales Revenue		XXX
	Cost of Goods Sold	XXX	
	Merchandise Inventory		XXX

A purchase of inventory for sale by a company under the perpetual inventory method would necessitate the following journal entry. (Greater detail is provided in Merchandising Transactions.)

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Inventory	XXX	
	Cash (or Accounts Payable)		XXX

CONTINUING APPLICATION

Inventory

As previously discussed, **Gearhead Outfitters** is a retail chain selling outdoor gear and accessories. As such, the company is faced with many possible questions related to inventory. How much inventory should be carried? What products are the most profitable? Which products have the most sales? Which products are obsolete? What timeframe should the company allow for inventory to be replenished? Which products are the most in demand at each location?

In addition to questions related to type, volume, obsolescence, and lead time, there are many issues related to accounting for inventory and the flow of goods. As one of the biggest assets of the company, the way inventory is tracked can have an effect on profit. Which method of accounting—first-in first-out, last-in first out, specific identification, weighted average— provides the most accurate reflection of inventory and cost of goods sold is important in determining gross profit and net income. The method selected affects profits, taxes, and can even change the opinion of potential lenders concerning the financial strength of the company. In choosing a method of accounting for inventory, management should consider many factors, including the accurate

reflection of costs, taxes on profits, decision-making about purchases, and what effect a point-of-sale (POS) system may have on tracking inventory.

Gearhead exists to provide a positive shopping experience for its customers. Offering a clear picture of its goods, and maintaining an appealing, timely supply at competitive prices is one way to keep the shopping experience positive. Thus, accounting for inventory plays an instrumental role in management's ability to successfully run a company and deliver the company's promise to customers.

Data for Demonstration of the Four Basic Inventory Valuation Methods

The following dataset will be used to demonstrate the application and analysis of the four methods of inventory accounting.

Company: Spy Who Loves You Corporation

Product: Global Positioning System (GPS) Tracking Device

Description: This product is an economical real-time GPS tracking device, designed for individuals who wish to monitor others' whereabouts. It is marketed to parents of middle school and high school students as a safety measure. Parents benefit by being apprised of the child's location, and the student benefits by not having to constantly check in with parents. Demand for the product has spiked during the current fiscal period, while supply is limited, causing the selling price to escalate rapidly.

SPY WHO LOVES YOU TRACKER			
	Number of Units	**Unit Cost**	**Sales Price**
Beginning Inventory Jul. 1	150	$21	
Sold Jul. 5	120		$36
Purchased Jul. 10	225	27	
Sold Jul. 15	180		39
Purchased Jul. 25	210	33	
Ending Inventory Jul. 31	285		

Specific Identification Method

The **specific identification method** refers to tracking the actual cost of the item being sold and is generally used only on expensive items that are highly customized (such as tracking detailed costs for each individual car in automobiles sales) or inherently distinctive (such as tracking origin and cost for each unique stone in diamond sales). This method is too cumbersome for goods of large quantity, especially if there are not significant feature differences in the various inventory items of each product type. However, for purposes of this demonstration, assume that the company sold one specific identifiable unit, which was purchased in the second lot of products, at a cost of $27.

Three separate lots of goods are purchased:

	Number of Units	**Unit Cost**
Lot 1	150	$21
Lot 2*	225	27
Lot 3	210	33

Sales revenue	$36
– Cost, assuming SI, unit assumed sold from Lot 2*	27
= Gross margin for one unit	9

Note: one unit sold for $36, using the specific identification (SI) costing method

First-in, First-out (FIFO) Method

The **first-in, first-out method (FIFO)** records costs relating to a sale as if the earliest purchased item would be sold first. However, the physical flow of the units sold under both the periodic and perpetual methods would be the same. Due to the mechanics of the determination of costs of goods sold under the perpetual method, based on the timing of additional purchases of inventory during the accounting period, it is possible that the costs of goods sold might be slightly different for an accounting period. Since FIFO assumes that the first items purchased are sold first, the latest acquisitions would be the items that remain in inventory at the end of the period and would constitute ending inventory.

Three separate lots of goods are purchased:

	Number of Units	Unit Cost
Lot 1*	150	$21
Lot 2	225	27
Lot 3	210	33

Sales revenue	$36
– Cost, assuming FIFO, unit assumed sold from Lot 1*	21
= Gross margin for one unit	15

Note: one unit sold for $36, using the FIFO costing method

Last-in, First-out (LIFO) Method

The **last-in, first out method (LIFO)** records costs relating to a sale as if the latest purchased item would be sold first. As a result, the earliest acquisitions would be the items that remain in inventory at the end of the period.

Three separate lots of goods are purchased:

	Number of Units	Unit Cost
Lot 1	150	$21
Lot 2	225	27
Lot 3*	210	33

Sales revenue	$36
– Cost, assuming LIFO, unit assumed sold from Lot 3*	33
= Gross margin for one unit	3

Note: one unit sold for $36, using the LIFO costing method

IFRS CONNECTION

Inventory

For many companies, inventory is a significant portion of the company's assets. In 2018, the inventory of **Walmart**, the world's largest international retailer, was 70% of current assets and 21% of total assets. Because inventory also affects income as it is sold through the cost of goods sold account, inventory plays a significant role in the analysis and evaluation of many companies. Ending inventory affects both the balance sheet and the income statement. As you've learned, the ending inventory balance is reflected as a current asset on the balance sheet and the ending inventory balance is used in the calculation of costs of goods sold. Understanding how companies report inventory under US GAAP versus under IFRS is important when comparing companies reporting under the two methods, particularly because of a significant difference between the two methods.

Similarities

- When inventory is purchased, it is accounted for at historical cost and then evaluated at each balance sheet date to adjust to the lower of cost or net realizable value.
- Both IFRS and US GAAP allow FIFO and weighted-average cost flow assumptions as well as specific identification where appropriate and applicable.

Differences

- IFRS does not permit the use of LIFO. This is a major difference between US GAAP and IFRS. The AICPA estimates that roughly 35–40% of all US companies use LIFO, and in some industries, such as oil and gas, the use of LIFO is more prevalent. Because LIFO generates lower taxable income during times of rising prices, it is estimated that eliminating LIFO would generate an estimated $102 billion in tax revenues in the US for the period 2017–2026. In creating IFRS, the IASB chose to eliminate LIFO, arguing that FIFO more closely matches the flow of goods. In the US, FASB believes the choice between LIFO and FIFO is a business model decision that should be left up to each company. In addition, there was significant pressure by some companies and industries to retain LIFO because of the significant tax liability that would arise for many companies from the elimination of LIFO.

Weighted-Average Cost Method

The **weighted-average cost method** (sometimes referred to as the average cost method) requires a calculation of the average cost of all units of each particular inventory items. The average is obtained by multiplying the number of units by the cost paid per unit for each lot of goods, then adding the calculated total value of all lots together, and finally dividing the total cost by the total number of units for that product. As a caveat relating to the average cost method, note that a new average cost must be calculated after every change in inventory to reassess the per-unit weighted-average value of the goods. This laborious requirement might make use of the average method cost-prohibitive.

Three separate lots of goods are purchased:

	Number of Units	Unit Cost
Lot 1	150	$21
Lot 2	225	27
Lot 3	210	33

Sales revenue	$36.00
– Cost, assuming average cost of units sold from Lots 1, 2, and 3*	27.62
= Gross margin for one unit	8.38

Note: one unit sold for $36, using the weighted average costing method
*[(150 × $21) + (225 × $27) + (210 × $33)]/585 = $27.62 average

Comparing the various costing methods for the sale of one unit in this simple example reveals a significant difference that the choice of cost allocation method can make. Note that the sales price is not affected by the cost assumptions; only the cost amount varies, depending on which method is chosen. Figure 10.4 depicts the different outcomes that the four methods produced.

	Sp ID	FIFO	LIFO	AVG
Sales revenue	36	36	36	36.00
– Cost, under each cost allocation method	27	21	33	27.62
= Gross margin for one unit	9	15	3	8.38

Figure 10.4 Comparison of the Four Costing Methods. One unit sold for $36. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Once the methods of costing are determined for the company, that methodology would typically be applied repeatedly over the remainder of the company's history to accomplish the generally accepted accounting principle of **consistency** from one period to another. It is possible to change methods if the company finds that a different method more accurately reflects results of operations, but the change requires disclosure in the company's notes to the financial statements, which alerts financial statement users of the impact of the change in methodology. Also, it is important to realize that although the Internal Revenue Service generally allows differing methods of accounting treatment for tax purposes than for financial statement purposes, an exception exists that prohibits the use of LIFO inventory costing on the company tax return unless LIFO is also used for the financial statement costing calculations.

ETHICAL CONSIDERATIONS

Auditors Look for Inventory Fraud

Inventory fraud can be used to book false revenue or to increase the amount of assets to obtain additional lending from a bank or other sources. In the typical chain of accounting events, inventory ultimately becomes an expense item known as cost of goods sold.[1] In a manipulated accounting system, a trail of fraudulent transactions can point to accounting misrepresentation in the sales cycle, which may include

- recording fictitious and nonexistent inventory,
- manipulation of inventory counts during a facility audit,
- recording of sales but no recording of purchases, and/or
- fraudulent inventory capitalization,

to list a few.[2] All these elaborate schemes have the same goal: to improperly manipulate inventory values to support the creation of a fraudulent financial statement. Accountants have an ethical, moral, and legal duty to not commit accounting and financial statement fraud. Auditors have a duty to look for such inventory fraud.

Auditors follow the Statement on Auditing Standards (SAS) No. 99 and AU Section 316 Consideration of Fraud in a Financial Statement Audit when auditing a company's books. Auditors are outside accountants hired to "obtain reasonable assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud."[3] Ultimately, an auditor will prepare an audit report based on the testing of the balances in a company's books, and a review of the company's accounting system. The auditor is to perform "procedures at locations on a surprise or unannounced basis, for example, observing inventory on unexpected dates or at unexpected locations or counting cash on a surprise basis."[4] Such testing of a company's inventory system is used to catch accounting fraud. It is the responsibility of the accountant to present accurate accounting records to the auditor, and for the auditor to create auditing procedures that reasonably ensure that the inventory balances are free of material misstatements in the accounting balances.

Additional Inventory Issues

Various other issues that affect inventory accounting include consignment sales, transportation and ownership issues, inventory estimation tools, and the effects of inflationary versus deflationary cycles on various methods.

Consignment

Consigned goods refer to merchandise inventory that belongs to a third party but which is displayed for sale by the company. These goods are not owned by the company and thus must not be included on the company's balance sheet nor be used in the company's inventory calculations. The company's profit relating to consigned goods is normally limited to a percentage of the sales proceeds at the time of sale.

For example, assume that you sell your office and your current furniture doesn't match your new building. One way to dispose of the furniture would be to have a consignment shop sell it. The shop would keep a percentage of the sales revenue and pay you the remaining balance. Assume in this example that the shop will keep one-third of the sales proceeds and pay you the remaining two-thirds balance. If the furniture sells for $15,000, you would receive $10,000 and the shop would keep the remaining $5,000 as its sales commission. A key point to remember is that until the inventory, in this case your office furniture, is sold, you still own it, and it is reported as an asset on your balance sheet and not an asset for the consignment shop. After the sale, the buyer is the owner, so the consignment shop is never the property's owner.

Free on Board (FOB) Shipping and Destination

Transportation costs are commonly assigned to either the buyer or the seller based on the free on board (FOB) terms, as the terms relate to the seller. Transportation costs are part of the responsibilities of the owner of the product, so determining the owner at the shipping point identifies who should pay for the shipping costs. The seller's responsibility and ownership of the goods ends at the point that is listed after the FOB designation. Thus, **FOB shipping point** means that the seller transfers title and responsibility to the buyer at the shipping point, so the buyer would owe the shipping costs. The purchased goods would be recorded on the buyer's balance sheet at this point.

Similarly, **FOB destination** means the seller transfers title and responsibility to the buyer at the destination, so the seller would owe the shipping costs. Ownership of the product is the trigger that mandates that the asset be included on the company's balance sheet. In summary, the goods belong to the seller until they transition to the location following the term FOB, making the seller responsible for everything about the goods to that point, including recording purchased goods on the balance sheet . If something happens to damage or destroy the goods before they reach the FOB location, the seller would be required to replace the product or reverse the sales transaction.

Lower-of-Cost-or-Market (LCM)

Reporting inventory values on the balance sheet using the accounting concept of **conservatism** (which discourages overstatement of net assets and net income) requires inventory to be calculated and adjusted to a value that is the lower of the cost calculated using the company's chosen valuation method or the market value based on the market or replacement value of the inventory items. Thus, if traditional cost calculations produce inventory values that are overstated, the **lower-of-cost-or-market (LCM)** concept requires that the balance in the inventory account should be decreased to the more conservative replacement value rather than be overstated on the balance sheet.

Estimating Inventory Costs: Gross Profit Method and Retail Inventory Method

Sometimes companies have a need to estimate inventory values. These estimates could be needed for interim reports, when physical counts are not taken. The need could be result from a natural disaster that destroys part or all of the inventory or from an error that causes inventory counts to be compromised or omitted. Some specific industries (such as select retail businesses) also regularly use these estimation tools to determine cost of goods sold. Although the method is predictable and simple, it is also less accurate since it is based on estimates rather than actual cost figures.

The **gross profit method** is used to estimate inventory values by applying a standard gross profit percentage to the company's sales totals when a physical count is not possible. The resulting gross profit can then be subtracted from sales, leaving an estimated cost of goods sold. Then the ending inventory can be calculated by subtracting cost of goods sold from the total goods available for sale.

Likewise, the **retail inventory method** estimates the cost of goods sold, much like the gross profit method does, but uses the retail value of the portions of inventory rather than the cost figures used in the gross profit method.

Inflationary Versus Deflationary Cycles

As prices rise (inflationary times), FIFO ending inventory account balances grow larger even when inventory unit counts are constant, while the income statement reflects lower cost of goods sold than the current prices for those goods, which produces higher profits than if the goods were costed with current inventory prices. Conversely, when prices fall (deflationary times), FIFO ending inventory account balances decrease and the income statement reflects higher cost of goods sold and lower profits than if goods were costed at current inventory prices. The effect of inflationary and deflationary cycles on LIFO inventory valuation are the exact opposite of their effects on FIFO inventory valuation.

LINK TO LEARNING

Accounting Coach does a great job in explaining inventory issues (and so many other accounting topics too): Learn more about inventory and cost of goods sold on their website.

THINK IT THROUGH

First-in, First-out (FIFO)

Suppose you are the assistant controller for a retail establishment that is an independent bookseller. The company uses manual, periodic inventory updating, using physical counts at year end, and the FIFO method for inventory costing. How would you approach the subject of whether the company should consider switching to computerized perpetual inventory updating? Can you present a persuasive argument for the benefits of perpetual? Explain.

Footnotes

- 1 “Inventory Fraud: Knowledge Is Your First Line of Defense.” Weaver. Mar. 27, 2015. https://weaver.com/blog/inventory-fr...t-line-defense
- 2 Wells, Joseph T. “Ghost Goods: How to Spot Phantom Inventory.” *Journal of Accountancy*. June 1, 2001. https://www.journalofaccountancy.com...inventory.html
- 3 American Institute of Certified Public Accountants (AICPA). *Consideration of Fraud in a Financial Statement Audit* (AU Section 316). https://www.aicpa.org/Research/Stand...s/AU-00316.pdf
- 4 American Institute of Certified Public Accountants (AICPA). *Consideration of Fraud in a Financial Statement Audit* (AU Section 316). https://www.aicpa.org/Research/Stand...s/AU-00316.pdf

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6.2: Calculate the Cost of Goods Sold and Ending Inventory Using the Perpetual Method

As you've learned, the perpetual inventory system is updated continuously to reflect the current status of inventory on an ongoing basis. Modern sales activity commonly uses electronic identifiers—such as bar codes and RFID technology—to account for inventory as it is purchased, monitored, and sold. Specific identification inventory methods also commonly use a manual form of the perpetual system. Here we'll demonstrate the mechanics implemented when using perpetual inventory systems in inventory accounting, whether those calculations are orchestrated in a laborious manual system or electronically (in the latter, the inventory accounting operates effortlessly behind the scenes but nonetheless utilizes the same perpetual methodology).

CONCEPTS IN PRACTICE

Perpetual Inventory's Advancements through Technology

Perpetual inventory has been seen as the wave of the future for many years. It has grown since the 1970s alongside the development of affordable personal computers. Universal product codes, commonly known as UPC barcodes, have advanced inventory management for large and small retail organizations, allowing real-time inventory counts and reorder capability that increased popularity of the perpetual inventory system. These UPC codes identify specific products but are not specific to the particular batch of goods that were produced. Electronic product codes (EPCs) such as radio frequency identifiers (RFIDs) are essentially an evolved version of UPCs in which a chip/identifier is embedded in the EPC code that matches the goods to the actual batch of product that was produced. This more specific information allows better control, greater accountability, increased efficiency, and overall quality monitoring of goods in inventory. The technology advancements that are available for perpetual inventory systems make it nearly impossible for businesses to choose periodic inventory and forego the competitive advantages that the technology offers.

Information Relating to All Cost Allocation Methods, but Specific to Perpetual Inventory Updating

Let's return to The Spy Who Loves You Corporation data to demonstrate the four cost allocation methods, assuming inventory is updated on an ongoing basis in a perpetual system.

Cost Data for Calculations

Company: Spy Who Loves You Corporation

Product: Global Positioning System (GPS) Tracking Device

Description: This product is an economical real-time GPS tracking device, designed for individuals who wish to monitor others' whereabouts. It is being marketed to parents of middle school and high school students as a safety measure. Parents benefit by being apprised of the child's location, and the student benefits by not having to constantly check in with parents. Demand for the product has spiked during the current fiscal period, while supply is limited, causing the selling price to escalate rapidly. Note: For simplicity of demonstration, beginning inventory cost is assumed to be $21 per unit for all cost assumption methods.

SPY WHO LOVES YOU TRACKER			
	Number of Units	Unit Cost	Sales Price
Beginning Inventory Jul. 1	150	$21	
Sold Jul. 5	120		$36
Purchased Jul. 10	225	27	
Sold Jul. 15	180		39
Purchased Jul. 25	210	33	
Ending Inventory Jul. 31	185		

Calculations for Inventory Purchases and Sales during the Period, Perpetual Inventory Updating

Regardless of which cost assumption is chosen, recording inventory sales using the perpetual method involves recording both the revenue and the cost from the transaction for each individual sale. As additional inventory is purchased during the period, the cost

of those goods is added to the merchandise inventory account. Normally, no significant adjustments are needed at the end of the period (before financial statements are prepared) since the inventory balance is maintained to continually parallel actual counts.

ETHICAL CONSIDERATIONS

Ethical Short-Term Decision Making

When management and executives participate in unethical or fraudulent short-term decision making, it can negatively impact a company on many levels. According to Antonia Chion, Associate Director of the SEC's Division of Enforcement, those who participate in such activities will be held accountable.[5] For example, in 2015, the Securities and Exchange Commission (SEC) charged two former top executives of OCZ Technology Group Inc. for accounting failures.[6] The SEC alleged that OCZ's former CEO Ryan Petersen engaged in a scheme to materially inflate OCZ's revenues and gross margins from 2010 to 2012, and that OCZ's former chief financial officer Arthur Knapp participated in certain accounting, disclosure, and internal accounting controls failures.

Petersen and Knapp allegedly participated in channel stuffing, which is the process of recognizing and recording revenue in a current period that actually will be legally earned in one or more future fiscal periods. A common example is to arrange for customers to submit purchase orders in the current year, often with the understanding that if they don't need the additional inventory then they may return the inventory received or cancel the order if delivery has not occurred.[7] When the intention behind channel stuffing is to mislead investors, it crosses the line into fraudulent practice. This and other unethical short-term accounting decisions made by Petersen and Knapp led to the bankruptcy of the company they were supposed to oversee and resulted in fraud charges from the SEC. Practicing ethical short-term decision making may have prevented both scenarios.

Specific Identification

For demonstration purposes, the specific units assumed to be sold in this period are designated as follows, with the specific inventory distinction being associated with the lot numbers:

- Sold 120 units, all from Lot 1 (beginning inventory), costing $21 per unit
- Sold 180 units, 20 from Lot 1 (beginning inventory), costing $21 per unit; 160 from Lot 2 (July 10 purchase), costing $27 per unit

The specific identification method of cost allocation directly tracks each of the units purchased and costs them out as they are sold. In this demonstration, assume that some sales were made by specifically tracked goods that are part of a lot, as previously stated for this method. For The Spy Who Loves You, the first sale of 120 units is assumed to be the units from the beginning inventory, which had cost $21 per unit, bringing the total cost of these units to $2,520. Once those units were sold, there remained 30 more units of the beginning inventory. The company bought 225 more units for $27 per unit. The second sale of 180 units consisted of 20 units at $21 per unit and 160 units at $27 per unit for a total second-sale cost of $4,740. Thus, after two sales, there remained 10 units of inventory that had cost the company $21, and 65 units that had cost the company $27 each. The last transaction was an additional purchase of 210 units for $33 per unit. Ending inventory was made up of 10 units at $21 each, 65 units at $27 each, and 210 units at $33 each, for a total specific identification perpetual ending inventory value of $8,895.

Calculations of Costs of Goods Sold, Ending Inventory, and Gross Margin, Specific Identification

The specific identification costing assumption tracks inventory items individually so that, when they are sold, the exact cost of the item is used to offset the revenue from the sale. The cost of goods sold, inventory, and gross margin shown in Figure 10.13 were determined from the previously-stated data, particular to specific identification costing.

	Cost of Goods Purchased			Cost of Goods Sold			Cost of Inventory Remaining		
	Number of Units	Unit Cost	Total Cost	Number of Units	Unit Cost	Total Cost	Number of Units	Unit Cost	Total Cost
Beginning, Jul. 1							150	$21	$3,150
Sale, Jul. 5				120	$21	$2,520	30	21	630
Purchase, Jul. 10	225	$27	$6,075				30 225	21 27	630 6,075
Sale, Jul. 15				20 160	21 27	420 4,320	30 65	21 27	210 1,755
Purchase, Jul. 25	210	33	6,930				30 65 210	21 27 33	210 1,755 6,930
Total Purchases in Jul.			$13,005	Total COGS		$7,260			

Cost Value:	
10 units at $21	210
65 units at $27	1,755
210 units at $33	6,930
Total	8,895

Figure 10.13 Specific Identification Costing Assumption Cost of Goods Sold, Inventory, and Cost Value. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Figure 10.14 shows the gross margin, resulting from the specific identification perpetual cost allocations of $7,260.

Gross Margin	
Sales	$11,340
– Cost of Goods Sold	7,260
= Gross Margin	4,080

$(120 \times \$36) + (180 \times \$39)$

Figure 10.14 Specific Identification Perpetual Cost Allocations Gross Margin. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Description of Journal Entries for Inventory Sales, Perpetual, Specific Identification

Journal entries are not shown, but the following discussion provides the information that would be used in recording the necessary journal entries. Each time a product is sold, a revenue entry would be made to record the sales revenue and the corresponding accounts receivable or cash from the sale. Because of the choice to apply perpetual inventory updating, a second entry made at the same time would record the cost of the item based on the actual cost of the items, which would be shifted from merchandise inventory (an asset) to cost of goods sold (an expense).

First-in, First-out (FIFO)

The first-in, first-out method (FIFO) of cost allocation assumes that the earliest units purchased are also the first units sold. For The Spy Who Loves You, using perpetual inventory updating, the first sale of 120 units is assumed to be the units from the beginning inventory, which had cost $21 per unit, bringing the total cost of these units to $2,520. Once those units were sold, there remained 30 more units of beginning inventory. The company bought 225 more units for $27 per unit. At the time of the second sale of 180 units, the FIFO assumption directs the company to cost out the last 30 units of the beginning inventory, plus 150 of the units that had been purchased for $27. Thus, after two sales, there remained 75 units of inventory that had cost the company $27 each. The last transaction was an additional purchase of 210 units for $33 per unit. Ending inventory was made up of 75 units at $27 each, and 210 units at $33 each, for a total FIFO perpetual ending inventory value of $8,955.

Calculations of Costs of Goods Sold, Ending Inventory, and Gross Margin, First-in, First-out (FIFO)

The FIFO costing assumption tracks inventory items based on lots of goods that are tracked, in the order that they were acquired, so that when they are sold the earliest acquired items are used to offset the revenue from the sale. The cost of goods sold, inventory, and gross margin shown in Figure 10.15 were determined from the previously-stated data, particular to perpetual FIFO costing.

	Cost of Goods Purchased			Cost of Goods Sold			Cost of Inventory Remaining		
	Number of Units	Unit Cost	Total Cost	Number of Units	Unit Cost	Total Cost	Number of Units	Unit Cost	Total Cost
Beginning, Jul. 1							150	$21	$3,150
Sale, Jul. 5				120	$21	$2,520	30	21	630
Purchase, Jul. 10	225	$27	$6,075				30 225	21 27	630 6,075
Sale, Jul. 15				30 150	21 27	630 4,050	– 75	– 27	– 2,025
Purchase, Jul. 25	210	33	6,930				75 210	27 33	2,025 6,930
Total Purchases in Jul.			$13,005	Total COGS		$7,200			

Cost Value:	
75 units at $27	2,025
210 units at $33	6,930
Total	8,955

Figure 10.15 FIFO Costing Assumption Cost of Goods Purchased, Cost of Goods Sold, and Cost of Inventory Remaining. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Figure 10.16 shows the gross margin, resulting from the FIFO perpetual cost allocations of $7,200.

Gross Margin	
Sales	11,340
– Cost of Goods Sold	7,200
= Gross Margin	4,140

Figure 10.16 FIFO Perpetual Cost Allocations Gross Margin. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Description of Journal Entries for Inventory Sales, Perpetual, First-in, First-out (FIFO)

Journal entries are not shown, but the following discussion provides the information that would be used in recording the necessary journal entries. Each time a product is sold, a revenue entry would be made to record the sales revenue and the corresponding accounts receivable or cash from the sale. When applying perpetual inventory updating, a second entry made at the same time would record the cost of the item based on FIFO, which would be shifted from merchandise inventory (an asset) to cost of goods sold (an expense).

Last-in, First-out (LIFO)

The last-in, first-out method (LIFO) of cost allocation assumes that the last units purchased are the first units sold. For The Spy Who Loves You, using perpetual inventory updating, the first sale of 120 units is assumed to be the units from the beginning inventory (because this was the only lot of good available, so it represented the last purchased lot), which had cost $21 per unit, bringing the total cost of these units in the first sale to $2,520. Once those units were sold, there remained 30 more units of beginning inventory. The company bought 225 more units for $27 per unit. At the time of the second sale of 180 units, the LIFO assumption directs the company to cost out the 180 units from the latest purchased units, which had cost $27 for a total cost on the second sale of $4,860. Thus, after two sales, there remained 30 units of beginning inventory that had cost the company $21 each, plus 45 units of the goods purchased for $27 each. The last transaction was an additional purchase of 210 units for $33 per unit.

Ending inventory was made up of 30 units at $21 each, 45 units at $27 each, and 210 units at $33 each, for a total LIFO perpetual ending inventory value of $8,775.

Calculations of Costs of Goods Sold, Ending Inventory, and Gross Margin, Last-in, First-out (LIFO)

The LIFO costing assumption tracks inventory items based on lots of goods that are tracked in the order that they were acquired, so that when they are sold, the latest acquired items are used to offset the revenue from the sale. The following cost of goods sold, inventory, and gross margin were determined from the previously-stated data, particular to perpetual, LIFO costing.

	Cost of Goods Purchased			Cost of Goods Sold			Cost of Inventory Remaining		
	Number of Units	Unit Cost	Total Cost	Number of Units	Unit Cost	Total Cost	Number of Units	Unit Cost	Total Cost
Beginning, Jul. 1							150	$21	$3,150
Sale, Jul. 5				120	$21	$2,520	30	21	630
Purchase, Jul. 10	225	$27	$6,075				30 225	21 27	630 6,075
Sale, Jul. 15				180	27	4,860	30 45	21 27	630 1,215
Purchase, Jul. 25	210	$33	6,930				30 45 210	21 27 33	630 1,215 6,930
Total Purchases in Jul.			$13,005	Total COGS		$7,380			

Cost Value:	
30 units at $21	$ 630
45 units at $27	1,215
210 units at $33	6,930
Total	8,775

Figure 10.17 LIFO Costing Assumption Cost of Goods Purchased, Cost of Goods Sold, and Cost of Inventory Remaining. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Figure 10.18 shows the gross margin resulting from the LIFO perpetual cost allocations of $7,380.

Gross Margin	
Sales	11,340
– Cost of Goods Sold	7,380
= Gross Margin	3,960

Figure 10.18 LIFO Perpetual Cost Allocations Gross Margin. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Description of Journal Entries for Inventory Sales, Perpetual, Last-in, First-out (LIFO)

Journal entries are not shown, but the following discussion provides the information that would be used in recording the necessary journal entries. Each time a product is sold, a revenue entry would be made to record the sales revenue and the corresponding accounts receivable or cash from the sale. When applying apply perpetual inventory updating, a second entry made at the same time would record the cost of the item based on LIFO, which would be shifted from merchandise inventory (an asset) to cost of goods sold (an expense).

LINK TO LEARNING

Visit this Amazon inventory video for a little insight into some of the inventory challenges experienced by retail giant Amazon to learn more.

Weighted-Average Cost (AVG)

Weighted-average cost allocation requires computation of the average cost of all units in goods available for sale at the time the sale is made for perpetual inventory calculations. For The Spy Who Loves You, the first sale of 120 units is assumed to be the units from the beginning inventory (because this was the only lot of good available, so the price of these units also represents the average cost), which had cost $21 per unit, bringing the total cost of these units in the first sale to $2,520. Once those units were sold, there remained 30 more units of the inventory, which still had a $21 average cost. The company bought 225 more units for $27 per unit. Recalculating the average cost, after this purchase, is accomplished by dividing total cost of goods available for sale (which totaled $6,705 at that point) by the number of units held, which was 255 units, for an average cost of $26.29 per unit. At the time of the second sale of 180 units, the AVG assumption directs the company to cost out the 180 at $26.29 for a total cost on the second sale of $4,732. Thus, after two sales, there remained 75 units at an average cost of $26.29 each. The last transaction was an additional purchase of 210 units for $33 per unit. Recalculating the average cost again resulted in an average cost of $31.24 per unit. Ending inventory was made up of 285 units at $31.24 each for a total AVG perpetual ending inventory value of $8,902 (rounded).[8]

Calculations of Costs of Goods Sold, Ending Inventory, and Gross Margin, Weighted Average (AVG)

The AVG costing assumption tracks inventory items based on lots of goods that are combined and re-averaged after each new acquisition to determine a new average cost per unit so that, when they are sold, the latest averaged cost items are used to offset the revenue from the sale. The cost of goods sold, inventory, and gross margin shown in Figure 10.19 were determined from the previously-stated data, particular to perpetual, AVG costing.

	Cost of Goods Purchased			Cost of Goods Sold			Cost of Inventory Remaining		
	Number of Units	Unit Cost	Total Cost	Number of Units	Unit Cost	Total Cost	Number of Units	Unit Cost	Total Cost
Beginning							150	$21.00	$3,150
Sale				120	$21.00	$2,520	30	21.00	630
Purchase	225	$27.00	$6,075				255	26.29	6,705
Sale				180	26.29	4,733	75	26.29	1,972
Purchase	210	33.00	6,930				285	31.24	8,902
Total Purchases			$13,005	Total COGS		$7,253			

Cost Value:	
285 units at $31.24	$8,902
Total	8,902

Figure 10.19 AVG Costing Assumption Cost of Goods Purchased, Cost of Goods Sold, and Cost of Inventory Remaining. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Figure 10.20 shows the gross margin, resulting from the weighted-average perpetual cost allocations of $7,253.

Gross Margin:

Sales	$11,340
– Cost of Goods Sold	7,253
= Gross Margin	4,087

Figure 10.20 Weighted AVG Perpetual Cost Allocations Gross Margin. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Description of Journal Entries for Inventory Sales, Perpetual, Weighted Average (AVG)

Journal entries are not shown, but the following discussion provides the information that would be used in recording the necessary journal entries. Each time a product is sold, a revenue entry would be made to record the sales revenue and the corresponding accounts receivable or cash from the sale. When applying perpetual inventory updating, a second entry would be made at the same

time to record the cost of the item based on the AVG costing assumptions, which would be shifted from merchandise inventory (an asset) to cost of goods sold (an expense).

Comparison of All Four Methods, Perpetual

The outcomes for gross margin, under each of these different cost assumptions, is summarized in Figure 10.21.

	Sp ID	FIFO	LIFO	AVG
Sales Revenue	$11,340	$11,340	$11,340	$11,340
– Cost	7,260	7,200	7,380	7,253
= Gross Margin	4,080	4,140	3,960	4,087

Figure 10.21 Gross Margin Comparison. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

THINK IT THROUGH

Last-in, First-out (LIFO)

Two-part consideration: 1) Why do you think a company would ever choose to use perpetual LIFO as its costing method? It is clearly more trouble to calculate than other methods and doesn't really align with the natural flow of the merchandise, in most cases. 2) Should the order in which the items are actually sold determine which costs are used to offset sales revenues from those goods? Explain your understanding of these issues.

Footnotes

- 5 U.S. Securities and Exchange Commission (SEC). "SEC Charges Former Executives with Accounting Fraud and Other Accounting Failures." October 6, 2015. https://www.sec.gov/news/pressrelease/2015-234.html
- 6 *SEC v. Ryan Petersen*, No. 15-cv-04599 (N.D. Cal. filed October 6, 2015). https://www.sec.gov/litigation/litre...17/lr23874.htm
- 7 George B. Parizek and Madeleine V. Findley. *Charting a Course: Revenue Recognition Practices for Today's Business Environment*. 2008. www.sidley.com/-/media/files...ingacourse.pdf
- 8 Note that there is a $1 rounding difference due to the rounding of cents inherent in the cost determination chain process.

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CHAPTER OVERVIEW

7: Bad Debt

7.1: Account for Uncollectible Accounts Using the Balance Sheet and Income Statement Approaches

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7.1: Account for Uncollectible Accounts Using the Balance Sheet and Income Statement Approaches

You lend a friend $500 with the agreement that you will be repaid in two months. At the end of two months, your friend has not repaid the money. You continue to request the money each month, but the friend has yet to repay the debt. How does this affect your finances?

Think of this on a larger scale. A bank lends money to a couple purchasing a home (mortgage). The understanding is that the couple will make payments each month toward the principal borrowed, plus interest. As time passes, the loan goes unpaid. What happens when a loan that was supposed to be paid is not paid? How does this affect the financial statements for the bank? The bank may need to consider ways to recognize this bad debt.

Fundamentals of Bad Debt Expenses and Allowances for Doubtful Accounts

Bad debts are uncollectible amounts from customer accounts. Bad debt negatively affects accounts receivable (see Figure 9.2). When future collection of receivables cannot be reasonably assumed, recognizing this potential nonpayment is required. There are two methods a company may use to recognize bad debt: the direct write-off method and the allowance method.



Figure 9.2 Bad Debt Expenses. Uncollectible customer accounts produce bad debt. (credit: modification of “Past Due Bills” by “Maggiebug 21”/Wikimedia Commons, CC0)

The **direct write-off method** delays recognition of bad debt until the specific customer accounts receivable is identified. Once this account is identified as uncollectible, the company will record a reduction to the customer’s accounts receivable and an increase to bad debt expense for the exact amount uncollectible.

Under generally accepted accounting principles (GAAP), the direct write-off method is not an acceptable method of recording bad debts, because it violates the matching principle. For example, assume that a credit transaction occurs in September 2018 and is determined to be uncollectible in February 2019. The direct write-off method would record the bad debt expense in 2019, while the matching principle requires that it be associated with a 2018 transaction, which will better reflect the relationship between revenues and the accompanying expenses. This matching issue is the reason accountants will typically use one of the two accrual-based accounting methods introduced to account for bad debt expenses.

It is important to consider other issues in the treatment of bad debts. For example, when companies account for bad debt expenses in their financial statements, they will use an accrual-based method; however, they are required to use the direct write-off method on their income tax returns. This variance in treatment addresses taxpayers’ potential to manipulate when a bad debt is recognized. Because of this potential manipulation, the Internal Revenue Service (IRS) requires that the direct write-off method must be used when the debt is determined to be uncollectible, while GAAP still requires that an accrual-based method be used for financial accounting statements.

For the taxpayer, this means that if a company sells an item on credit in October 2018 and determines that it is uncollectible in June 2019, it must show the effects of the bad debt when it files its 2019 tax return. This application probably violates the matching principle, but if the IRS did not have this policy, there would typically be a significant amount of manipulation on company tax

returns. For example, if the company wanted the deduction for the write-off in 2018, it might claim that it was actually uncollectible in 2018, instead of in 2019.

The final point relates to companies with very little exposure to the possibility of bad debts, typically, entities that rarely offer credit to its customers. Assuming that credit is not a significant component of its sales, these sellers can also use the direct write-off method. The companies that qualify for this exemption, however, are typically small and not major participants in the credit market. Thus, virtually all of the remaining bad debt expense material discussed here will be based on an allowance method that uses accrual accounting, the matching principle, and the revenue recognition rules under GAAP.

For example, a customer takes out a $15,000 car loan on August 1, 2018 and is expected to pay the amount in full before December 1, 2018. For the sake of this example, assume that there was no interest charged to the buyer because of the short-term nature or life of the loan. When the account defaults for nonpayment on December 1, the company would record the following journal entry to recognize bad debt.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 1	Bad Debt Expense	15,000	
	Accounts Receivable		15,000
	To record bad debts		

Bad Debt Expense increases (debit), and Accounts Receivable decreases (credit) for $15,000. If, in the future, any part of the debt is recovered, a reversal of the previously written-off bad debt, and the collection recognition is required. Let's say this customer unexpectedly pays in full on May 1, 2019, the company would record the following journal entries (note that the company's fiscal year ends on June 30)

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 1, 2019	Accounts Receivable	15,000	
	Bad Debt Expense		15,000
	To reverse previous bad debt write-off		
May 1, 2019	Cash	15,000	
	Accounts Receivable		15,000
	To record payment on account		

The first entry reverses the bad debt write-off by increasing Accounts Receivable (debit) and decreasing Bad Debt Expense (credit) for the amount recovered. The second entry records the payment in full with Cash increasing (debit) and Accounts Receivable decreasing (credit) for the amount received of $15,000.

As you've learned, the delayed recognition of bad debt violates GAAP, specifically the matching principle. Therefore, the direct write-off method is not used for publicly traded company reporting; the allowance method is used instead.

The allowance method is the more widely used method because it satisfies the matching principle. The **allowance method**estimates bad debt during a period, based on certain computational approaches. The calculation matches bad debt with related sales during the period. The estimation is made from past experience and industry standards. When the estimation is recorded at the end of a period, the following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Bad Debt Expense	$$$	
	Allowance for Doubtful Accounts		$$$
	To record estimated bad debt		

The journal entry for the Bad Debt Expense increases (debit) the expense's balance, and the Allowance for Doubtful Accounts increases (credit) the balance in the Allowance. The **allowance for doubtful accounts** is a contra asset account and is subtracted from Accounts Receivable to determine the **Net Realizable Value** of the Accounts Receivable account on the balance sheet. A **contra account** has an opposite normal balance to its paired account, thereby reducing or increasing the balance in the paired

account at the end of a period; the adjustment can be an addition or a subtraction from a controlling account. In the case of the allowance for doubtful accounts, it is a contra account that is used to reduce the Controlling account, Accounts Receivable.

At the end of an accounting period, the Allowance for Doubtful Accounts reduces the Accounts Receivable to produce Net Accounts Receivable. Note that allowance for doubtful accounts reduces the overall accounts receivable account, not a specific accounts receivable assigned to a customer. Because it is an estimation, it means the exact account that is (or will become) uncollectible is not yet known.

To demonstrate the treatment of the allowance for doubtful accounts on the balance sheet, assume that a company has reported an Accounts Receivable balance of $90,000 and a Balance in the Allowance of Doubtful Accounts of $4,800. The following table reflects how the relationship would be reflected in the current (short-term) section of the company's Balance Sheet.

Accounts Receivable	$90,000	
– Allowance for Doubtful Accounts	($4,800)	$85,200

There is one more point about the use of the contra account, Allowance for Doubtful Accounts. In this example, the $85,200 total is the net realizable value, or the amount of accounts anticipated to be collected. However, the company is owed $90,000 and will still try to collect the entire $90,000 and not just the $85,200.

Under the balance sheet method of calculating bad debt expenses, if there is already a balance in Allowance for Doubtful Accounts from a previous period and accounts written off in the current year, this must be considered before the adjusting entry is made. For example, if a company already had a credit balance from the prior period of $1,000, plus any accounts that have been written off this year, and a current period estimated balance of $2,500, the company would need to subtract the prior period's credit balance from the current period's estimated credit balance in order to calculate the amount to be added to the Allowance for Doubtful Accounts.

Current period	= $2,500 credit
Prior period	= $1,000 credit
Allowance for Doubtful Accounts	= $1,500 credit

Therefore, the adjusting journal entry would be as follows.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Bad Debt Expense	1,500	
	Allowance for Doubtful Accounts		1,500
	To record estimated bad debt		

If a company already had a debit balance from the prior period of $1,000, and a current period estimated balance of $2,500, the company would need to add the prior period's debit balance to the current period's estimated credit balance.

Current period	= $2,500 credit
Prior period	= $1,000 debit
Allowance for Doubtful Accounts	= $3,500 credit

Therefore, the adjusting journal entry would be as follows.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Bad Debt Expense	3,500	
	Allowance for Doubtful Accounts		3,500
	To record estimated bad debt		

When a specific customer has been identified as an uncollectible account, the following journal entry would occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Allowance for Doubtful Accounts	$$$	
	Accounts Receivable: Customer		$$$
	To record bad debt for specific customer		

Allowance for Doubtful Accounts decreases (debit) and Accounts Receivable for the specific customer also decreases (credit). Allowance for doubtful accounts decreases because the bad debt amount is no longer unclear. Accounts receivable decreases because there is an assumption that no debt will be collected on the identified customer's account.

Let's say that the customer unexpectedly pays on the account in the future. The following journal entries would occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Receivable: Customer	$$$	
	Allowance for Doubtful Accounts		$$$
	To reinstate previously written-off bad debt		
	Cash	$$$	
	Accounts Receivable: Customer		$$$
	To record bad debt for specific customer		

The first entry reverses the previous entry where bad debt was written off. This reinstatement requires Accounts Receivable: Customer to increase (debit), and Allowance for Doubtful Accounts to increase (credit). The second entry records the payment on the account. Cash increases (debit) and Accounts Receivable: Customer decreases (credit) for the amount received.

To compute the most accurate estimation possible, a company may use one of three methods for bad debt expense recognition: the income statement method, balance sheet method, or balance sheet aging of receivables method.

THINK IT THROUGH

Bad Debt Estimation

As the accountant for a large publicly traded food company, you are considering whether or not you need to change your bad debt estimation method. You currently use the income statement method to estimate bad debt at 4.5% of credit sales. You are considering switching to the balance sheet aging of receivables method. This would split accounts receivable into three past- due categories and assign a percentage to each group.

While you know that the balance sheet aging of receivables method is more accurate, it does require more company resources (e.g., time and money) that are currently applied elsewhere in the business. Using the income statement method is acceptable under generally accepted accounting principles (GAAP), but should you switch to the more accurate method even if your resources are constrained? Do you have a responsibility to the public to change methods if you know one is a better estimation?

Income Statement Method for Calculating Bad Debt Expenses

The **income statement method** (also known as the percentage of sales method) estimates bad debt expenses based on the assumption that at the end of the period, a certain percentage of sales during the period will not be collected. The estimation is typically based on credit sales only, not total sales (which include cash sales). In this example, assume that any credit card sales that are uncollectible are the responsibility of the credit card company. It may be obvious intuitively, but, by definition, a cash sale cannot become a bad debt, assuming that the cash payment did not entail counterfeit currency. The income statement method is a simple method for calculating bad debt, but it may be more imprecise than other measures because it does not consider how long a debt has been outstanding and the role that plays in debt recovery.

To illustrate, let's continue to use Billie's Watercraft Warehouse (BWW) as the example. Billie's end-of-year credit sales totaled $458,230. BWW estimates that 5% of its overall credit sales will result in bad debt. The following adjusting journal entry for bad debt occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense	22,911.50	
	Allowance for Doubtful Accounts		22,911.50
	To record estimated bad debts, income statement method		

Bad Debt Expense increases (debit), and Allowance for Doubtful Accounts increases (credit) for $22,911.50 ($458,230 × 5%). This means that BWW believes $22,911.50 will be uncollectible debt. Let's say that on April 8, it was determined that Customer Robert Craft's account was uncollectible in the amount of $5,000. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 8	Allowance for Doubtful Accounts	5,000	
	Accounts Receivable: Craft		5,000
	To record known bad debt		

In this case, Allowance for Doubtful Accounts decreases (debit) and Accounts Receivable: Craft decreases (credit) for the known uncollectible amount of $5,000. On June 5, Craft unexpectedly makes a partial payment on his account in the amount of $3,000. The following journal entries show the reinstatement of bad debt and the subsequent payment.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jun. 5	Accounts Receivable: Craft	3,000	
	Allowance for Doubtful Accounts		3,000
	To reinstate previously written-off bad debt		
Jun. 5	Cash	3,000	
	Accounts Receivable: Craft		3,000
	To record bad debt for specific customer		

The outstanding balance of $2,000 that Craft did not repay will remain as bad debt.

YOUR TURN

Heating and Air Company

You run a successful heating and air conditioning company. Your net credit sales, accounts receivable, and allowance for doubtful accounts figures for year-end 2018, follow.

Net credit sales	$831,400
Accounts receivable	222,850
Allowance for doubtful accounts	0

A. Compute bad debt estimation using the income statement method, where the percentage uncollectible is 5%.
B. Prepare the journal entry for the income statement method of bad debt estimation.
C. Compute bad debt estimation using the balance sheet method of percentage of receivables, where the percentage uncollectible is 9%.
D. Prepare the journal entry for the balance sheet method bad debt estimation.

Solution

A. $41,570; $831,400 × 5%

B.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense Allowance for Doubtful Accounts *To record estimated bad debts, income statement method*	41,570	41,570

C. $20,056.50; $222,850 × 9%

D.

Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense Allowance for Doubtful Accounts *To record estimated bad debts, balance sheet method*	20,056.50	20,056.50

Balance Sheet Method for Calculating Bad Debt Expenses

The **balance sheet method** (also known as the percentage of accounts receivable method) estimates bad debt expenses based on the balance in accounts receivable. The method looks at the balance of accounts receivable at the end of the period and assumes that a certain amount will not be collected. Accounts receivable is reported on the balance sheet; thus, it is called the balance sheet method. The balance sheet method is another simple method for calculating bad debt, but it too does not consider how long a debt has been outstanding and the role that plays in debt recovery. There is a variation on the balance sheet method, however, called the aging method that does consider how long accounts receivable have been owed, and it assigns a greater potential for default to those debts that have been owed for the longest period of time.

Continuing our examination of the balance sheet method, assume that BWW's end-of-year accounts receivable balance totaled $324,850. This entry assumes a zero balance in Allowance for Doubtful Accounts from the prior period. BWW estimates 15% of its overall accounts receivable will result in bad debt. The following adjusting journal entry for bad debt occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense Allowance for Doubtful Accounts *To record estimated bad debts, balance sheet method*	48,727.50	48,727.50

Bad Debt Expense increases (debit), and Allowance for Doubtful Accounts increases (credit) for $48,727.50 ($324,850 × 15%). This means that BWW believes $48,727.50 will be uncollectible debt. Let's consider that BWW had a $23,000 credit balance from the previous period. The adjusting journal entry would recognize the following.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense Allowance for Doubtful Accounts *To record estimated bad debts, balance sheet method*	25,727.50	25,727.50

This is different from the last journal entry, where bad debt was estimated at $48,727.50. That journal entry assumed a zero balance in Allowance for Doubtful Accounts from the prior period. This journal entry takes into account a credit balance of $23,000 and subtracts the prior period's balance from the estimated balance in the current period of $48,727.50.

Current period	= $48,727.50 credit
Prior period	= $23,000.00 credit
Allowance for Doubtful Accounts	= $25,727.50 credit

Balance Sheet Aging of Receivables Method for Calculating Bad Debt Expenses

The **balance sheet aging of receivables method** estimates bad debt expenses based on the balance in accounts receivable, but it also considers the uncollectible time period for each account. The longer the time passes with a receivable unpaid, the lower the probability that it will get collected. An account that is 90 days overdue is more likely to be unpaid than an account that is 30 days past due.

With this method, accounts receivable is organized into categories by length of time outstanding, and an uncollectible percentage is assigned to each category. The length of uncollectible time increases the percentage assigned. For example, a category might consist of accounts receivable that is 0–30 days past due and is assigned an uncollectible percentage of 6%. Another category might be 31–60 days past due and is assigned an uncollectible percentage of 15%. All categories of estimated uncollectible amounts are summed to get a total estimated uncollectible balance. That total is reported in Bad Debt Expense and Allowance for Doubtful Accounts, if there is no carryover balance from a prior period. If there is a carryover balance, that must be considered before recording Bad Debt Expense. The balance sheet aging of receivables method is more complicated than the other two methods, but it tends to produce more accurate results. This is because it considers the amount of time that accounts receivable has been owed, and it assumes that the longer the time owed, the greater the possibility that individual accounts receivable will prove to be uncollectible.

Looking at BWW, it has an accounts receivable balance of $324,850 at the end of the year. The company splits its past-due accounts into three categories: 0–30 days past due, 31–90 days past due, and over 90 days past due. The uncollectible percentages and the accounts receivable breakdown are shown here.

Past-Due Category	Accounts Receivable Total	Uncollectible Percentage	Total
0–30 days	$145,740	10%	$14,574
31–90 days	102,100	20%	20,420
Over 90 days	77,010	30%	23,103
		Total Estimated Uncollectible:	**$58,097**

For each of the individual categories, the accountant multiplies the uncollectible percentage by the accounts receivable total for that category to get the total balance of estimated accounts that will prove to be uncollectible for that category. Then all of the category estimates are added together to get one total estimated uncollectible balance for the period. The entry for bad debt would be as follows, if there was no carryover balance from the prior period.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense	58,097	
	Allowance for Doubtful Accounts		58,097
	To record estimated bad debts, balance sheet aging method		

Bad Debt Expense increases (debit) as does Allowance for Doubtful Accounts (credit) for $58,097. BWW believes that $58,097 will be uncollectible debt.

Let’s consider a situation where BWW had a $20,000 debit balance from the previous period. The adjusting journal entry would recognize the following.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense	78,097	
	Allowance for Doubtful Accounts		78,097
	To record estimated bad debts, balance sheet aging method		

This is different from the last journal entry, where bad debt was estimated at $58,097. That journal entry assumed a zero balance in Allowance for Doubtful Accounts from the prior period. This journal entry takes into account a debit balance of $20,000 and adds the prior period’s balance to the estimated balance of $58,097 in the current period.

Current period	= $58,097 credit
Prior period	= $20,000 debit
Allowance for Doubtful Accounts	= $78,097 credit

You may notice that all three methods use the same accounts for the adjusting entry; only the method changes the financial outcome. Also note that it is a requirement that the estimation method be disclosed in the notes of financial statements so stakeholders can make informed decisions.

CONCEPTS IN PRACTICE

Generally Accepted Accounting Principles

As of January 1, 2018, GAAP requires a change in how health-care entities record bad debt expense. Before this change, these entities would record revenues for billed services, even if they did not expect to collect any payment from the patient. This uncollectible amount would then be reported in Bad Debt Expense. Under the new guidance, the bad debt amount may only be recorded if there is an unexpected circumstance that prevented the patient from paying the bill, and it may only be calculated from the amount that the providing entity anticipated collecting.

For example, a patient receives medical services at a local hospital that cost $1,000. The hospital knows in advance that the patient will pay only $100 of the amount owed. The previous GAAP rules would allow the company to write off $900 to bad debt. Under the current rule, the company may only consider revenue to be the expected amount of $100. For example, if the patient ran into an unexpected job loss and is able to pay only $20 of the $100 expected, the hospital would record the $20 to revenue and the $80 ($100 – $20) as a write-off to bad debt. This is a significant change in revenue reporting and bad debt expense. Health-care entities will more than likely see a decrease in bad debt expense and revenues as a result of this change.[3]

Footnotes

- 3 Tara Bannow. “New Bad Debt Accounting Standards Likely to Remake Community Benefit Reporting.” *Modern Healthcare*. March 17, 2018. http://www.modernhealthcare.com/arti...NEWS/180319904

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CHAPTER OVERVIEW

8: Internal Controls

8.1: Analyze Fraud in the Accounting Workplace

8.2: Define and Explain Internal Controls and Their Purpose within an Organization

8.3: Describe Internal Controls within an Organization

8.4: Discuss Management Responsibilities for Maintaining Internal Controls within an Organization

8.5: Describe Fraud in Financial Statements and Sarbanes-Oxley Act Requirements

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8.1: Analyze Fraud in the Accounting Workplace

In this chapter, one of the major issues examined is the concept of fraud. **Fraud** can be defined in many ways, but for the purposes of this course we define it as the act of intentionally deceiving a person or organization or misrepresenting a relationship in order to secure some type of benefit, either financial or nonfinancial. We initially discuss it in a broader sense and then concentrate on the issue of fraud as it relates to the accounting environment and profession.

Workplace fraud is typically detected by anonymous tips or by accident, so many companies use the fraud triangle to help in the analysis of workplace fraud. Donald Cressey, an American criminologist and sociologist, developed the **fraud triangle** to help explain why law-abiding citizens sometimes commit serious workplace-related crimes. He determined that people who embezzled money from banks were typically otherwise law-abiding citizens who came into a "non-sharable financial problem." A non-sharable financial problem is when a trusted individual has a financial issue or problem that he or she feels can't be shared. However, it is felt that the problem can be alleviated by surreptitiously violating the position of trust through some type of illegal response, such as embezzlement or other forms of misappropriation. The guilty party is typically able to rationalize the illegal action. Although they committed serious financial crimes, for many of them, it was their first offense.

The fraud triangle consists of three elements: incentive, opportunity, and rationalization (Figure 8.2). When an employee commits fraud, the elements of the fraud triangle provide assistance in understanding the employee's methods and rationale. Each of the elements needs to be present for workplace fraud to occur.

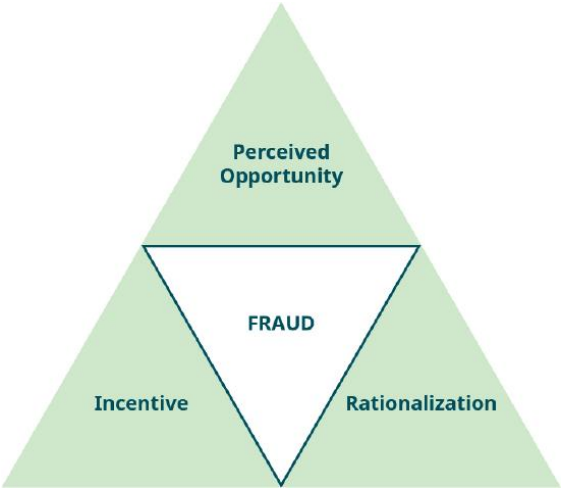


Figure 8.2 Fraud Triangle. The three components identified in the fraud triangle are perceived opportunity, incentive, and rationalization. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Perceived opportunity is when a potential fraudster thinks that the internal controls are weak or sees a way to override them. This is the area in which an accountant has the greatest ability to mitigate fraud, as the accountant can review and test internal controls to locate weaknesses. After identifying a weak, circumvented, or nonexistent internal control, management, along with the accountant, can implement stronger internal controls.

Rationalization is a way for the potential fraudster to internalize the concept that the fraudulent actions are acceptable. A typical fraudster finds ways to personally justify his or her illegal and unethical behavior. Using rationalization as a tool to locate or combat fraud is difficult, because the outward signs may be difficult to recognize.

Incentive (or pressure) is another element necessary for a person to commit fraud. The different types of pressure are typically found in (1) vices, such as gambling or drug use; (2) financial pressures, such as greed or living beyond their means; (3) work pressure, such as being unhappy with a job; and (4) other pressures, such as the desire to appear successful. Pressure may be more recognizable than rationalization, for instance, when coworkers seem to be living beyond their means or complain that they want to get even with their employer because of low pay or other perceived slights.

Typically, all three elements of the triangle must be in place for an employee to commit fraud, but companies usually focus on the opportunity aspect of mitigating fraud because, they can develop internal controls to manage the risk. The rationalization and

pressure to commit fraud are harder to understand and identify. Many organizations may recognize that an employee may be under pressure, but many times the signs of pressure are missed.

Virtually all types of businesses can fall victim to fraudulent behavior. For example, there have been scams involving grain silos in Texas inflating their inventory, the sale of mixed oils labeled as olive oil across the globe, and the tens of billions of dollars that Bernie Madoff swindled out of investors and not-for-profits.

To demonstrate how a fraud can occur, let's examine a sample case in a little more detail. In 2015, a long-term employee of the **SCICAP Federal Credit Union** in Iowa was convicted of stealing over $2.7 million in cash over a 37-year period. The employee maintained two sets of financial records: one that provided customers with correct information as to how much money they had on deposit within their account, and a second set of books that, through a complex set of transactions, moved money out of customer accounts and into the employee's account as well as those of members of her family. To ensure that no other employee within the small credit union would have access to the duplicate set of books, the employee never took a vacation over the 37-year period, and she was the only employee with password-protected access to the system where the electronic records were stored.

There were, at least, two obvious violations of solid internal control principles in this case. The first was the failure to require more than one person to have access to the records, which the employee was able to maintain by not taking a vacation. Allowing the employee to not share the password-protected access was a second violation. If more than one employee had access to the system, the felonious employee probably would have been caught much earlier. What other potential failures in the internal control system might have been present? How does this example of fraud exhibit the three components of the fraud triangle?

Unfortunately, this is one of many examples that occur on a daily basis. In almost any city on almost any day, there are articles in local newspapers about a theft from a company by its employees. Although these thefts can involve assets such as inventory, most often, employee theft involves cash that the employee has access to as part of his or her day-to-day job.

LINK TO LEARNING

Small businesses have few employees, but often they have certain employees who are trusted with responsibilities that may not have complete internal control systems. This situation makes small businesses especially vulnerable to fraud. The article "Small Business Fraud and the Trusted Employee" from the Association of Certified Fraud Examinersdescribes how a trusted employee may come to commit fraud, and how a small business can prevent it from happening.

Accountants, and other members of the management team, are in a good position to control the perceived opportunity side of the fraud triangle through good internal controls, which are policies and procedures used by management and accountants of a company to protect assets and maintain proper and efficient operations within a company with the intent to minimize fraud. An **internal auditor** is an employee of an organization whose job is to provide an independent and objective evaluation of the company's accounting and operational activities. Management typically reviews the recommendations and implements stronger internal controls.

Another important role is that of an **external auditor**, who generally works for an outside certified public accountant (CPA) firm or his or her own private practice and conducts audits and other assignments, such as reviews. Importantly, the external auditor is not an employee of the client. The external auditor prepares reports and then provides opinions as to whether or not the financial statements accurately reflect the financial conditions of the company, subject to generally accepted accounting principles (GAAP). External auditors can maintain their own practice, or they might be employed by national or regional firms.

ETHICAL CONSIDERATIONS

Internal Auditors and Their Code of Ethics

Internal auditors are employees of an organization who evaluate internal controls and other operational metrics, and then ethically report their findings to management. An internal auditor may be a Certified Internal Auditor (CIA), an accreditation granted by the Institute of Internal Auditors (IIA). The IIA defines internal auditing as "an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes."[2]

Internal auditors have their own organizational code of ethics. According to the IIA, “the purpose of The Institute’s Code of Ethics is to promote an ethical culture in the profession of internal auditing.”[3] Company management relies on a disciplined and truthful approach to reporting. The internal auditor is expected to keep confidential any received information, while reporting results in an objective fashion. Management trusts internal auditors to perform their work in a competent manner and with integrity, so that the company can make the best decisions moving forward.

One of the issues faced by any organization is that internal control systems can be overridden and can be ineffective if not followed by management or employees. The use of internal controls in both accounting and operations can reduce the risk of fraud. In the unfortunate event that an organization is a victim of fraud, the internal controls should provide tools that can be used to identify who is responsible for the fraud and provide evidence that can be used to prosecute the individual responsible for the fraud. This chapter discusses internal controls in the context of accounting and controlling for cash in a typical business setting. These examples are applicable to the other ways in which an organization may protect its assets and protect itself against fraud.

Footnotes

- 2 The Institute of Internal Auditors (IIA). “Code of Ethics.” n.d. https://na.theiia.org/standards-guid...of-Ethics.aspx
- 3 The Institute of Internal Auditors (IIA). “Code of Ethics.” n.d. https://na.theiia.org/standards-guid...of-Ethics.aspx

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8.2: Define and Explain Internal Controls and Their Purpose within an Organization

Internal controls are the systems used by an organization to manage risk and diminish the occurrence of fraud. The internal control structure is made up of the control environment, the accounting system, and procedures called *control activities*. Several years ago, the **Committee of Sponsoring Organizations (COSO)**, which is an independent, private-sector group whose five sponsoring organizations periodically identify and address specific accounting issues or projects, convened to address the issue of internal control deficiencies in the operations and accounting systems of organizations. They subsequently published a report that is known as COSO's *Internal Control-Integrated Framework*. The five components that they determined were necessary in an effective internal control system make up the components in the internal controls triangle shown in Figure 8.3.

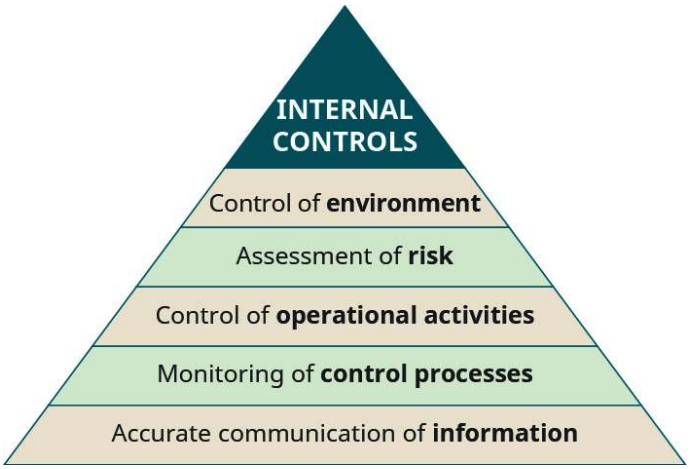


Figure 8.3 The Internal Control Environment. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Here we address some of the practical aspects of internal control systems. The internal control system consists of the formal policies and procedures that do the following:

- ensure assets are properly used
- ensure that the accounting system is functioning properly
- monitor operations of the organization to ensure maximum efficiency
- ensure that assets are kept secure
- ensure that employees are in compliance with corporate policies

A properly designed and functioning internal control system will not eliminate the risk of loss, but it will reduce the risk.

Different organizations face different types of risk, but when internal control systems are lacking, the opportunity arises for fraud, misuse of the organization's assets, and employee or workplace corruption. Part of an accountant's function is to understand and assist in maintaining the internal control in the organization.

LINK TO LEARNING

See the Institute of Internal Auditors website to learn more about many of the professional functions of the internal auditor.

Internal control keeps the assets of a company safe and keeps the company from violating any laws, while fairly recording the financial activity of the company in the accounting records. Proper accounting records are used to create the financial statements that the owners use to evaluate the operations of a company, including all company and employee activities. Internal controls are more than just reviews of how items are recorded in the company's accounting records; they also include comparing the accounting records to the actual operations of the company.

For example, a movie theater earns most of its profits from the sale of popcorn and soda at the concession stand. The prices of the items sold at the concession stand are typically high, even though the costs of popcorn and soda are low. Internal controls allow the owners to ensure that their employees do not give away the profits by giving away sodas and popcorn.

If you were to go to the concession stand and ask for a cup of water, typically, the employee would give you a clear, small plastic cup called a courtesy cup. This internal control, the small plastic cup for nonpaying customers, helps align the accounting system

and the theater's operations. A movie theater does not use a system to directly account for the sale of popcorn, soda, or ice used. Instead, it accounts for the containers. A point-of-sale system compares the number of soda cups used in a shift to the number of sales recorded in the system to ensure that those numbers match. The same process accounts for popcorn buckets and other containers. Providing a courtesy cup ensures that customers drinking free water do not use the soda cups that would require a corresponding sale to appear in the point-of-sale system. The cost of the popcorn, soda, and ice will be recorded in the accounting system as an inventory item, but the internal control is the comparison of the recorded sales to the number of containers used. This is just one type of internal control. As we discuss the internal controls, we see that the internal controls are used both in accounting, to provide information for management to properly evaluate the operations of the company, and in business operations, to reduce fraud.

It should be clear how important internal control is to all businesses, regardless of size. An effective internal control system allows a business to monitor its employees, but it also helps a company protect sensitive customer data. Consider the 2017 massive data breach at **Equifax** that compromised data of over 143 million people. With proper internal controls functioning as intended, there would have been protective measures to ensure that no unauthorized parties had access to the data. Not only would internal controls prevent outside access to the data, but proper internal controls would protect the data from corruption, damage, or misuse.

Example 8.2.1: Bank Fraud in Enid, Oklahoma

The retired mayor of Enid, Oklahoma, Ernst Currier, had a job as a loan officer and then as a senior vice president at **Security National Bank**. In his bank job, he allegedly opened 61 fraudulent loans. He used the identities of at least nine real people as well as eight fictitious people and stole about $6.2 million.[4] He was sentenced to 13 years in prison on 33 felony counts.

Currier was able to circumvent one of the most important internal controls: segregation of duties. The American Institute of Certified Public Accountants (AICPA) states that segregation of duties "is based on shared responsibilities of a key process that disperses the critical functions of that process to more than one person or department. Without this separation in key processes, fraud and error risks are far less manageable."[5] Currier used local residents' identities and created false documents to open loans for millions of dollars and then collect the funds himself, without any oversight by any other employee. Creating these loans allowed him to walk up to the bank vault and take cash out of the bank without anyone questioning him. There was no segregation of duties for opening loans, or if there was, he was able to easily override those internal controls.

How could internal controls have helped prevent Currier's bank fraud in Enid, Oklahoma?

Solution

Simply having someone else confirm the existence of the borrower and make the payment for the loan directly to the borrower would have saved this small bank millions of dollars.

Consider a bank that has to track deposits for thousands of customers. If a fire destroys the building housing the bank's servers, how can the bank find the balances of each customer? Typically, organizations such as banks mirror their servers at several locations around the world as an internal control. The bank might have a main server in Tennessee but also mirror all data in real time to identical servers in Arizona, Montana, and even offshore in Iceland. With multiple copies of a server at multiple locations across the country, or even the world, in the event of disaster to one server, a backup server can take control of operations, protecting customer data and avoiding any service interruptions.

Internal controls are the basic components of an **internal control system**, the sum of all internal controls and policies within an organization that protect assets and data. A properly designed system of internal controls aims to ensure the integrity of assets, allows for reliable accounting information and financial reporting, enhances efficiency within an organization, and provides guidelines and possible consequences for dealing with breaches. Internal controls drive many decisions and overall operational procedures within an organization. A properly designed internal control system will not prevent all loss from occurring, but it will significantly reduce the risk of loss and increase the chance of identifying the responsible party.

CONTINUING APPLICATION

Fraud Controls for Grocery Stores

All businesses are concerned with internal controls over reporting and assets. For the grocery industry this concern is even greater, because profit margins on items are so small that any lost opportunity hurts profitability. How can an individual grocery store

develop effective controls?

Consider the two biggest items that a grocery store needs to control: food (inventory) and cash. Inventory controls are set up to stop shrinkage (theft). While it is not profitable for each aisle to be patrolled by a security guard, cameras throughout the store linked to a central location allow security staff to observe customers. More controls are placed on cash registers to prevent employees from stealing cash. Cameras at each register, cash counts at each shift change, and/or a supervisor who observes cashiers are some potential internal control methods. Grocery stores invest more resources in controlling cash because they have determined it to be the greatest opportunity for fraudulent activity.

The Role of Internal Controls

The accounting system is the backbone of any business entity, whether it is profit based or not. It is the responsibility of management to link the accounting system with other functional areas of the business and ensure that there is communication among employees, managers, customers, suppliers, and all other internal and external users of financial information. With a proper understanding of internal controls, management can design an internal control system that promotes a positive business environment that can most effectively serve its customers.

For example, a customer enters a retail store to purchase a pair of jeans. As the cashier enters the jeans into the point-of-sale system, the following events occur internally:

1. A sale is recorded in the company's journal, which increases revenue on the income statement. If the transaction occurred by credit card, the bank typically transfers the funds into the store's bank account in a timely manner.
2. The pair of jeans is removed from the inventory of the store where the purchase was made.
3. A new pair of jeans is ordered from the distribution center to replace what was purchased from the store's inventory.
4. The distribution center orders a new pair of jeans from the factory to replace its inventory.
5. Marketing professionals can monitor over time the trend and volume of jeans sold in a specific size. If an increase or decrease in sales volume of a specific size is noted, store inventory levels can be adjusted.
6. The company can see in real time the exact inventory levels of all products in all stores at all times, and this can ensure the best customer access to products.

Because many systems are linked through technology that drives decisions made by many stakeholders inside and outside of the organization, internal controls are needed to protect the integrity and ensure the flow of information. An internal control system also assists all stakeholders of an organization to develop an understanding of the organization and provide assurance that all assets are being used efficiently and accurately.

Environment Leading to the Sarbanes-Oxley Act

Internal controls have grown in their importance as a component of most business decisions. This importance has grown as many company structures have grown in complexity. Despite their importance, not all companies have given maintenance of controls top priority. Additionally, many small businesses do not have adequate understanding of internal controls and therefore use inferior internal control systems. Many large companies have nonformalized processes, which can lead to systems that are not as efficient as they could be. The failure of the **SCICAP Credit Union** discussed earlier is a direct result of a small financial institution having a substandard internal control system leading to employee theft. One of the largest corporate failures of all time was **Enron**, and the failure can be directly attributed to poor internal controls.

Enron was one of the largest energy companies in the world in the late twentieth century. However, a corrupt management attempted to hide weak financial performance by manipulating revenue recognition, valuation of assets on the balance sheet, and other financial reporting disclosures so that the company appeared to have significant growth. When this practice was uncovered, the owners of **Enron** stock lost $40 billion as the stock price dropped from $91 per share to less than $1 per share, as shown in Figure 8.4.[6] This failure could have been prevented had proper internal controls been in place.

For example, **Enron** and its accounting firm, **Arthur Andersen**, did not maintain an adequate degree of independence. **Arthur Andersen** provided a significant amount of services in both auditing and consulting, which prevented them from approaching the audit of **Enron** with a proper degree of independence. Also, among many other violations, **Enron** avoided the proper use of several acceptable reporting requirements.



Figure 8.4 Change in Enron Stock Price. The Enron scandal was one of the largest frauds in the history of modern business. It was the main fraud that was responsible for creation of the Sarbanes-Oxley Act as well as the Public Company Accounting Oversight Board (PCAOB). (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

As a result of the **Enron** failure and others that occurred during the same time frame, Congress passed the **Sarbanes-Oxley Act (SOX)** to regulate practice to manage conflicts of analysts, maintain governance, and impose guidelines for criminal conduct as well as sanctions for violations of conduct. It ensures that internal controls are properly documented, tested, and used consistently. The intent of the act was to ensure that corporate financial statements and disclosures are accurate and reliable. It is important to note that SOX only applies to public companies. A **publicly traded company** is one whose stock is traded (bought and sold) on an organized stock exchange. Smaller companies still struggle with internal control development and compliance due to a variety of reasons, such as cost and lack of resources.

Major Accounting Components of the Sarbanes-Oxley Act

As it pertains to internal controls, the SOX requires the certification and documentation of internal controls. Specifically, the act requires that the auditor do the following:

1. Issue an internal control report following the evaluation of internal controls.
2. Limit nonaudit services, such as consulting, that are provided to a client.
3. Rotate who can lead the audit. The person in charge of the audit can serve for a period of no longer than seven years without a break of two years.

Additionally, the work conducted by the auditor is to be overseen by the **Public Company Accounting Oversight Board (PCAOB)**. The PCAOB is a congressionally established, nonprofit corporation. Its creation was included in the Sarbanes-Oxley Act of 2002 to regulate conflict, control disclosures, and set sanction guidelines for any violation of regulations. The PCAOB was assigned the responsibilities of ensuring independent, accurate, and informative audit reports, monitoring the audits of securities brokers and dealers, and maintaining oversight of the accountants and accounting firms that audit publicly traded companies.

LINK TO LEARNING

Visit the Public Company Accounting Oversight Board (PCAOB) website to learn more about what it does.

Any employee found to violate SOX standards can be subject to very harsh penalties, including $5 million in fines and up to 20 to 25 years in prison. The penalty is more severe for securities fraud (25 years) than for mail or wire fraud (20 years).

The SOX is relatively long and detailed, with Section 404 having the most application to internal controls. Under Section 404, management of a company must perform annual audits to assess and document the effectiveness of all internal controls that have an impact on the financial reporting of the organization. Also, selected executives of the firm under audit must sign the audit report and state that they attest that the audit fairly represents the financial records and conditions of the company.

The financial reports and internal control system must be audited annually. The cost to comply with this act is very high, and there is debate as to how effective this regulation is. Two primary arguments that have been made against the SOX requirements is that complying with their requirements is expensive, both in terms of cost and workforce, and the results tend not to be conclusive. Proponents of the SOX requirements do not accept these arguments.

One available potential response to mandatory SOX compliance is for a company to decertify (remove) its stock for trade on the available stock exchanges. Since SOX affects publicly traded companies, decertifying its stock would eliminate the SOX compliance requirement. However, this has not proven to be a viable option, primarily because investors enjoy the protection SOX provides, especially the requirement that the companies in which they invest undergo a certified audit prepared by CPAs employed by national or regional accounting firms. Also, if a company takes its stock off of an organized stock exchange, many investors assume that a company is in trouble financially and that it wants to avoid an audit that might detect its problems.

Example 8.2.1: The Growing Importance of the Report on Internal Controls

Internal controls have become an important aspect of financial reporting. As part of the financial statements, the auditor has to issue a report with an opinion on the financial statements, as well as internal controls. Use the internet and locate the annual report of a company, specifically the report on internal controls. What does this report tell the user of financial information?

Solution

The annual report informs the user about the financial results of the company, both in discussion by management as well as the financial statements. Part of the financial statements involves an independent auditor's report on the integrity of the financial statements as well as the internal controls.

LINK TO LEARNING

Many companies have their own internal auditors on staff. The role of the internal auditor is to test and ensure that a company has proper internal controls in place, and that they are functioning. Read about how the internal audit works from **I.S. Partners** to learn more.

Footnotes

- 4 Jack Money. "Fraudulent Loans Lead to Enid Banker's Arrest on Numerous Felony Complaints." *The Oklahoman*. November 15, 2017. https://newsok.com/article/5572195/f...ony-complaints
- 5 American Institute of Certified Public Accountants (AICPA). "Segregation of Duties." n.d. https://www.aicpa.org/interestareas/...of-duties.html
- 6 Douglas O. Linder, ed. "Enron Historical Stock Price." Famous Trials. n.d. https://www.famous-trials.com/images...stockchart.pdf

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8.3: Describe Internal Controls within an Organization

The use of internal controls differs significantly across organizations of different sizes. In the case of small businesses, implementation of internal controls can be a challenge, due to cost constraints, or because a small staff may mean that one manager or owner will have full control over the organization and its operations. An owner in charge of all functions has enough knowledge to keep a close eye on all aspects of the organization and can track all assets appropriately. In smaller organizations in which responsibilities are delegated, procedures need to be developed in order to ensure that assets are tracked and used properly.

When an owner cannot have full oversight and control over an organization, internal control systems need to be developed. When an appropriate internal control system is in place, it is interlinked to all aspects of the entity's operations. An appropriate internal control system links the accounting, finance, operations, human resources, marketing, and sales departments within an organization. It is important that the management team, as well as employees, recognize the importance of internal controls and their role in preventing losses, monitoring performance, and planning for the future.

Elements of Internal Control

A strong internal control system is based on the same consistent elements:

- establishment of clear responsibilities
- proper documentation
- adequate insurance
- separation of assets from custody
- separation of duties
- use of technology

Establishment of Clear Responsibilities

A properly designed system of internal control clearly dictates responsibility for certain roles within an organization. When there is a clear statement of responsibility, issues that are uncovered can be easily traced and responsibility placed where it belongs.

As an example, imagine that you are the manager of the Galaxy's Best Yogurt. On any shift, you have three employees working in the store. One employee is designated as the shift supervisor who oversees the operations of the other two employees on the shift and ensures that the store is presented and functioning properly. Of the other two employees, one may be solely responsible for management of the cash register, while the others serve the customers. When only one employee has access to an individual cash register, if there is an overage or shortage of cash, it can be traced to the one employee who is in charge of the cash register.

Proper Documentation

An effective internal control system maintains proper documentation, including backups, to trace all transactions. The documentation can be paper copies, or documents that are computer generated and stored, on flash drives or in the cloud, for example. Given the possibility of some type of natural (tornado or flood) or man-made (arson) disasters, even the most basic of businesses should create backup copies of documentation that are stored off-site.

In addition, any documentation generated by daily operations should be managed according to internal controls. For example, when the Galaxy's Best Yogurt closes each day, one employee should close out and reconcile the cash drawer using prenumbered forms in pen to ensure that no forms can be altered or changed by another employee who may have access to the cash. In case of an error, the employee responsible for making the change should initial any changes on the form. If there are special orders for cakes or other products, the order forms should be prenumbered. The use of prenumbered documents provides assurance that all sales are recorded. If a form is not prenumbered, an order can be prepared, and the employee can then take the money without ringing the order into the cash register, leaving no record of the sale.

Adequate Insurance

Insurance may be a significant cost to an organization (especially liability coverage), but it is necessary. With adequate insurance on an asset, if it is lost or destroyed, an outside party will recoup the company for the loss. If assets are lost to fraud or theft, an insurance company will investigate the loss and will press criminal charges against any employee found to be involved. Very often, the employer will be hesitant to pursue criminal charges against an employee due to the risk of lawsuit or bad publicity. For

example, an employee might assume that the termination was age related and is going to sue the company. Also, there might be a situation where the company experienced a loss, such as theft, and it does not want to let the general public know that there are potential deficiencies in its security system.

If the insurance company presses charges on behalf of the company, this protects the organization and also acts as a deterrent if employees know that the insurance company will always prosecute theft. For example, suppose the manager of the Galaxy's Best Yogurt stole $10,000 cash over a period of two years. The owner of the yogurt store will most likely file an insurance claim to recover the $10,000 that was stolen. With proper insurance, the insurance company will reimburse the yogurt store for the money but then has the right to press charges and recover its losses from the employee who was caught stealing. The store owner will have no control over the insurance company's efforts to recover the $10,000 and will likely be forced to fire the employee in order to keep the insurance policy.

Separation of Assets from Custody

Separation of assets from custody ensures that the person who controls an asset cannot also keep the accounting records. This action prevents one employee from taking income from the business and entering a transaction on the accounting records to cover it up. For example, one person within an organization may open an envelope that contains a check, but a different person would enter the check into the organization's accounting system. In the case of the Galaxy's Best Yogurt, one employee may count the money in the cash register drawer at the end of the night and reconcile it with the sales, but a different employee would recount the money, prepare the bank deposit, and ensure that the deposit is made at the bank.

Separation of Duties

A properly designed internal control system assures that at least two (if not more) people are involved with most transactions. The purpose of separating duties is to ensure that there is a check and balance in place. One common internal control is to have one employee place an inventory order and a different employee receive the order as it is delivered. For example, assume that an employee at the Galaxy's Best Yogurt places an inventory order. In addition to the needed inventory, the employee orders an extra box of piecrusts. If that employee also receives the order, he or she can take the piecrusts home, and the store will still pay for them. Check signing is another important aspect of separation of duties. Typically, the person who writes a check should not also sign the check. Additionally, the person who places supply orders should not write checks to pay the bills for these supplies.

Use of Technology

Technology has made the process of internal control simpler and more approachable to all businesses. There are two reasons that the use of technology has become more prevalent. The first is the development of more user-friendly equipment, and the second is the reduction in costs of security resources. In the past, if a company wanted a security system, it often had to go to an outside security firm, and the costs of providing and monitoring the system were prohibitive for many small businesses. Currently, security systems have become relatively inexpensive, and not only do many small businesses now have them, they are now commonly used by residential homeowners.

In terms of the application of security resources, some businesses use surveillance cameras focused on key areas of the organization, such as the cash register and areas where a majority of work is performed. Technology also allows businesses to use password protection on their data or systems so that employees cannot access systems and change data without authorization. Businesses may also track all employee activities within an information technology system.

Even if a business uses all of the elements of a strong internal control system, the system is only as good as the oversight. As responsibilities, staffing, and even technology change, internal control systems need to be constantly reviewed and refined. Internal control reviews are typically not conducted by inside management but by internal auditors who provide an impartial perspective of where controls are working and where they can be improved.

Purposes of Internal Controls within a Governmental Entity

Internal controls apply not only to public and private corporations but also to governmental entities. Often, a government controls one of the most important assets of modern times: data. Unprotected financial information, including tax data, social security, and governmental identifications, could lead to identity theft and could even provide rogue nations access to data that could

compromise the security of our country. Governmental entities require their contractors to have proper internal controls and to maintain proper codes of ethics.

ETHICAL CONSIDERATIONS

Ethics in Governmental Contractors

Government entities are not the only organizations required to implement proper internal controls and codes of ethics. As part of the business relationship between different organizations, governmental agencies also require contractors and their subcontractors to implement internal controls to ensure compliance with proper ethical conduct. The Federal Acquisition Regulation (FAR) Council outlines regulations under FAR 3.10,[7] which require governmental contractors and their subcontractors to implement a written "Contractor Code of Business Ethics and Conduct," and the proper internal controls to ensure that the code of ethics is followed. An employee training program, posting of agency inspector general hotline posters, and an internal control system to promote compliance with the established ethics code are also required. Contractors must disclose violations of federal criminal law involving fraud, conflicts of interest, bribery, or gratuity violations; violations of the civil False Claims Act; and significant overpayments on a contract not resulting from contract financing payments.[8] Such internal controls help ensure that an organization and its business relationships are properly managed.

To recognize the significant need for internal controls within the government, and to ensure and enforce compliance, the US Government Accountability Office (GAO) has its own standards for internal control within the federal government. All government agencies are subject to governance under these standards, and one of the objectives of the GAO is to provide audits on agencies to ensure that proper controls are in place and within compliance. Standards for internal control within the federal government are located within a publication referred to as the "Green Book," or *Standards for Internal Control in the Federal Government.*

LINK TO LEARNING

Government organizations have their own needs for internal controls. Read the GAO "Green Book" to learn more about these internal control procedures.

Purposes of Internal Controls within a Not-for-Profit

Not-for-profit (NFP) organizations have the same needs for internal control as many traditional for-profit entities. At the same time, there are unique challenges that these entities face. Based on the objectives and charters of NFP organizations, in many cases, those who run the organizations are volunteers. As volunteers, leaders of NFPs may not have the same training background and qualifications as those in a similar for-profit position. Additionally, a volunteer leader often splits time between the organization and a full-time career. For these reasons, internal controls in an NFP often are not properly implemented, and there may be a greater risk of control lapse. A **control lapse** occurs when there is a deviation from standard control protocol that leads to a failure in the internal control and/or fraud prevention processes or systems. A failure occurs in a situation when results did not achieve predetermined goals or meet expectations.

Not-for-profit organizations have an extra category of finances that need protection, in addition to their assets. They need to ensure that incoming donations are used as intended. For example, many colleges and universities are classified as NFP organizations, and donations are a significant source of revenue. However, donations are often directed to a specific source. For example, suppose an alumnus of Alpha University wants to make a $1,000,000 donation to the business school for undergraduate student scholarships. Internal controls would track that donation to ensure it paid for scholarships for undergraduate students in the business school and was not used for any other purpose at the school, in order to avoid potential legal issues.

Identify and Apply Principles of Internal Controls to the Receipt and Disbursement of Cash

Cash can be a major part of many business operations. Imagine a Las Vegas casino, or a large grocery store, such as **Publix Super Markets**, **Wegmans Food Markets**, or **ShopRite**; in any of these settings, millions of dollars in cash can change hands within a matter of minutes, and it can pass through the hands of thousands of employees. Internal controls ensure that all of this cash reaches the bank account of the business entity. The first control is monitoring. Not only are cameras strategically placed throughout the store to prevent shoplifting and crime by customers, but cameras are also located over all areas where cash changes hands, such as over every cash register, or in a casino over every gaming table. These cameras are constantly monitored, often offsite at a central

location by personnel who have no relationship with the employees who handle the cash, and all footage is recorded. This close monitoring makes it more difficult for misuse of cash to occur.

Additionally, access to cash is tightly controlled. Within a grocery store, each employee has his or her own cash drawer with a set amount of cash. At any time, any employee can reconcile the sales recorded within the system to the cash balance that should be in the drawer. If access to the drawer is restricted to one employee, that employee is responsible when cash is missing. If one specific employee is consistently short on cash, the company can investigate and monitor the employee closely to determine if the shortages are due to theft or if they are accidental, such as if they resulted from errors in counting change. Within a casino, each time a transaction occurs and when there is a shift change for the dealers, cash is counted in real time. Casino employees dispersed on the gaming floor are constantly monitoring play, in addition to those monitoring cameras behind the scenes.

Technology plays a major role in the maintenance of internal controls, but other principles are also important. If an employee makes a mistake involving cash, such as making an error in a transaction on a cash register, the employee who made the mistake typically cannot correct the mistake. In most cases, a manager must review the mistake and clear it before any adjustments are made. These changes are logged to ensure that managers are not clearing mistakes for specific employees in a pattern that could signify **collusion**, which is considered to be a private cooperation or agreement primarily for a deceitful, illegal, or immoral cause or purpose. Duties are also separated to count cash on hand and ensure records are accurate. Often, at the end of the shift, a manager or employee other than the person responsible for the cash is responsible for counting cash on hand within the cash drawer. For example, at a grocery store, it is common for an employee who has been checking out customers for a shift to then count the money in the register and prepare a document providing the counts for the shift. This employee then submits the counted tray to a supervisor, such as a head cashier, who then repeats the counting and documentation process. The two counts should be equal. If there is a discrepancy, it should immediately be investigated. If the store accepts checks and credit/debit card payments, these methods of payments are also incorporated into the verification process.

In many cases, the sales have also been documented either by a paper tape or by a computerized system. The ultimate goal is to determine if the cash, checks, and credit/debit card transactions equal the amount of sales for the shift. For example, if the shift's register had sales of $800, then the documentation of counted cash and checks, plus the credit/debit card documentation should also add up to $800.

Despite increased use of credit cards by consumers, our economy is still driven by cash. As cash plays a very important role in society, efforts must be taken to control it and ensure that it makes it to the proper areas within an organization. The cost of developing, maintaining, and monitoring internal controls is significant but important. Considering the millions of dollars of cash that can pass through the hands of employees on any given day, the high cost can be well worth it to protect the flow of cash within an organization.

LINK TO LEARNING

Internal controls are as important for not-for-profit businesses as they are within the for-profit sector. See this guide for not-for-profit businesses to set up and maintain proper internal control systems provided by the National Council of Nonprofits.

THINK IT THROUGH

Hiring Approved Vendors

One internal control that companies often have is an official "approved vendor" list for purchases. Why is it important to have an approved vendor list?

Footnotes

- 7 Federal Acquisition Regulation. "Subpart 3.10: Contractor Code of Business Ethics and Conduct." January 22, 2019. https://www.acquisition.gov/content/...cs-and-conduct
- 8 National Contract Management Association. https://www.ncmahq.org/

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8.4: Discuss Management Responsibilities for Maintaining Internal Controls within an Organization

Because internal controls do protect the integrity of financial statements, large companies have become highly regulated in their implementation. In addition to Section 404 of the SOX, which addresses reporting and testing requirements for internal controls, there are other sections of the act that govern management responsibility for internal controls. Although the auditor reviews internal controls and advises on the improvement of controls, ultimate responsibility for the controls is on the management of the company. Under SOX Section 302, in order to provide additional assurance to the financial markets, the **chief executive officer (CEO)**, who is the executive within a company with the highest-ranking title and the overall responsibility for management of the company, and the **chief financial officer (CFO)**, who is the corporation officer who reports to the CEO and oversees all of the accounting and finance concerns of a company, must personally certify that (1) they have reviewed the internal control report provided by the auditor; (2) the report does not contain any inaccurate information; and (3) they believe that all financial information fairly states the financial conditions, income, and cash flows of the entity. The sign-off under Section 302 makes the CEO and CFO personally responsible for financial reporting as well as internal control structure.

While the executive sign-offs seem like they would be just a formality, they actually have a great deal of power in court cases. Prior to SOX, when an executive swore in court that he or she was not aware of the occurrence of some type of malfeasance, either committed by his or her firm or against his or her firm, the executive would claim a lack of knowledge of specific circumstances. The typical response was, “I can’t be expected to know everything.” In fact, in virtually all of the trials involving potential malfeasance, this claim was made and often was successful in a not-guilty verdict.

The initial response to the new SOX requirements by many people was that there was already sufficient affirmation by the CEO and CFO and other executives to the accuracy and fairness of the financial statements and that the SOX requirements were unnecessary. However, it was determined that the SOX requirements provided a degree of legal responsibility that previously might have been assumed but not actually stated.

Even if a company is not public and not governed by the SOX, it is important to note that the tone is set at the managerial level, called the *tone at the top*. If management respects the internal control system and emphasizes the importance of maintaining proper internal controls, the rest of the staff will follow and create a cohesive environment. A proper tone at the top demonstrates management’s commitment toward openness, honesty, integrity, and ethical behavior.

YOUR TURN

Defending the Sarbanes-Oxley Act

You are having a conversation with the CFO of a public company. Imagine that the CFO complains that there is no benefit to Sections 302 and 404 of the Sarbanes-Oxley Act relative to the cost, as “our company has always valued internal controls before this regulation and never had an issue.” He believes that this regulation is an unnecessary overstep. How would you respond and defend the need for Sections 302 and 404 of the Sarbanes-Oxley Act?

Solution

I would tell the CFO the following:

1. Everyone says that they have always valued internal controls, even those who did not.
2. Better security for the public is worth the cost.
3. The cost of compliance is more than recovered in the company’s market price for its stock.

THINK IT THROUGH

Personal Internal Controls

Technology plays a very important role in internal controls. One recent significant security breach through technology was the **Equifax** breach. What is an internal control that you can personally implement to protect your personal data as a result of this breach, or any other future breach?

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8.5: Describe Fraud in Financial Statements and Sarbanes-Oxley Act Requirements

Financial statements are the end result of an accountant's work and are the responsibility of management. Proper internal controls help the accountant determine that the financial statements fairly present the financial position and performance of a company. **Financial statement fraud** occurs when the financial statements are used to conceal the actual financial condition of a company or to hide specific transactions that may be illegal. Financial statement fraud may take on many different methods, but it is generally called **cooking the books**. This issue may occur for many purposes.

A common reason to cook the books is to create a false set of a company's books used to convince investors or lenders to provide money to the company. Investors and lenders rely on a properly prepared set of financial statements in making their decision to provide the company with money. Another reason to misstate a set of financial statements is to hide corporate looting such as excessive retirement perks of top executives, unpaid loans to top executives, improper stock options, and any other wrongful financial action. Yet another reason to misreport a company's financial data is to drive the stock price higher. Internal controls assist the accountant in locating and identifying when management of a company wants to mislead the inventors or lenders.

The financial accountant or members of management who set out to cook the books are intentionally attempting to deceive the user of the financial statements. The actions of upper management are being concealed, and in most cases, the entire financial position of the company is being purposely misreported. Regardless of the reason for misstating the true condition of a company's financial position, doing so misleads any person using the financial statements of a company to evaluate the company and its operations.

How Companies Cook the Books to Misrepresent Their Financial Condition

One of the most common ways companies cook the books is by manipulating revenue accounts or accounts receivables. Proper **revenue recognition** involves accounting for revenue when the company has met its obligation on a contract. Financial statement fraud involves early revenue recognition, or recognizing revue that does not exist, and receivable accountings, used in tandem with false revenue reporting. **HealthSouth** used a combination of false revenue accounts and misstated accounts receivable in a direct manipulation of the revenue accounts to commit a multibillion-dollar fraud between 1996 and 2002. Several chief financial officers and other company officials went to prison as a result.[9]

CONCEPTS IN PRACTICE

Internal Controls at HealthSouth

The fraud at **HealthSouth** was possible because some of the internal controls were ignored. The company failed to maintain standard segregation of duties and allowed management override of internal controls. The fraud required the collusion of the entire accounting department, concealing hundreds of thousands of fraudulent transactions through the use of falsified documents and fraudulent accounting schemes that included revenue recognition irregularities (such as recognizing accounts receivables to be recorded as revenue before collection), misclassification of expenses and asset acquisitions, and fraudulent merger and acquisition accounting. The result was billions of dollars of fraud. Simply implementing and following proper internal control procedures would have stopped this massive fraud.[10]

Many companies may go to great lengths to perpetuate financial statement fraud. Besides the direct manipulation of revenue accounts, there are many other ways fraudulent companies manipulate their financial statements. Companies with large inventory balances can misrepresent their inventory account balances and use this misrepresentation to overstate the amount of their assets to get larger loans or use the increased balance to entice investors through claims of exaggerated revenues. The inventory accounts can also be used to overstate income. Such inventory manipulations can include the following:

- Channel stuffing: encouraging customers to buy products under favorable terms. These terms include allowing the customer to return or even not pick up goods sold, without a corresponding reserve to account for the returns.
- Sham sales: sales that have not occurred and for which there are no customers.
- Bill-and-hold sales: recognition of income before the title transfers to the buyer, and holding the inventory in the seller's warehouse.
- Improper cutoff: recording sales of inventory in the wrong period and before the inventory is sold; this is a type of early revenue recognition.
- Round-tripping: selling items with the promise to buy the items back, usually on credit, so there is no economic benefit.

These are just a few examples of the way an organization might manipulate inventory or sales to create false revenue.

One of the most famous financial statement frauds involved **Enron**, as discussed previously. **Enron** started as an interstate pipeline company, but then branched out into many different ventures. In addition to the internal control deficiencies discussed earlier, the financial statement fraud started when the company began to attempt to hide its losses.

The fraudulent financial reporting schemes included building assets and immediately taking as income any projected profits on construction and hiding the losses from operating assets in an off-the-balance sheet transaction called **special purpose entities**, which are separate, often complicated legal entities that are often used to absorb risk for a corporation. **Enron** moved assets that were losing money off of its books and onto the books of the Special Purpose Entity. This way, **Enron** could hide its bad business decisions and continue to report a profit, even though its assets were losing money. **Enron**'s financial statement fraud created false revenues with the misstatement of assets and liability balances. This was further supported by inadequate balance sheet footnotes and the related disclosures. For example, required disclosures were ramped up as a result of these special purpose entities.

Sarbanes-Oxley Act Compliance Today

The **Enron** scandal and related financial statement frauds led to investors requiring that public companies maintain better internal controls and develop stronger governance systems, while auditors perform a better job at auditing public companies. These requirements, in turn, led to the regulations developed under SOX that were intended to protect the investing public.

Since SOX was first passed, it has adapted to changing technology and now requires public companies to protect their accounting and financial data from hackers and other outside or internal forces through stronger internal controls designed to protect the data. The *Journal of Accountancy* supported these new requirements and reported that the results of SOX have been positive for both companies and investors.

As discussed in the *Journal of Accountancy* article,[11] there are three conditions that are increasingly affecting compliance with SOX requirements:

- **PCAOB requirements.** The PCAOB has increased the requirements for inspection reports, with a greater emphasis on deficiency evaluation.
- **Revenue recognition**. The Financial Accounting Standards Board has introduced a new standard for revenue recognition. This requirement has led to the need for companies to update control documentation.
- **Cybersecurity**. **Cybersecurity** is the practice of protecting software, hardware, and data from digital attacks. As would be expected in today's environment, the number of recent cybersecurity disclosures has significantly grown.

Under current guidelines, instead of the SOX requiring compliance with just the financial component of reporting and internal control, the guidelines now allow application to information technology (IT) activities as well. A major change under the SOX guidelines involves the method of storage of a company's electronic records. While the act did not specifically require a particular storage method, it did provide guidance on which records were to be stored and for how long they should be stored.

The SOX now requires that all business records, electronic records, and electronic messages must be stored for at least five years. The penalties for noncompliance include either imprisonment or fines, or a combination of the two options.

Footnotes

- 9 Melinda Dickinson. "Former HealthSouth Boss Found Liable for $2.9 Billion." *Reuters*. June 18, 2009. https://www.reuters.com/article/us-h...55H4IP20090618
- 10 David McCann. "Two CFOs Tell a Tale of Fraud at HealthSouth." CFO.com. March 27, 2017. .http://ww2.cfo.com/fraud/2017/03/two...d-healthsouth/
- 11 Ken Tysiac. "Companies Spending More Time on SOX Compliance." *Journal of Accountancy*. June 12, 2017. https://www.journalofaccountancy.com...201716857.html

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CHAPTER OVERVIEW

9: Fixed Assets

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9.4: Explain and Apply Depreciation Methods to Allocate Capitalized Costs

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9.1: Long Term Assets

On a classified balance sheet, the asset section contained long term assets including things:

1. Plant assets (also called property, plant and equipment or fixed assets)
2. Long term investments
3. Intangible assets

Plant assets are long-lived assets because they are expected to last for more than one year. Long-lived assets consist of tangible assets and intangible assets. **Tangible assets** have physical characteristics that we can see and touch; they include plant assets such as buildings and furniture, and natural resources such as gas and oil. **Intangible assets** have no physical characteristics that we can see and touch but represent exclusive privileges and rights to their owners.

In this section, we will look at the accounting treatment for plant assets, natural resources and intangible assets. Investments will be covered in other chapters.

Plant assets

To be classified as a plant asset, an asset must: (1) be tangible, that is, capable of being seen and touched; (2) have a useful service life of more than one year; and (3) be used in business operations rather than held for resale. Common plant assets are buildings, machines, tools, and office equipment. On the balance sheet, these assets appear under the heading “Property, plant, and equipment”.

Natural resources

Resources supplied by nature, such as ore deposits, mineral deposits, oil reserves, gas deposits, and timber stands, are **natural resources** or **wasting assets.** Natural resources represent inventories of raw materials that can be consumed (exhausted) through extraction or removal from their natural setting (e.g. removing oil from the ground).

Intangible assets

Although they have no physical characteristics, **intangible assets** have value because of the advantages or exclusive privileges and rights they provide to a business. Intangible assets generally arise from two sources: (1) exclusive privileges granted by governmental authority or by legal contract, such as patents, copyrights, franchises, trademarks and trade names, and leases; and (2) superior entrepreneurial capacity or management know-how and customer loyalty, which is called goodwill.

All intangible assets are nonphysical, but not all nonphysical assets are intangibles. For example, accounts receivable and prepaid expenses are nonphysical, yet classified as current assets rather than intangible assets. Intangible assets are generally both nonphysical and noncurrent; they appear in a separate long-term section of the balance sheet entitled “Intangible assets”.

Examples of intangible assets include:

- **Research and development (R&D)**
- **Amortization**
- **A patent**
- **A copyright**
- **A franchise**
- A **trademark**
- A **lease**
- A **leasehold improvement**
- **Goodwill**

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9.2: Entries for Cash and Lump-Sum Purchases of Property, Plant and Equipment

Property, plant, and equipment (fixed assets or operating assets) compose more than one-half of total assets in many corporations. These resources are necessary for the companies to operate and ultimately make a profit. It is the efficient use of these resources that in many cases determines the amount of profit corporations will earn.

On a classified balance sheet, the asset section contains: (1) current assets; (2) property, plant, and equipment; and (3) other categories such as intangible assets and long-term investments. Previous chapters discussed current assets. Property, plant, and equipment are often called **plant and equipment** or simply plant assets. Plant assets are long-lived assets because they are expected to last for more than one year. Long-lived assets consist of tangible assets and intangible assets. **Tangible assets** have physical characteristics that we can see and touch; they include plant assets such as buildings and furniture, and natural resources such as gas and oil. **Intangible assets** have no physical characteristics that we can see and touch but represent exclusive privileges and rights to their owners.

Nature of plant assets

To be classified as a plant asset, an asset must: (1) be tangible, that is, capable of being seen and touched; (2) have a useful service life of more than one year; and (3) be used in business operations rather than held for resale. Common plant assets are buildings, machines, tools, and office equipment. On the balance sheet, these assets appear under the heading “Property, plant, and equipment”.

Initial recording of plant assets

When a company acquires a plant asset, accountants record the asset at the cost of acquisition (historical cost). When a plant asset is purchased for cash, its acquisition cost is simply the agreed on cash price. This cost is objective, verifiable, and the best measure of an asset’s fair market value at the time of purchase. **Fair market value** is the price received for an item sold in the normal course of business (not at a forced liquidation sale). Even if the market value of the asset changes over time, accountants continue to report the acquisition cost in the asset account in subsequent periods.

The **acquisition cost** of a plant asset is the amount of cost incurred to acquire and place the asset in operating condition at its proper location. Cost includes all normal, reasonable, and necessary expenditures to obtain the asset and get it ready for use. Acquisition cost also includes the repair and reconditioning costs for used or damaged assets as longs as the item was not damaged after purchase. Unnecessary costs (such as traffic tickets or fines or repairs that occurred after purchase) that must be paid as a result of hauling machinery to a new plant are not part of the acquisition cost of the asset.

Recording Land

The cost of land includes its purchase price and other many other costs including:

- real estate commissions,
- title search and title transfer fees,
- title insurance premiums,
- existing mortgage note or unpaid taxes (back taxes) assumed by the purchaser,
- costs of surveying, clearing, and grading;
- and local assessments for sidewalks, streets, sewers, and water mains.
- Sometimes land purchased as a building site contains an unusable building that must be removed.

The accountant debits the entire costs to Land, including the cost of removing the building less any cash received from the sale of salvaged items while the land is being readied for use. **Land is considered to have an unlimited life and is therefore not depreciable**. However, land improvements, including driveways, temporary landscaping, parking lots, fences, lighting systems, and sprinkler systems, are attachments to the land. They have limited lives and therefore are depreciable. Owners record depreciable land improvements in a separate account called Land Improvements. They record the cost of permanent landscaping, including leveling and grading, in the Land account.

To illustrate, assume that Spivey Company purchased an old farm on the outskirts of San Diego as a factory site. The company paid $225,000 for the property. In addition, the company agreed to pay unpaid property taxes from previous periods (called back taxes)

of $12,000. Attorneys' fees and other legal costs relating to the purchase of the farm totaled $1,800. Spivey demolished (razed) the farm buildings at a cost of $18,000. The company salvaged some of the structural pieces of the building and sold them for $3,000. Because the firm was constructing a new building at the site, the city assessed Spivey Company $9,000 for water mains, sewers, and street paving. Spivey computed the cost of the land as follows:

Cost of factory site	$225,000
Back taxes	12,000
Attorneys' fees and other legal costs	1,800
Demolition	18,000
Sale of salvaged parts	-3,000
City assessment	9,000
Total Land Cost	**$262,800**

The journal entry to record the purchase of this land for cash would be:

	Debit	Credit
Land	262,800	
Cash		262,800
To record purchase of land with cash.		

Recording Building

When a business buys a building, its cost includes:

- the purchase price,
- repair and remodeling costs,
- unpaid taxes assumed by the purchaser,
- legal costs,
- and real estate commissions paid.

Determining the cost of constructing a new building is often more difficult. Usually this cost includes architect's fees; building permits; payments to contractors; and the cost of digging the foundation. Also included are labor and materials to build the building; salaries of officers supervising the construction; and insurance, taxes, and interest during the construction period. Any miscellaneous amounts earned from the building during construction reduce the cost of the building. For example, an owner who could rent out a small completed portion during construction of the remainder of the building, would credit the rental proceeds to the Buildings account rather than to a revenue account.

Recording Equipment or Machinery

Often companies purchase machinery or other equipment such as delivery or office equipment. Its cost includes:

- the seller's net invoice price (whether the discount is taken or not),
- transportation charges incurred,
- insurance in transit,
- cost of installation,
- costs of accessories,
- and testing costs.
- Also included are other costs needed to put the machine or equipment in operating condition in its intended location.

The cost of machinery does not include removing and disposing of a replaced, old machine that has been used in operations. Such costs are part of the gain or loss on disposal of the old machine.

To illustrate, assume that Clark Company purchased new equipment to replace equipment that it has used for five years. The company paid a net purchase price of $150,000, brokerage fees of $5,000, legal fees of $2,000, and freight and insurance in transit of $3,000. In addition, the company paid $1,500 to remove old equipment and $2,000 to install new equipment. Clark would compute the cost of new equipment as follows:

Net purchase price	$150,000
Brokerage fees	5,000
Legal fees	2,000
Freight and insurance in transit	3,000
Installation costs	2,000
Total Equipment cost	**$162,000**

The journal entry to record the purchase of the equipment paying $50,000 cash and by signing a note for the balance would be:

	Debit	Credit
Equipment	162,000	
Cash		50,000
Note Payable (162,000 – 50,000)		162,000
To record purchase of equipment by paying cash and signing note.		

Lump Sum Purchases

Sometimes a company buys land and other assets for a lump sum. When land and buildings purchased together are to be used, the firm divides the total cost and establishes separate ledger accounts for land and for buildings. This division of cost establishes the proper balances in the appropriate accounts. This is especially important later because the depreciation recorded on the buildings affects reported income, while no depreciation is taken on the land.

Let's look at an example: Assume a company purchases land, machinery and a building for $4,000,000 cash. The land has a market value of $1,350,000, machinery of $675,000 and the building for $2,475,000 for a total value of $4,500,000. We cannot report the assets at market value since the market value is less than we paid for the assets. We will do a 2-step process to get the cost of each asset.

1. Calculate each asset's percent of market value (Asset market value / total market value of all assets)

Asset	Appraisal (or	Market) Value	% of MV
Land	1,350,000	/4,500,000 =	30%
Machinery	675,000	/4,500,000 =	15%
Building	2,475,000	/4,500,000 =	55%
Total	4,500,000		

2. Calculate the cost of each asset (total price paid for all assets x % of market value)

Asset	% of MV	Purchase Price	Asset Cost
Land	30%	4,000,000	$ 1,200,000
Machinery	15%	4,000,000	$ 600,000
Building	55%	4,000,000	$ 2,200,000
Total			$ 4,000,000

The journal entry to record this purchase for cash would be:

Account	Debit	Credit
Land	$ 1,200,000	
Machinery	600,000	
Building	2,200,000	
Cash		$ 4,000,000

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9.3: Analyze and Classify Capitalized Costs versus Expenses

When a business purchases a long-term asset (used for more than one year), it classifies the asset based on whether the asset is used in the business's operations. If a long-term asset is used in the business operations, it will belong in property, plant, and equipment or intangible assets. In this situation the asset is typically capitalized. **Capitalization** is the process by which a long-term asset is recorded on the balance sheet and its allocated costs are expensed on the income statement over the asset's economic life. Explain and Apply Depreciation Methods to Allocate Capitalized Costs addresses the available methods that companies may choose for expensing capitalized assets.

Long-term assets that are not used in daily operations are typically classified as an investment. For example, if a business owns land on which it operates a store, warehouse, factory, or offices, the cost of that land would be included in property, plant, and equipment. However, if a business owns a vacant piece of land on which the business conducts no operations (and assuming no current or intermediate-term plans for development), the land would be considered an investment.

YOUR TURN

Classifying Assets and Related Expenditures

You work at a business consulting firm. Your new colleague, Marielena, is helping a client organize his accounting records by types of assets and expenditures. Marielena is a bit stumped on how to classify certain assets and related expenditures, such as capitalized costs versus expenses. She has given you the following list and asked for your help to sort through it. Help her classify the expenditures as either capitalized or expensed, and note which assets are property, plant, and equipment.

Expenditures:

- normal repair and maintenance on the manufacturing facility
- cost of taxes on new equipment used in business operations
- shipping costs on new equipment used in business operations
- cost of a minor repair on existing equipment used in business operations

Assets:

- land next to the production facility held for use next year as a place to build a warehouse
- land held for future resale when the value increases
- equipment used in the production process

Solution

Expenditures:

- normal repair and maintenance on the manufacturing facility: expensed
- cost of taxes on new equipment used in business operations: capitalized
- shipping costs on new equipment used in business operations: capitalized
- cost of a minor repair on existing equipment used in business operations: expensed

Assets:

- land next to the production facility held for use next year as a place to build a warehouse: property, plant, and equipment
- land held for future resale when the value increases: investment
- equipment used in the production process: property, plant, and equipment

Property, Plant, and Equipment (Fixed Assets)

Why are the costs of putting a long-term asset into service capitalized and written off as expenses (depreciated) over the economic life of the asset? Let's return to Liam's start-up business as an example. Liam plans to buy a silk-screening machine to help create clothing that he will sell. The machine is a long-term asset, because it will be used in the business's daily operation for many years. If the machine costs Liam $5,000 and it is expected to be used in his business for several years, generally accepted accounting principles (GAAP) require the allocation of the machine's costs over its useful life, which is the period over which it will produce

revenues. Overall, in determining a company's financial performance, we would not expect that Liam should have an expense of $5,000 this year and $0 in expenses for this machine for future years in which it is being used. GAAP addressed this through the *expense recognition* (*matching*) principle, which states that expenses should be recorded in the same period with the revenues that the expense helped create. In Liam's case, the $5,000 for this machine should be allocated over the years in which it helps to generate revenue for the business. Capitalizing the machine allows this to occur. As stated previously, to capitalize is to record a long-term asset on the balance sheet and expense its allocated costs on the income statement over the asset's economic life. Therefore, when Liam purchases the machine, he will record it as an asset on the financial statements.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Machine	5,000	
	Cash		5,000

When capitalizing an asset, the total cost of acquiring the asset is included in the cost of the asset. This includes additional costs beyond the purchase price, such as shipping costs, taxes, assembly, and legal fees. For example, if a real estate broker is paid $8,000 as part of a transaction to purchase land for $100,000, the land would be recorded at a cost of $108,000.

Over time as the asset is used to generate revenue, Liam will need to depreciate the asset.

Depreciation is the process of allocating the cost of a tangible asset over its useful life, or the period of time that the business believes it will use the asset to help generate revenue. This process will be described in Explain and Apply Depreciation Methods to Allocate Capitalized Costs.

ETHICAL CONSIDERATIONS

How WorldCom's Improper Capitalization of Costs Almost Shut Down the Internet

In 2002, telecommunications giant **WorldCom** filed for the largest Chapter 11 bankruptcy to date, a situation resulting from manipulation of its accounting records. At the time, **WorldCom** operated nearly a third of the bandwidth of the twenty largest US internet backbone routes, connecting over 3,400 global networks that serviced more than 70,000 businesses in 114 countries.[4]

WorldCom used a number of accounting gimmicks to defraud investors, mainly including capitalizing costs that should have been expensed. Under normal circumstances, this might have been considered just another account fiasco leading to the end of a company. However, **WorldCom** controlled a large percentage of backbone routes, a major component of the hardware supporting the internet, as even the Securities and Exchange Commission recognized.[5] If **WorldCom**'s bankruptcy due to accounting malfeasance shut the company down, then the internet would no longer be functional.

If such an event was to happen today, it could shut down international commerce and would be considered a national emergency. As demonstrated by **WorldCom**, the unethical behavior of a few accountants could have shut down the world's online businesses and international commerce. An accountant's job is fundamental and important: keep businesses operating in a transparent fashion.

Investments

A short-term or long-term asset that is not used in the day-to-day operations of the business is considered an **investment** and is not expensed, since the company does not expect to use up the asset over time. On the contrary, the company hopes that the assets (investment) would grow in value over time. Short-term investments are investments that are expected to be sold within a year and are recorded as current assets.

CONTINUING APPLICATION

Investment in Property in the Grocery Industry

To remain viable, companies constantly look to invest in upgrades in long-term assets. Such acquisitions might include new machinery, buildings, warehouses, or even land in order to expand operations or make the work process more efficient. Think back to the last time you walked through a grocery store. Were you mostly focused on getting the food items on your list? Or did you plan to pick up a prescription and maybe a coffee once you finished?

Grocery stores have become a one-stop shopping environment, and investments encompass more than just shelving and floor arrangement. Some grocery chains purchase warehouses to distribute inventory as needed to various stores. Machinery upgrades can help automate various departments. Some supermarkets even purchase large parcels of land to build not only their stores, but also surrounding shopping plazas to draw in customers. All such investments help increase the company's net profit.

CONCEPTS IN PRACTICE

Vehicle Repairs and Enhancements

Automobiles are a useful way of looking at the difference between repair and maintenance expenses and capitalized modifications. Routine repairs such as brake pad replacements are recorded as repair and maintenance expense. They are an expected part of owning a vehicle. However, a car may be modified to change its appearance or performance. For example, if a supercharger is added to a car to increase its horsepower, the car's performance is increased, and the cost should be included as a part of the vehicle asset. Likewise, if replacing the engine of an older car extends its useful life, that cost would also be capitalized.

Repair and Maintenance Costs of Property, Plant, and Equipment

Long-term assets may have additional costs associated with them over time. These additional costs may be capitalized or expensed based on the nature of the cost. For example, **Walmart**'s financial statements explain that major improvements are capitalized, while costs of normal repairs and maintenance are charged to expense as incurred.

An amount spent is considered a **current expense**, or an amount charged in the current period, if the amount incurred did not help to extend the life of or improve the asset. For example, if a service company cleans and maintains Liam's silk-screening machine every six months, that service does not extend the useful life of the machine beyond the original estimate, increase the capacity of the machine, or improve the quality of the silk-screening performed by the machine. Therefore, this maintenance would be expensed within the current period. In contrast, if Liam had the company upgrade the circuit board of the silk-screening machine, thereby increasing the machine's future capabilities, this would be capitalized and depreciated over its useful life.

THINK IT THROUGH

Correcting Errors in Classifying Assets

You work at a business consulting firm. Your new colleague, Marielena, helped a client organize his accounting records last year by types of assets and expenditures. Even though Marielena was a bit stumped on how to classify certain assets and related expenditures, such as capitalized costs versus expenses, she did not come to you or any other more experienced colleagues for help. Instead, she made the following classifications and gave them to the client who used this as the basis for accounting transactions over the last year. Thankfully, you have been asked this year to help prepare the client's financial reports and correct errors that were made. Explain what impact these errors would have had over the last year and how you will correct them so you can prepare accurate financial statements.

Expenditures:

- Normal repair and maintenance on the manufacturing facility were capitalized.
- The cost of taxes on new equipment used in business operations was expensed.
- The shipping costs on new equipment used in business operations were expensed.
- The cost of a minor repair on existing equipment used in business operations was capitalized.

Assets:

- Land next to the production facility held for use next year as a place to build a warehouse was depreciated.
- Land held for future resale when the value increases was classified as Property, Plant, and Equipment but not depreciated.
- Equipment used in the production process was classified as an investment.

LINK TO LEARNING

Many businesses invest a lot of money in production facilities and operations. Some production processes are more automated than others, and they require a greater investment in property, plant, and equipment than production facilities that may be more labor intensive. Watch this video of the operation of a **Georgia-Pacific** lumber mill and note where you see all components of property,

plant, and equipment in operations in this fascinating production process. There's even a reference to an intangible asset—if you watch and listen closely, you just might catch it.

Footnotes

- 4 Cybertelecom. "WorldCom (UNNET)." n.d. http://www.cybertelecom.org/industry/wcom.htm
- 5 Dennis R. Beresford, Nicholas DeB. Katzenbach, and C.B. Rogers, Jr. "Special Investigative Committee of the Board of Directors of WorldCom." *Report of Investigation*. March 31, 2003. https://www.sec.gov/Archives/edgar/d...862/dex991.htm

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9.4: Explain and Apply Depreciation Methods to Allocate Capitalized Costs

In this section, we concentrate on the major characteristics of determining capitalized costs and some of the options for allocating these costs on an annual basis using the depreciation process. In the determination of capitalized costs, we do not consider just the initial cost of the asset; instead, we determine all of the costs necessary to place the asset into service. For example, if our company purchased a drill press for $22,000, and spent $2,500 on sales taxes and $800 for delivery and setup, the depreciation calculation would be based on a cost of $22,000 plus $2,500 plus $800, for a total cost of $25,300.

We also address some of the terminology used in depreciation determination that you want to familiarize yourself with. Finally, in terms of allocating the costs, there are alternatives that are available to the company. We consider three of the most popular options, the *straight-line method*, the *units-of-production method*, and the *double-declining-balance method*.

YOUR TURN

Calculating Depreciation Costs

Liam buys his silk screen machine for $10,000. He estimates that he can use this machine for five years or 100,000 presses, and that the machine will only be worth $1,000 at the end of its life. He also estimates that he will make 20,000 clothing items in year one and 30,000 clothing items in year two. Determine Liam's depreciation costs for his first two years of business under straight-line, units-of-production, and double-declining-balance methods. Also, record the journal entries.

Solution

Straight-line method: ($10,000 – $1,000)/5 = $1,800 per year for both years.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Depreciation Expense	1,800	
	Accumulated Depreciation		1,800

Units-of-production method: ($10,000 – $1,000)/100,000= $0.09 per press

Year 1 expense: $0.09 × 20,000 = $1,800

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Depreciation Expense	1,800	
	Accumulated Depreciation		1,800

Year 2 expense: $0.09 × 30,000 = $2,700

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Depreciation Expense	2,700	
	Accumulated Depreciation		2,700

Double-declining-balance method:

Year 1 expense: [($10,000 – 0)/5] × 2 = $4,000

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Depreciation Expense	4,000	
	Accumulated Depreciation		4,000

Year 2 expense: [($10,000 – $4,000)/5] × 2 = $2,400

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Depreciation Expense Accumulated Depreciation	2,400	 2,400

Fundamentals of Depreciation

As you have learned, when accounting for a long-term fixed asset, we cannot simply record an expense for the cost of the asset and record the entire outflow of cash in one accounting period. Like all other assets, when purchasing or acquiring a long-term asset, it must be recorded at the historical (initial) cost, which includes all costs to acquire the asset and put it into use. The initial recording of an asset has two steps:

1. Record the initial purchase on the date of purchase, which places the asset on the balance sheet (as property, plant, and equipment) at cost, and record the amount as notes payable, accounts payable, or an outflow of cash.
2. At the end of the period, make an adjusting entry to recognize the depreciation expense. Companies may record depreciation expense incurred annually, quarterly, or monthly.

Following GAAP and the expense recognition principle, the depreciation expense is recognized over the asset's estimated useful life.

Recording the Initial Purchase of an Asset

Assets are recorded on the balance sheet at cost, meaning that all costs to purchase the asset and to prepare the asset for operation should be included. Costs outside of the purchase price may include shipping, taxes, installation, and modifications to the asset.

The journal entry to record the purchase of a fixed asset (assuming that a note payable is used for financing and not a short-term account payable) is shown here.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Fixed Asset (truck, building, etc.) Cash/Notes Payable *To record purchase of fixed asset*	XXX	 XXX

Applying this to Liam's silk-screening business, we learn that he purchased his silk-screening machine for $5,000 by paying $1,000 cash and the remainder in a note payable over five years. The journal entry to record the purchase is shown here.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Equipment Cash Notes Payable *To recognize purchase of delivery truck*	5,000	 1,000 4,000

CONCEPTS IN PRACTICE

Estimating Useful Life and Salvage Value

Useful life and salvage value are estimates made at the time an asset is placed in service. It is common and expected that the estimates are inaccurate with the uncertainty involved in estimating the future. Sometimes, however, a company may attempt to take advantage of estimating salvage value and useful life to improve earnings. A larger salvage value and longer useful life decrease annual depreciation expense and increase annual net income. An example of this behavior is **Waste Management**, which was disciplined by the Securities and Exchange Commission for fraudulently altering its estimates to reduce depreciation expense and overstate net income by $1.7 billion.[6]

Components Used in Calculating Depreciation

The expense recognition principle that requires that the cost of the asset be allocated over the asset's useful life is the process of depreciation. For example, if we buy a delivery truck to use for the next five years, we would allocate the cost and record

depreciation expense across the entire five-year period. The calculation of the depreciation expense for a period is not based on anticipated changes in the fair market value of the asset; instead, the depreciation is based on the allocation of the cost of owning the asset over the period of its useful life.

The following items are important in determining and recording depreciation:

- **Book value**: the asset's original cost less accumulated depreciation.
- **Useful life**: the length of time the asset will be productively used within operations.
- **Salvage (residual) value**: the price the asset will sell for or be worth as a trade-in when its useful life expires. The determination of salvage value can be an inexact science, since it requires anticipating what will occur in the future. Often, the salvage value is estimated based on past experiences with similar assets.
- **Depreciable base (cost)**: the depreciation expense over the asset's useful life. For example, if we paid $50,000 for an asset and anticipate a salvage value of $10,000, the depreciable base is $40,000. We expect $40,000 in depreciation over the time period in which the asset was used, and then it would be sold for $10,000.

Depreciation records an expense for the value of an asset consumed and removes that portion of the asset from the balance sheet. The journal entry to record depreciation is shown here.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Depreciation Expense	XXX	
	Accumulated Depreciation		XXX
	To record depreciation on asset for period		

Depreciation expense is a common operating expense that appears on an income statement. **Accumulated depreciation** is a **contra account**, meaning it is attached to another account and is used to offset the main account balance that records the total depreciation expense for a fixed asset over its life. In this case, the asset account stays recorded at the historical value but is offset on the balance sheet by accumulated depreciation. Accumulated depreciation is subtracted from the historical cost of the asset on the balance sheet to show the asset at book value. Book value is the amount of the asset that has not been allocated to expense through depreciation.

HARRY COMPANY
Partial Balance Sheet
December 31, 2020

Assets	
Property, Plant and Equipment:	
Truck	$25,000
− Accumulated Depreciation	(5,000)
	$20,000

In this case, the asset's book value is $20,000: the historical cost of $25,000 less the accumulated depreciation of $5,000.

It is important to note, however, that not all long-term assets are depreciated. For example, land is not depreciated because depreciation is the allocating of the expense of an asset over its useful life. How can one determine a useful life for land? It is assumed that land has an unlimited useful life; therefore, it is not depreciated, and it remains on the books at historical cost.

Once it is determined that depreciation should be accounted for, there are three methods that are most commonly used to calculate the allocation of depreciation expense: the *straight-line method*, the *units-of-production method*, and the *double-declining-balance method*. A fourth method, the *sum-of-the-years-digits* method, is another *accelerated* option that has been losing popularity and can be learned in intermediate accounting courses. Let's use the following scenario involving Kenzie Company to work through these three methods.

Assume that on January 1, 2019, Kenzie Company bought a printing press for $54,000. Kenzie pays shipping costs of $1,500 and setup costs of $2,500, assumes a useful life of five years or 960,000 pages. Based on experience, Kenzie Company anticipates a salvage value of $10,000.

Recall that determination of the costs to be depreciated requires including all costs that prepare the asset for use by the company. The Kenzie example would include shipping and setup costs. Any costs for maintaining or repairing the equipment would be treated as regular expenses, so the total cost would be $58,000, and, after allowing for an anticipated salvage value of $10,000 in five years, the business could take $48,000 in depreciation over the machine's economic life.

	Total Cost
Purchase Price	$ 54,000
Shipping Costs	1,500
Set-up Costs	2,500
Total Cost	$ 58,000
− Salvage Value	(10,000)
Depreciable Base	$ 48,000

CONCEPTS IN PRACTICE

Fixed Assets

You work for **Georgia-Pacific** as an accountant in charge of the fixed assets subsidiary ledger at a production and warehouse facility in Pennsylvania. The facility is in the process of updating and replacing several asset categories, including warehouse storage units, fork trucks, and equipment on the production line. It is your job to keep the information in the fixed assets subsidiary ledger up to date and accurate. You need information on original historical cost, estimated useful life, salvage value, depreciation methods, and additional capital expenditures. You are excited about the new purchases and upgrades to the facility and how they will help the company serve its customers better. However, you have been in your current position for only a few years and have never overseen extensive updates, and you realize that you will have to gather a lot of information at once to keep the accounting records accurate. You feel overwhelmed and take a minute to catch your breath and think through what you need. After a few minutes, you realize that you have many people and many resources to work with to tackle this project. Whom will you work with and how will you go about gathering what you need?

Straight-Line Depreciation

Straight-line depreciation is a method of depreciation that evenly splits the depreciable amount across the useful life of the asset. Therefore, we must determine the yearly depreciation expense by dividing the depreciable base of $48,000 by the economic life of five years, giving an annual depreciation expense of $9,600. The journal entries to record the first two years of expenses are shown, along with the balance sheet information. Here are the journal entry and information for year one:

Printing Press	$58,000
− Accumulated Depreciation: Printing Press	(9,600)
Net Book Value	$48,400

After the journal entry in year one, the press would have a book value of $48,400. This is the original cost of $58,000 less the accumulated depreciation of $9,600. Here are the journal entry and information for year two:

Printing Press	$ 58,000
− Accumulated Depreciation: Printing Press	(19,200)
Net Book Value	$ 38,800

Kenzie records an annual depreciation expense of $9,600. Each year, the accumulated depreciation balance increases by $9,600, and the press's book value decreases by the same $9,600. At the end of five years, the asset will have a book value of $10,000, which is calculated by subtracting the accumulated depreciation of $48,000 (5 × $9,600) from the cost of $58,000.

Units-of-Production Depreciation

Straight-line depreciation is efficient, accounting for assets used consistently over their lifetime, but what about assets that are used with less regularity? The **units-of-production depreciation method** bases depreciation on the actual usage of the asset, which is more appropriate when an asset's life is a function of usage instead of time. For example, this method could account for depreciation of a printing press for which the depreciable base is $48,000 (as in the straight-line method), but now the number of pages the press prints is important.

In our example, the press will have total depreciation of $48,000 over its useful life of 960,000 pages. Therefore, we would divide $48,000 by 960,000 pages to get a cost per page of $0.05. If Kenzie printed 180,000 pages in the first year, the depreciation expense would be 180,000 pages × $0.05 per page, or $9,000. The journal entry to record this expense would be the same as with straight-line depreciation: only the dollar amount would have changed. The presentation of accumulated depreciation and the calculation of the book value would also be the same. Kenzie would continue to depreciate the asset until a total of $48,000 in depreciation was taken after printing 960,000 total pages.

THINK IT THROUGH

Deciding on a Depreciation Method

Liam is struggling to determine which deprecation method he should use for his new silk-screening machine. He expects sales to increase over the next five years. He also expects (hopes) that in two years he will need to buy a second silk-screening machine to keep up with the demand for products of his growing company. Which depreciation method makes more sense for Liam: higher expenses in the first few years, or keeping expenses consistent over time? Or would it be better for him to not think in terms of time, but rather in the usage of the machine?

IFRS CONNECTION

Accounting for Depreciation

Both US GAAP and International Financial Reporting Standards (IFRS) account for long-term assets (tangible and intangible) by recording the asset at the cost necessary to make the asset ready for its intended use. Additionally, both sets of standards require that the cost of the asset be recognized over the economic, useful, or legal life of the asset through an allocation process such as depreciation. However, there are some significant differences in how the allocation process is used as well as how the assets are carried on the balance sheet.

IFRS and US GAAP allow companies to choose between different methods of depreciation, such as even allocation (straight-line method), depreciation based on usage (production methods), or an accelerated method (double-declining balance). The mechanics of applying these methods do not differ between the two standards. However, IFRS requires companies to use "component depreciation" if it is feasible. Component depreciation would apply to assets with components that have differing lives. Consider the following example using a plane owned by **Southwest Airlines**. Let's divide this plane into three components: the interior, the engines, and the fuselage. Suppose the average life of the interior of a plane is ten years, the average life of the engines is fifteen years, and the average life of the fuselage is twenty-five years. Given this, what should be the depreciable life of the asset? In that case, under IFRS, the costs associated with the interior would be depreciated over ten years, the costs associated with the engines would be depreciated over fifteen years, and the costs associated with the fuselage would be depreciated over twenty-five years. Under US GAAP, the total cost of the airplane would likely be depreciated over

twenty years. Obviously, component depreciation involves more record keeping and differing amounts of depreciation per year for the life of the asset. But the same amount of total depreciation, the cost of the asset less residual value, would be taken over the life of the asset under both US GAAP and IFRS.

Probably one of the most significant differences between IFRS and US GAAP affects long-lived assets. This is the ability, under IFRS, to adjust the value of those assets to their fair value as of the balance sheet date. The adjustment to fair value is to be done by "class" of asset, such as real estate, for example. A company can adjust some classes of assets to fair value but not others. Under US GAAP, almost all long-lived assets are carried on the balance sheet at their depreciated historical cost, regardless of how the actual fair value of the asset changes. Consider the following example. Suppose your company owns a single building that you bought for $1,000,000. That building currently has $200,000 in accumulated depreciation. This building now has a book value of $800,000. Under US GAAP, this is how this building would appear in the balance sheet. Even if the fair value of the building is $875,000, the building would still appear on the balance sheet at its depreciated historical cost of $800,000 under US GAAP. Alternatively, if the company used IFRS and elected to carry real estate on the balance sheet at fair value, the building would appear on the company's balance sheet at its new fair value of $875,000.

It is difficult to determine an accurate fair value for long-lived assets. This is one reason US GAAP has not permitted the fair valuing of long-lived assets. Different appraisals can result in different determinations of "fair value." Thus, the Financial Accounting Standards Board (FASB) elected to continue with the current method of carrying assets at their depreciated historical cost. The thought process behind the adjustments to fair value under IFRS is that fair value more accurately represents true value. Even if the fair value reported is not known with certainty, reporting the class of assets at a reasonable representation of fair value enhances decision-making by users of the financial statements.

Summary of Depreciation

Table 9.4.1 compares the three methods discussed. Note that although each time-based (straight-line and double-declining balance) annual depreciation expense is different, after five years the total amount depreciated (accumulated depreciation) is the same. This occurs because at the end of the asset's useful life, it was expected to be worth $10,000: thus, both methods depreciated the asset's value by $48,000 over that time period.

The sum-of-the-years-digits is different from the two above methods in that while those methods are based on time factors, the sum-of-the-years-digits is based on usage. However, the total amount of depreciation taken over an asset's economic life will still be the same. In our example, the total depreciation will be $48,000, even though the sum-of-the-years-digits method could take only two or three years or possibly six or seven years to be allocated.

Calculation of Depreciation Expense

Depreciation Method	Calculation
Straight line	(Cost – salvage value)/Useful life
Units of production	(Cost – salvage value) × (Units produced in current period/Estimated total units to be produced)
Double declining balance	Book value × Straight-line annual depreciation percentage × 2

Table 9.4.1

Period	Straight-Line Depreciation Method	Units of Production Method	Double-Declining-Balance Method
Year 1	$ 9,600	(180,000 units) $ 9,000	$23,200
Year 2	9,600	(200,000 units) 10,000	13,920
Year 3	9,600	(210,000 units) 10,500	8,352
Year 4	9,600	(190,000 units) 9,500	2,528
Year 5	9,600	(180,000 units) 9,000	0
Total	$48,000	$48,000	$48,000

ETHICAL CONSIDERATIONS

Depreciation Analysis Requires Careful Evaluation

When analyzing depreciation, accountants are required to make a supportable estimate of an asset's useful life and its salvage value. However, "management teams typically fail to invest either time or attention into making or periodically revisiting and revising reasonably supportable estimates of asset lives or salvage values, or the selection of depreciation methods, as prescribed by GAAP."[7] This failure is not an ethical approach to properly accounting for the use of assets.

Accountants need to analyze depreciation of an asset over the entire useful life of the asset. As an asset supports the cash flow of the organization, expensing its cost needs to be allocated, not just recorded as an arbitrary calculation. An asset's depreciation may change over its life according to its use. If asset depreciation is arbitrarily determined, the recorded "gains or losses on the disposition of depreciable property assets seen in financial statements"[8] are not true best estimates. Due to operational changes, the depreciation expense needs to be periodically reevaluated and adjusted.

Any mischaracterization of asset usage is not proper GAAP and is not proper accrual accounting. Therefore, "financial statement preparers, as well as their accountants and auditors, should pay more attention to the quality of depreciation-related estimates and their possible mischaracterization and losses of credits and charges to operations as disposal gains."[9] An accountant should always follow GAAP guidelines and allocate the expense of an asset according to its usage.

Partial-Year Depreciation

A company will usually only own depreciable assets for a portion of a year in the year of purchase or disposal. Companies must be consistent in how they record depreciation for assets owned for a partial year. A common method is to allocate depreciation expense based on the number of months the asset is owned in a year. For example, a company purchases an asset with a total cost of $58,000, a five-year useful life, and a salvage value of $10,000. The annual depreciation is $9,600 ([$58,000 – 10,000]/5). However, the asset is purchased at the beginning of the fourth month of the fiscal year. The company will own the asset for nine months of the first year. The depreciation expense of the first year is $7,200 ($9,600 × 9/12). The company will depreciate the asset $9,600 for the next four years, but only $2,400 in the sixth year so that the total depreciation of the asset over its useful life is the depreciable amount of $48,000 ($7,200 + 9,600 + 9,600 + 9,600 + 9,600 + 2,400).

THINK IT THROUGH

Choosing Appropriate Depreciation Methods

You are part of a team reviewing the financial statements of a new computer company. Looking over the fixed assets accounts, one long-term tangible asset sticks out. It is labeled "USB" and valued at $10,000. You ask the company's accountant for more detail, and he explains that the asset is a USB drive that holds the original coding for a game the company developed during the year. The company expects the game to be fairly popular for the next few years, and then sales are expected to trail off. Because of this, they are planning on depreciating this asset over the next five years using the double-declining method. Does this recording seem appropriate, or is there a better way to categorize the asset? How should this asset be expensed over time?

Special Issues in Depreciation

While you've now learned the basic foundation of the major available depreciation methods, there are a few special issues. Until now, we have assumed a definite physical or economically functional useful life for the depreciable assets. However, in some situations, depreciable assets can be used beyond their useful life. If so desired, the company could continue to use the asset beyond the original estimated economic life. In this case, a new remaining depreciation expense would be calculated based on the remaining depreciable base and estimated remaining economic life.

Assume in the earlier Kenzie example that after five years and $48,000 in accumulated depreciation, the company estimated that it could use the asset for two more years, at which point the salvage value would be $0. The company would be able to take an additional $10,000 in depreciation over the extended two-year period, or $5,000 a year, using the straight-line method.

As with the straight-line example, the asset could be used for more than five years, with depreciation recalculated at the end of year five using the double-declining balance method. While the process of calculating the additional depreciation for the double-

declining-balance method would differ from that of the straight-line method, it would also allow the company to take an additional $10,000 after year five, as with the other methods, so long as the cost of $58,000 is not exceeded.

As a side note, there often is a difference in useful lives for assets when following GAAP versus the guidelines for depreciation under federal tax law, as enforced by the Internal Revenue Service (IRS). This difference is not unexpected when you consider that tax law is typically determined by the United States Congress, and there often is an economic reason for tax policy.

For example, if we want to increase investment in real estate, shortening the economic lives of real estate for taxation calculations can have a positive increasing effect on new construction. If we want to slow down new production, extending the economic life can have the desired slowing effect. In this course, we concentrate on financial accounting depreciation principles rather than tax depreciation.

Fundamentals of Depletion of Natural Resources

Another type of fixed asset is **natural resources**, assets a company owns that are consumed when used. Examples include lumber, mineral deposits, and oil/gas fields. These assets are considered natural resources while they are still part of the land; as they are extracted from the land and converted into products, they are then accounted for as inventory (raw materials). Natural resources are recorded on the company's books like a fixed asset, at cost, with total costs including all expenses to acquire and prepare the resource for its intended use.

As the resource is consumed (converted to a product), the cost of the asset must be expensed: this process is called **depletion**. As with depreciation of nonnatural resource assets, a contra account called **accumulated depletion**, which records the total depletion expense for a natural resource over its life, offsets the natural resource asset account. Depletion expense is typically calculated based on the number of units extracted from cutting, mining, or pumping the resource from the land, similar to the units-of-production method. For example, assume a company has an oil well with an estimated 10,000 gallons of crude oil. The company purchased this well for $1,000,000, and the well is expected to have no salvage value once it is pumped dry. The depletion cost per gallon will be $1,000,000/10,000 = $100. If the company extracts 4,000 gallons of oil in a given year, the depletion expense will be $400,000.

Fundamentals of Amortization of an Intangible

Recall that intangible assets are recorded as long-term assets at their cost. As with tangible assets, many intangible assets have a finite (limited) life span so their costs must be allocated over their useful lives: this process is **amortization**. Depreciation and amortization are similar in nature but have some important differences. First, amortization is typically only done using the straight-line method. Second, there is usually no salvage value for intangible assets because they are completely used up over their life span. Finally, an accumulated amortization account is not required to record yearly expenses (as is needed with depreciation); instead, the intangible asset account is written down each period.

For example, a company called Patents-R-Us purchased a product patent for $10,000, granting the company exclusive use of that product for the next twenty years. Therefore, unless the company does not think the product will be useful for all twenty years (at that point the company would use the shorter useful life of the product), the company will record amortization expense of $500 a year ($10,000/20 years). Assuming that it was placed into service on October 1, 2019, the journal entry would be as follows:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 1, 2019	Amortization Expense	125	
	Patent		125
	To record amortization on patent for period		

LINK TO LEARNING

See Form 10-K that was filed with the SEC to determine which depreciation method **McDonald's Corporation** used for its long-term assets in 2017.

Footnotes

- 6 U.S. Securities and Exchange Commission. “Judge Enters Final Judgment against Former CFO of Waste Management, Inc. Following Jury Verdict in SEC’s Favor.” January 3, 2008. https://www.sec.gov/news/press/2008/2008-2.htm
- 7 Howard B. Levy. “Depreciable Asset Lives.” *The CPA Journal*. September 2016. https://www.cpajournal.com/2016/09/0...e-asset-lives/
- 8 Howard B. Levy. “Depreciable Asset Lives.” *The CPA Journal*. September 2016. https://www.cpajournal.com/2016/09/0...e-asset-lives/
- 9 Howard B. Levy. “Depreciable Asset Lives.” *The CPA Journal*. September 2016. https://www.cpajournal.com/2016/09/0...e-asset-lives/

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9.5: Describe Some Special Issues in Accounting for Long-Term Assets

A company will account for some events for long-term assets that are less routine than recording purchase and depreciation or amortization. For example, a company may realize that its original estimate of useful life or salvage value is no longer accurate. A long-term asset may lose its value, or a company may sell a long-term asset.

Revision of Remaining Life or Salvage Value

As you have learned, depreciation is based on estimating both the useful life of an asset and the salvage value of that asset. Over time, these estimates may be proven inaccurate and need to be adjusted based on new information. When this occurs, the depreciation expense calculation should be changed to reflect the new (more accurate) estimates. For this entry, the remaining depreciable balance of the net book value is allocated over the new useful life of the asset. To work through this process with data, let's return to the example of Kenzie Company.

- Kenzie has a press worth $58,000.
- Its salvage value was originally estimated to be $10,000.
- Its economic life was originally estimated to be five years.
- Kenzie uses straight-line depreciation.

After three years, Kenzie determines that the estimated useful life would have been more accurately estimated at eight years, and the salvage value at that time would be $6,000. The revised depreciation expense is calculated as shown:

Original Cost	$ 58,000
Depreciation Previously Taken (3 × $9,600)	(28,800)
Book Value at Beginning of Year 4	$ 29,200
Revised Salvage Value	(6,000)
Revised Remaining Depreciable Cost	$ 23,200
Revised Remaining Useful Life	5 years
Revised Depreciation: $23,200/5 years = $4,640 per year	

These revised calculations show that Kenzie should now be recording a depreciation of $4,640 per year for the next five years.

YOUR TURN

Useful Life

Georgia-Pacific is a global company that employs a wide variety of property, plant, and equipment assets in its production facilities. You work for Georgia-Pacific as an accountant in charge of the fixed assets subsidiary ledger at a warehouse facility in Pennsylvania. You find out that the useful lives for the fork trucks need to be adjusted. As an asset category, the trucks were bought at the same time and had original useful lives of seven years. However, after depreciating them for two years, the company makes improvements to the trucks that allow them to be used outdoors in what can be harsh winters. The improvements also extend their useful lives by two additional years. What is the remaining useful life after the improvements?

Solution

Seven original years – two years depreciated + two additional years = seven years remaining.

Obsolescence

Obsolescence refers to the reduction in value and/or use of the asset. Obsolescence has traditionally resulted from the physical deterioration of the asset—called **physical obsolescence**. In current application—and considering the role of modern technology and tech assets—accounting for functional obsolescence is becoming more common. **Functional obsolescence** is the loss of value from all causes within a property *except* those due to physical deterioration. With functional obsolescence, the useful life still needs to be adjusted downward: although the asset physically still works, its functionality makes it less useful for the company. Also, an

adjustment might be necessary in the salvage value. This potential adjustment depends on the specific details of each obsolescence determination or decision.

Sale of an Asset

When an asset is sold, the company must account for its depreciation up to the date of sale. This means companies may be required to record a depreciation entry before the sale of the asset to ensure it is current. After ensuring that the net book value of an asset is current, the company must determine if the asset has sold at a gain, at a loss, or at book value. We look at examples of each accounting alternative using the Kenzie Company data.

Recall that Kenzie's press has a depreciable base of $48,000 and an economic life of five years. If Kenzie sells the press at the end of the third year, the company would have taken three years of depreciation amounting to $28,800 ($9,600 × 3 years). With an original cost of $58,000, and after subtracting the accumulated depreciation of $28,800, the press would have a book value of $29,200. If the company sells the press for $31,000, it would realize a gain of $1,800, as shown.

Cost of Press	$ 58,000
− Accumulated Depreciation: Printing Press	(28,800)
Book Value	$ 29,200
Sales Price	$ 31,000
− Book Value	(29,200)
Gain on Sale of Printing Press	$ 1,800

The journal entry to record the sale is shown here.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2019	Cash	31,000	
	Accumulated Depreciation: Printing Press	28,800	
	Printing Press		58,000
	Gain on Sale: Printing Press		1,800

If Kenzie sells the printing press for $27,100, what would the journal entries be? The book value of the press is $29,200, so Kenzie would be selling the press at a loss. The journal entry to record the sale is shown here.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2019	Cash	27,100	
	Accumulated Depreciation: Printing Press	28,800	
	Loss on Sale of Printing Press	2,100	
	Printing Press		58,000

What if Kenzie sells the press at exactly book value? In this case, the company will realize neither a gain nor a loss. Here is the journal entry to record the sale.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2019	Cash	29,200	
	Accumulated Depreciation: Printing Press	28,800	
	Printing Press		58,000

While it would be ideal to estimate a salvage value that provides neither a gain nor a loss upon the retirement and sale of a long-term asset, this type of accuracy is virtually impossible to reach, unless you negotiate a fixed future sales price. For example, you

might buy a truck for $80,000 and lock in a five-year life with 100,000 or fewer miles driven. Under these conditions, the dealer might agree to pay you $20,000 for the truck in five years.

Under these conditions, you could justify calculating your depreciation over a five-year period, using a depreciable base of $60,000. Under the straight-line method, this would provide an annual depreciation amount of $12,000. Also, when you sell the truck to the dealer after five years, the sales price will be $20,000, and the book value will be $20,000, so there would be neither a gain nor a loss on the sale.

In the Kenzie example where the asset was sold for $31,000 after three years, Kenzie should have recorded a total of $27,000 in depreciation (cost of $58,000 less the sales value of $31,000). However, the company recorded $28,800 in depreciation over the three-year period. Subtracting the gain of $1,800 from the total depreciation expense of $28,800 shows the true cost of using the asset as $27,000, and not the depreciation amount of $28,800.

When the asset was sold for $27,100, the accounting records would show $30,900 in depreciation (cost of $58,000 less the sales price of $27,100). However, depreciation is listed as $28,800 over the three-year period. Adding the loss of $2,100 to the total depreciation expense of $28,800 results in a cost of $30,900 for use of the asset rather than the $28,800 depreciation.

If the asset sells for exactly the book value, its depreciation expense was estimated perfectly, and there is no gain or loss. If it sells for $29,200 and had a book value of $29,200, its depreciation expense of $28,800 matches the original estimate.

THINK IT THROUGH

Depreciation of Long-Term Assets

You are a new staff accountant at a large construction company. After a rough year, management is seeking ways to minimize expenses or increase revenues before year-end to help increase the company's earnings per share. Your boss has asked staff to think "outside the box" and has asked to you look through the list of long-term assets to find ones that have been fully depreciated in value but may still have market value. Why would your manager be looking for these specific assets? How significantly might these items impact your company's overall performance? What ethical issues might come into play in the task you have been assigned?

LINK TO LEARNING

The management of fixed assets can be quite a challenge for any business, from sole proprietorships to global corporations. Not only do companies need to track their asset purchases, depreciation, sales, disposals, and capital expenditures, they also need to be able to generate a variety of reports. Read this Finances Online post for more details on software packages that help companies steward their fixed assets no matter what their size.

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CHAPTER OVERVIEW

10: Intangible Assets

10.1: Distinguish between Tangible and Intangible Assets
10.2: Describe Accounting for Intangible Assets and Record Related Transactions

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10.1: Distinguish between Tangible and Intangible Assets

Assets are items a business owns.[1] For accounting purposes, assets are categorized as current versus long term, and tangible versus intangible. Assets that are expected to be used by the business for more than one year are considered **long-term assets**. They are not intended for resale and are anticipated to help generate revenue for the business in the future. Some common long-term assets are computers and other office machines, buildings, vehicles, software, computer code, and copyrights. Although these are all considered long-term assets, some are tangible and some are intangible.

Tangible Assets

An asset is considered a **tangible asset** when it is an economic resource that has physical substance—it can be seen and touched. Tangible assets can be either short term, such as inventory and supplies, or long term, such as land, buildings, and equipment. To be considered a long-term tangible asset, the item needs to be used in the normal operation of the business for more than one year, not be near the end of its useful life, and the company must have no plan to sell the item in the near future. The **useful life** is the time period over which an asset cost is allocated. Long-term tangible assets are known as **fixed assets**.

Businesses typically need many different types of these assets to meet their objectives. These assets differ from the company's products. For example, the computers that **Apple Inc.** intends to sell are considered inventory (a short-term asset), whereas the computers **Apple**'s employees use for day-to-day operations are long-term assets. In Liam's case, the new silk-screening machine would be considered a long-term tangible asset as he plans to use it over many years to help him generate revenue for his business. Long-term tangible assets are listed as noncurrent assets on a company's balance sheet. Typically, these assets are listed under the category of Property, Plant, and Equipment (PP&E), but they may be referred to as fixed assets or plant assets.

Apple Inc. lists a total of $33,783,000,000 in total Property, Plant and Equipment (net) on its 2017 consolidated balance sheet (see Figure 11.2).[2] As shown in the figure, this net total includes land and buildings, machinery, equipment and internal-use software, and leasehold improvements, resulting in a gross PP&E of $75,076,000,000—less accumulated depreciation and amortization of $41,293,000,000—to arrive at the net amount of $33,783,000,000.

PROPERTY Plant and Equipment, Net (in millions)		
	2017	**2016**
Land and Buildings	$ 13,587	$ 10,185
Machinery, Equipment and Internal-use Software	54,210	44,543
Leasehold Improvements	7,279	6,517
Gross Property, Plant and Equipment	75,076	61,245
Accumulated Depreciation and Amortization	(41,293)	(34,235)
Total Property, Plant and Equipment, net	$ 33,783	$ 27,010

Figure 11.2Apple Inc.'s Property, Plant and Equipment, Net. This report shows the company's consolidated financial statement details as of September 30, 2017, and September 24, 2016 (in millions). (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

LINK TO LEARNING

Recently, there has been a trend involving an increase in the number of intangibles on companies' balance sheets. As a result, investors need a better understanding of how this will affect their valuation of these companies. Read this article on intangible assets from *The Economist* for more information.

Intangible Assets

Companies may have other long-term assets used in the operations of the business that they do not intend to sell, but that do not have physical substance; these assets still provide specific rights to the owner and are called **intangible assets**. These assets typically appear on the balance sheet following long-term tangible assets (see Figure 11.3.)[3] Examples of intangible assets are patents, copyrights, franchises, licenses, goodwill, sometimes software, and trademarks (Table 11.1). Because the value of

intangible assets is very subjective, it is usually not shown on the balance sheet until there is an event that indicates value objectively, such as the purchase of an intangible asset.

A company often records the costs of developing an intangible asset internally as expenses, not assets, especially if there is ambiguity in the expense amounts or economic life of the asset. However, there are also conditions under which the costs can be allocated over the anticipated life of the asset. (The treatment of intangible asset costs can be quite complex and is taught in advanced accounting courses.)

APPLE INC.
Consolidated Balance Sheets
(in millions)

Assets	2017	2016
Current Assets:		
Cash and Cash Equivalents	$ 20,289	$ 20,484
Short-term Marketable Securities	53,892	46,671
Accounts Receivable, Allowances of $58 and $53, respectively	17,874	15,754
Inventories	4,855	2,132
Vendor Nontrade Receivables	17,799	13,545
Other Current Assets	13,936	8,283
Total Current Assets	128,645	106,869
Long-term Marketable Securities	194,714	170,430
Property, Plant, and Equipment, net	33,783	27,010
Goodwill	5,717	5,414
Acquired Intangible Assets, net	2,298	3,206
Other Noncurrent Assets	10,162	8,757
Total Assets	$375,319	$321,686

Figure 11.3Consolidated Balance Sheets for Apple, Inc. in 2017 and 2016. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Types of Intangible Assets

Asset	Useful Life
Patents	Twenty years
Trademarks	Renewable every ten years
Copyrights	Seventy years beyond death of creator
Goodwill	Indefinite

Table11.1

THINK IT THROUGH

Categorizing Intangible Assets

Your company has recently hired a star scientist who has a history of developing new technologies. The company president is excited with the new hire, and questions you, the company accountant, why the scientist cannot be recorded as an intangible asset, as the scientist will probably provide more value to the company in the future than any of its other assets. Discuss why the scientist, and employees in general, who often provide the greatest value for a company, are not recorded as intangible assets.

Patents

A **patent** is a contract that provides a company exclusive rights to produce and sell a unique product. The rights are granted to the inventor by the federal government and provide exclusivity from competition for twenty years. Patents are common within the pharmaceutical industry as they provide an opportunity for drug companies to recoup the significant financial investment on

research and development of a new drug. Once the new drug is produced, the company can sell it for twenty years with no direct competition.

THINK IT THROUGH

Research and Development Costs

Jane works in product development for a technology company. She just heard that her employer is slashing research and development costs. When she asks why, the marketing senior vice president tells her that current research and development costs are reducing net income in the current year for a potential but unknown benefit in future years, and that management is concerned about the effect on stock price. Jane wonders why research and development costs are not capitalized so that the cost would be matched with the future revenues. Why do you think research and development costs are not capitalized?

Trademarks and Copyrights

A company's **trademark** is the exclusive right to the name, term, or symbol it uses to identify itself or its products. Federal law allows companies to register their trademarks to protect them from use by others. Trademark registration lasts for ten years with optional 10-year renewable periods. This protection helps prevent impersonators from selling a product similar to another or using its name. For example, a burger joint could not start selling the "Big Mac." Although it has no physical substance, the exclusive right to a term or logo has value to a company and is therefore recorded as an asset.

A **copyright** provides the exclusive right to reproduce and sell artistic, literary, or musical compositions. Anyone who owns the copyright to a specific piece of work has exclusive rights to that work. Copyrights in the United States last seventy years beyond the death of the original author. While you might not be overly interested in what seems to be an obscure law, it actually directly affects you and your fellow students. It is one of the primary reasons that your copy of the *Collected Works of William Shakespeare* costs about $40 in your bookstore or online, while a textbook, such as *Principles of Biology* or *Principles of Accounting*, can run in the hundreds of dollars.

Goodwill

Goodwill is a unique intangible asset. **Goodwill** refers to the value of certain favorable factors that a business possesses that allows it to generate a greater rate of return or profit. Such factors include superior management, a skilled workforce, quality products or service, great geographic location, and overall reputation. Companies typically record goodwill when they acquire another business in which the purchase price is in excess of the fair value of the identifiable net assets. The difference is recorded as goodwill on the purchaser's balance sheet. For example, the goodwill of $5,717,000,000 that we see on Apple's consolidated balance sheets for 2017 (see Figure 11.3) was created when Apple purchased another business for a purchase price exceeding the book value of its net assets.

YOUR TURN

Classifying Long-Term Assets as Tangible or Intangible

Your cousin started her own business and wants to get a small loan from a local bank to expand production in the next year. The bank has asked her to prepare a balance sheet, and she is having trouble classifying the assets properly. Help her sort through the list below and note the assets that are tangible long-term assets and those that are intangible long-term assets.

- Cash
- Patent
- Accounts Receivable
- Land
- Investments
- Software
- Inventory
- Note Receivable
- Machinery
- Equipment

- Marketable Securities
- Owner Capital
- Copyright
- Building
- Accounts Payable
- Mortgage Payable

Solution

Tangible long-term assets include land, machinery, equipment, and building. Intangible long-term assets include patent, software, and copyright.

Footnotes

- 1 The Financial Accounting Standards Board (FASB) defines assets as “probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events” (SFAC No. 6, p. 12).
- 2 Apple, Inc. U.S. Securities and Exchange Commission 10-K Filing. November 3, 2017. http://pdf.secdatabase.com/2624/0000...-17-000070.pdf
- 3 Apple, Inc. U.S. Securities and Exchange Commission 10-K Filing. November 3, 2017. http://pdf.secdatabase.com/2624/0000...-17-000070.pdf

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10.2: Describe Accounting for Intangible Assets and Record Related Transactions

Intangible assets can be difficult to understand and incorporate into the decision-making process. In this section we explain them in more detail and provide examples of how to amortize each type of intangible asset.

Fundamentals of Intangible Assets

Intangibles are recorded at their acquisition cost, as are tangible assets. The costs of internally generated intangible assets, such as a patent developed through research and development, are recorded as expenses when incurred. An exception is legal costs to register or defend an intangible asset. For example, if a company incurs legal costs to defend a patent it has developed internally, the costs associated with developing the patent are recorded as an expense, but the legal costs associated with defending the patent would be capitalized as a patent intangible asset.

Amortization of intangible assets is handled differently than depreciation of tangible assets. Intangible assets are typically amortized using the straight-line method; there is typically no salvage value, as the usefulness of the asset is used up over its lifetime, and no accumulated amortization account is needed. Additionally, based on regulations, certain intangible assets are restricted and given limited life spans, while others are infinite in their economic life and not amortized.

Copyrights

While copyrights have a finite life span of 70 years beyond the author's death, they are amortized over their estimated useful life. Therefore, if a company acquired a copyright on a new graphic novel for $10,000 and estimated it would be able to sell that graphic novel for the next ten years, it would amortize $1,000 a year ($10,000/ten years), and the journal entry would be as shown. Assume that the novel began sales on January 1, 2019.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2019	Amortization Expense	1,000	
	Copyright		1,000

Patents

Patents are issued to the inventor of the product by the federal government and last twenty years. All costs associated with creating the product being patented (such as research and development costs) are expensed; however, direct costs to obtain the patent could be capitalized. Otherwise, patents are capitalized only when purchased. Like copyrights, patents are amortized over their useful life, which can be shorter than twenty years due to changing technology. Assume Mech Tech purchased the patent for a new pump system. The patent cost $20,000, and the company expects the pump to be a useful product for the next twenty years. Mech Tech will then amortize the $20,000 over the next twenty years, which is $1,000 a year.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2019	Amortization Expense	1,000	
	Patent		1,000

Trademarks

Companies can register their trademarks with the federal government for ten years with the opportunity to renew the trademark every ten years. Trademarks are recorded as assets only when they are purchased from another company and are valued based on market price at the time of purchase. In this case, these trademarks are amortized over the expected useful life. In some cases, the trademark may be seen as having an indefinite life, in which case there would be no amortization.

Goodwill

From an accounting standpoint, goodwill is internally generated and is not recorded as an asset unless it is purchased during the acquisition of another company. The purchase of goodwill occurs when one company buys another company for an amount greater than the total value of the company's net assets. The value difference between net assets and the purchase price is then recorded as

goodwill on the purchaser's financial statements. For example, say the London Hoops professional basketball team was sold for $10 million. The new owner received net assets of $7 million, so the goodwill (value of the London Hoops above its net assets) is $3 million. The following journal entry shows how the new owner would record this purchase.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Net Assets	7,000,000	
	Goodwill	3,000,000	
	Cash		10,000,000

Goodwill does not have an expected life span and therefore is not amortized. However, a company is required to compare the book value of goodwill to its market value at least annually to determine if it needs to be adjusted. This comparison process is called *testing for impairment*. If the market value of goodwill is found to be lower than the book value, then goodwill needs to be reduced to its market value. If goodwill is impaired, it is reduced with a credit, and an impairment loss is debited. Goodwill is never increased beyond its original cost. For example, if the new owner of London Hoops assesses that London Hoops now has a fair value of $9,000,000 rather than the $10,000,000 of the original purchase, the owner would need to record the impairment as shown in the following journal entry.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2019	Impairment Loss	1,000,000	
	Goodwill		1,000,000

CONCEPTS IN PRACTICE

Microsoft's Goodwill

In 2016, **Microsoft** bought **LinkedIn** for $25 billion. **Microsoft** wanted the brand, website platform, and software, which are intangible assets of **LinkedIn**, and therefore **Microsoft** only received $4 billion in net assets. The overpayment by **Microsoft** is not necessarily a bad business decision, but rather the premium or value of those intangible assets that **LinkedIn** owned and **Microsoft** wanted. The $21 billion difference will be listed on **Microsoft**'s balance sheet as goodwill.

LINK TO LEARNING

Apple Inc. had goodwill of $5,717,000,000 on its 2017 balance sheet. Explore **Apple, Inc.**'s U.S. Securities and Exchange Commission 10-K Filing for notes that discuss goodwill and whether **Apple** has had to adjust for the impairment of this asset in recent years.

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CHAPTER OVERVIEW

11: Current Liabilities

11.1: Identify and Describe Current Liabilities

11.2: Analyze, Journalize, and Report Current Liabilities

11.3: Define and Apply Accounting Treatment for Contingent Liabilities

11.4: Prepare Journal Entries to Record Short-Term Notes Payable

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11.1: Identify and Describe Current Liabilities

To assist in understanding current liabilities, assume that you own a landscaping company that provides landscaping maintenance services to clients. As is common for landscaping companies in your area, you require clients to pay an initial deposit of 25% for services before you begin working on their property. Asking a customer to pay for services before you have provided them creates a current liability transaction for your business. As you've learned, liabilities require a future disbursement of assets or services resulting from a prior business activity or transaction. For companies to make more informed decisions, liabilities need to be classified into two specific categories: current liabilities and noncurrent (or long-term) liabilities. The differentiating factor between current and long-term is when the liability is due. The focus of this chapter is on current liabilities, while Long-Term Liabilitiesemphasizes long-term liabilities.

Fundamentals of Current Liabilities

A **current liability** is a debt or obligation due within a company's standard operating period, typically a year, although there are exceptions that are longer or shorter than a year. A company's typical operating period (sometimes called an operating cycle) is a year, which is used to delineate current and noncurrent liabilities, and current liabilities are considered short term and are typically due within a year or less.

Noncurrent liabilities are long-term obligations with payment typically due in a subsequent operating period. Current liabilities are reported on the classified balance sheet, listed before noncurrent liabilities. Changes in current liabilities from the beginning of an accounting period to the end are reported on the statement of cash flows as part of the cash flows from operations section. An increase in current liabilities over a period increases cash flow, while a decrease in current liabilities decreases cash flow.

Current vs. Noncurrent Liabilities

Current Liabilities	Noncurrent Liabilities
Due within one year or less for a typical one-year operating period	Due in more than one year or longer than one operating period
Short-term accounts such as: • Accounts Payable • Salaries Payable • Unearned Revenues • Interest Payable • Taxes Payable • Notes Payable within one operating period • Current portion of a longer-term account such as Notes Payable or Bonds Payable	Long-term portion of obligations such as: • Noncurrent portion of a longer-term account such as Notes Payable or Bonds Payable

Table12.1 A delineator between current and noncurrent liabilities is one year or the company's operating period, whichever is longer.

Examples of Current Liabilities

Common current liabilities include accounts payable, unearned revenues, the current portion of a note payable, and taxes payable. Each of these liabilities is current because it results from a past business activity, with a disbursement or payment due within a period of less than a year.

ETHICAL CONSIDERATIONS

Proper Current Liabilities Reporting and Calculating Burn Rate

When using financial information prepared by accountants, decision-makers rely on ethical accounting practices. For example, investors and creditors look to the current liabilities to assist in calculating a company's annual *burn rate*. The burn rate is the metric defining the monthly and annual cash needs of a company. It is used to help calculate how long the company can maintain

operations before becoming insolvent. The proper classification of liabilities as current assists decision-makers in determining the short-term and long-term cash needs of a company.

Another way to think about burn rate is as the amount of cash a company uses that exceeds the amount of cash created by the company's business operations. The burn rate helps indicate how quickly a company is using its cash. Many start-ups have a high cash burn rate due to spending to start the business, resulting in low cash flow. At first, start-ups typically do not create enough cash flow to sustain operations.

Proper reporting of current liabilities helps decision-makers understand a company's burn rate and how much cash is needed for the company to meet its short-term and long-term cash obligations. If misrepresented, the cash needs of the company may not be met, and the company can quickly go out of business. Therefore, it is important that the accountant appropriately report current liabilities because a creditor, investor, or other decision-maker's understanding of a company's specific cash needs helps them make good financial decisions.

Accounts Payable

Accounts payable accounts for financial obligations owed to suppliers after purchasing products or services on credit. This account may be an open credit line between the supplier and the company. An open credit line is a borrowing agreement for an amount of money, supplies, or inventory. The option to borrow from the lender can be exercised at any time within the agreed time period.

An account payable is usually a less formal arrangement than a promissory note for a current note payable. Long-term debt is covered in depth in Long-Term Liabilities. For now, know that for some debt, including short-term or current, a formal contract might be created. This contract provides additional legal protection for the lender in the event of failure by the borrower to make timely payments. Also, the contract often provides an opportunity for the lender to actually sell the rights in the contract to another party.

An invoice from the supplier (such as the one shown in Figure 12.2) detailing the purchase, credit terms, invoice date, and shipping arrangements will suffice for this contractual relationship. In many cases, accounts payable agreements do not include interest payments, unlike notes payable.



INVOICE

246 Sierra Road,
Anywhere,
USA 01234

Invoice No.: 00257
Invoice Date: 8/12/2016

Bill to:
Joe Johnson

Sl NO.	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
1	Youth Snowboard	10	$45.99	$459.90
			Shipping Charges	$56.00
			TOTAL	**$515.90**
			Credit Term: Net 30	

Figure 12.2 Accounts Payable. Contract terms for accounts payable transactions are usually listed on an invoice. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

For example, assume the owner of a clothing boutique purchases hangers from a manufacturer on credit. The organizations may establish an ongoing purchase agreement, which includes purchase details (such as hanger prices and quantities), credit terms (2/10, n/60), an invoice date, and shipping charges (free on board [FOB] shipping) for each order. The basics of shipping charges and

credit terms were addressed in Merchandising Transactions if you would like to refresh yourself on the mechanics. Also, to review accounts payable, you can also return to Merchandising Transactions for detailed explanations.

Unearned Revenue

Unearned revenue, also known as deferred revenue, is a customer's advance payment for a product or service that has yet to be provided by the company. Some common unearned revenue situations include subscription services, gift cards, advance ticket sales, lawyer retainer fees, and deposits for services. As you learned when studying the accounting cycle (Analyzing and Recording Transactions, The Adjustment Process, and Completing the Accounting Cycle), we are applying the principles of accrual accounting when revenues and expenses are recognized in different months or years. Under accrual accounting, a company does not record revenue as earned until it has provided a product or service, thus adhering to the revenue recognition principle. Until the customer is provided an obligated product or service, a liability exists, and the amount paid in advance is recognized in the Unearned Revenue account. As soon as the company provides all, or a portion, of the product or service, the value is then recognized as earned revenue.

For example, assume that a landscaping company provides services to clients. The company requires advance payment before rendering service. The customer's advance payment for landscaping is recognized in the Unearned Service Revenue account, which is a liability. Once the company has finished the client's landscaping, it may recognize all of the advance payment as earned revenue in the Service Revenue account. If the landscaping company provides part of the landscaping services within the operating period, it may recognize the value of the work completed at that time.

Perhaps at this point a simple example might help clarify the treatment of unearned revenue. Assume that the previous landscaping company has a three-part plan to prepare lawns of new clients for next year. The plan includes a treatment in November 2019, February 2020, and April 2020. The company has a special rate of $120 if the client prepays the entire $120 before the November treatment. In real life, the company would hope to have dozens or more customers. However, to simplify this example, we analyze the journal entries from one customer. Assume that the customer prepaid the service on October 15, 2019, and all three treatments occur on the first day of the month of service. We also assume that $40 in revenue is allocated to each of the three treatments.

Before examining the journal entries, we need some key information. Because part of the service will be provided in 2019 and the rest in 2020, we need to be careful to keep the recognition of revenue in its proper period. If all of the treatments occur, $40 in revenue will be recognized in 2019, with the remaining $80 recognized in 2020. Also, since the customer could request a refund before any of the services have been provided, we need to ensure that we do not recognize revenue until it has been earned. While it is nice to receive funding before you have performed the services, in essence, all you have received when you get the money is a liability (unearned service revenue), with the hope of it eventually becoming revenue. The following journal entries are built upon the client receiving all three treatments. First, for the prepayment of future services and for the revenue earned in 2019, the journal entries are shown.

JOURNAL

Date	Account	Debit	Credit
Oct. 15, 2019	Cash	120	
	Unearned Revenue: Landscaping		120
	To recognize prepayment of future landscaping services		
Nov. 1, 2019	Unearned Revenue: Landscaping	40	
	Earned Revenue: Landscaping		40
	To record landscaping revenue earned		

For the revenue earned in 2020, the journal entries would be.

JOURNAL

Date	Account	Debit	Credit
Feb. 1, 2020	Unearned Revenue: Landscaping	40	
	Earned Revenue: Landscaping		40
	To record landscaping revenue earned		
Apr. 1, 2020	Unearned Revenue: Landscaping	40	
	Earned Revenue: Landscaping		40
	To record landscaping revenue earned		



Figure 12.3 Advance Ticket Sales. Season ticket sales are considered unearned revenue because customers pay for them in advance of any games played. (credit: “Fans in Razorback Stadium (Fayetteville, AR)” by Rmcclen/Wikimedia Commons, Public Domain)

CONCEPTS IN PRACTICE

Thinking about Unearned Revenue

When thinking about unearned revenue, consider the example of **Amazon.com, Inc**. **Amazon** has a large business portfolio that includes a widening presence in the online product and service space. **Amazon** has two services in particular that contribute to their unearned revenue account: Amazon Web Services and Prime membership.

According to *Business Insider*, **Amazon** had $4.8 billion in unearned revenue recognized in their fourth quarter report (December 2016), with most of that contribution coming from Amazon Web Services.[1] This is an increase from prior quarters. The growth is due to larger and longer contracts for web services. The advance payment for web services is transferred to revenue over the term of the contract. The same is true for Prime membership. **Amazon** receives $99 in advance pay from customers, which is amortized over the twelve-month period of the service agreement. This means that each month, Amazon only recognizes $8.25 per Prime membership payment as earned revenue.

Current Portion of a Note Payable

A **note payable** is a debt to a lender with specific repayment terms, which can include principal and interest. A note payable has written contractual terms that make it available to sell to another party. The **principal** on a note refers to the initial borrowed amount, not including interest. In addition to repayment of principal, interest may accrue. **Interest** is a monetary incentive to the lender, which justifies loan risk.

Let’s review the concept of interest. Interest is an expense that you might pay for the use of someone else’s money. For example, if you have a credit card and you owe a balance at the end of the month it will typically charge you a percentage, such as 1.5% a month (which is the same as 18% annually) on the balance that you owe. Assuming that you owe $400, your interest charge for the month would be $400 × 1.5%, or $6.00. To pay your balance due on your monthly statement would require $406 (the $400 balance due plus the $6 interest expense).

We make one more observation about interest: interest rates are typically quoted in annual terms. For example, if you borrowed money to buy a car, your interest expense might be quoted as 9%. Note that this is an annual rate. If you are making monthly payments, the monthly charge for interest would be 9% divided by twelve, or 0.75% a month. For example, if you borrowed $20,000, and made sixty equal monthly payments, your monthly payment would be $415.17, and your interest expense component of the $415.17 payment would be $150.00. The formula to calculate interest on either an annual or partial-year basis is:

Interest = Principal (amount borrowed) × Interest Rate × Period of Time

In our example this would be

$20,000×9%×112=$150$20,000×9%×112=$150

The good news is that for a loan such as our car loan or even a home loan, the loan is typically what is called *fully amortizing*. At this point, you just need to know that in our case the amount that you owe would go from a balance due of $20,000 down to $0 after the twentieth payment and the part of your $415.17 monthly payment allocated to interest would be less each month. For example, your last (sixtieth) payment would only incur $3.09 in interest, with the remaining payment covering the last of the principle owed. See Figure 13.7 for an exhibit that demonstrates this concept.

CONCEPTS IN PRACTICE

Applying Amortization

Car loans, mortgages, and education loans have an amortization process to pay down debt. Amortization of a loan requires periodic scheduled payments of principal and interest until the loan is paid in full. Every period, the same payment amount is due, but interest expense is paid first, with the remainder of the payment going toward the principal balance. When a customer first takes out the loan, most of the scheduled payment is made up of interest, and a very small amount goes to reducing the principal balance. Over time, more of the payment goes toward reducing the principal balance rather than interest.

For example, let's say you take out a car loan in the amount of $10,000. The annual interest rate is 3%, and you are required to make scheduled payments each month in the amount of $400. You first need to determine the monthly interest rate by dividing 3% by twelve months (3%/12), which is 0.25%. The monthly interest rate of 0.25% is multiplied by the outstanding principal balance of $10,000 to get an interest expense of $25. The scheduled payment is $400; therefore, $25 is applied to interest, and the remaining $375 ($400 – $25) is applied to the outstanding principal balance. This leaves an outstanding principal balance of $9,625. Next month, interest expense is computed using the new principal balance outstanding of $9,625. The new interest expense is $24.06 ($9,625 × 0.25%). This means $24.06 of the $400 payment applies to interest, and the remaining $375.94 ($400 – $24.06) is applied to the outstanding principal balance to get a new balance of $9,249.06 ($9,625 – $375.94). These computations occur until the entire principal balance is paid in full.

A note payable is usually classified as a long-term (noncurrent) liability if the note period is longer than one year or the standard operating period of the company. However, during the company's current operating period, any portion of the long-term note due that will be paid in the current period is considered a **current portion of a note payable**. The outstanding balance note payable during the current period remains a noncurrent note payable. Note that this does not include the interest portion of the payments. On the balance sheet, the current portion of the noncurrent liability is separated from the remaining noncurrent liability. No journal entry is required for this distinction, but some companies choose to show the transfer from a noncurrent liability to a current liability.

For example, a bakery company may need to take out a $100,000 loan to continue business operations. The bakery's outstanding note principal is $100,000. Terms of the loan require equal annual principal repayments of $10,000 for the next ten years. Payments will be made on July 1 of each of the ten years. Even though the overall $100,000 note payable is considered long term, the $10,000 required repayment during the company's operating cycle is considered current (short term). This means $10,000 would be classified as the current portion of a noncurrent note payable, and the remaining $90,000 would remain a noncurrent note payable.

The portion of a note payable due in the current period is recognized as current, while the remaining outstanding balance is a noncurrent note payable. For example, Figure 12.4 shows that $18,000 of a $100,000 note payable is scheduled to be paid within the current period (typically within one year). The remaining $82,000 is considered a long-term liability and will be paid over its remaining life.

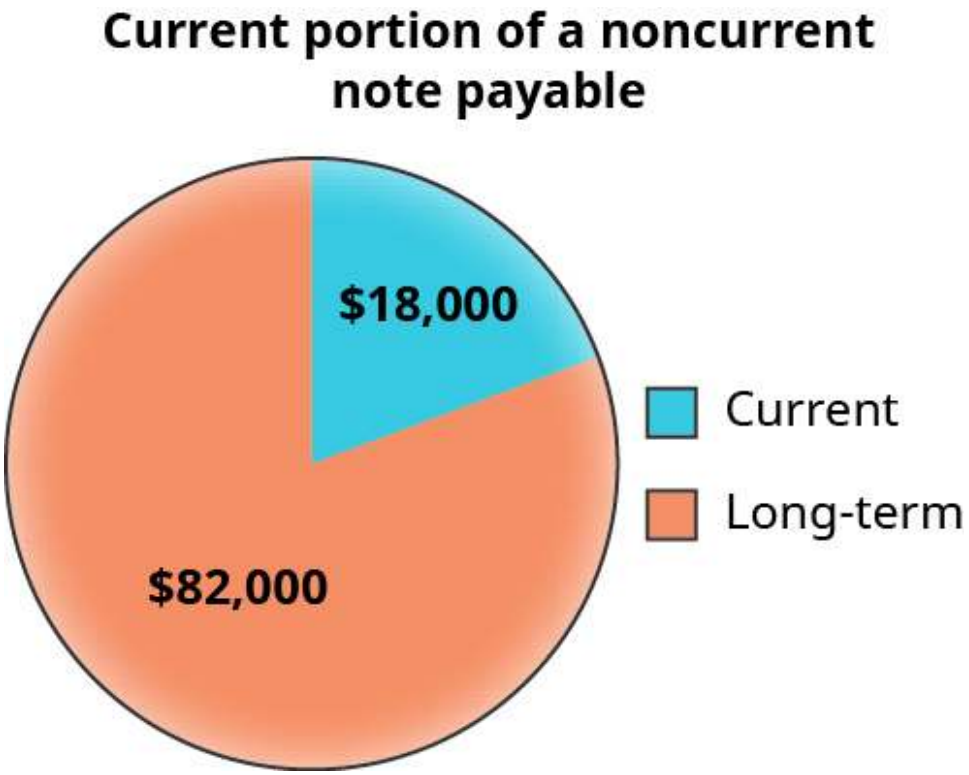


Figure 12.4 Current Portion of a Noncurrent Note Payable. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

In addition to the $18,000 portion of the note payable that will be paid in the current year, any accrued interest on both the current portion and the long-term portion of the note payable that is due will also be paid. Assume, for example, that for the current year $7,000 of interest will be accrued. In the current year the debtor will pay a total of $25,000—that is, $7,000 in interest and $18,000 for the current portion of the note payable. A similar type of payment will be paid each year for as long as any of the note payable remains; however, the annual interest expense would be reduced since the remaining note payable owed will be reduced by the previous payments.

Interest payable can also be a current liability if accrual of interest occurs during the operating period but has yet to be paid. An annual interest rate is established as part of the loan terms. Interest accrued is recorded in Interest Payable (a credit) and Interest Expense (a debit). To calculate interest, the company can use the following equations. This method assumes a twelve-month denominator in the calculation, which means that we are using the calculation method based on a 360-day year. This method was more commonly used prior to the ability to do the calculations using calculators or computers, because the calculation was easier to perform. However, with today's technology, it is more common to see the interest calculation performed using a 365-day year. We will demonstrate both methods.

$$\text{Interest Payable} = \text{Annual Interest Rate} \times \text{Loan Principal} \times \text{Part of Year}$$

$$\text{Part of Year} = \frac{\text{Number of Months of Accrued Interest}}{\text{12 Months}}$$

For example, we assume the bakery has an annual interest rate on its loan of 7%. The loan interest began accruing on July 1 and it is now December 31. The bakery has accrued six months of interest and would compute the interest liability as

$100,000×7%×612=$3,500$100,000×7%×612=$3,500

The $3,500 is recognized in Interest Payable (a credit) and Interest Expense (a debit).

Taxes Payable

Taxes payable refers to a liability created when a company collects taxes on behalf of employees and customers or for tax obligations owed by the company, such as sales taxes or income taxes. A future payment to a government agency is required for the

amount collected. Some examples of taxes payable include sales tax and income taxes.

Sales taxes result from sales of products or services to customers. A percentage of the sale is charged to the customer to cover the tax obligation (see Figure 12.5). The sales tax rate varies by state and local municipalities but can range anywhere from 1.76% to almost 10% of the gross sales price. Some states do not have sales tax because they want to encourage consumer spending. Those businesses subject to sales taxation hold the sales tax in the Sales Tax Payable account until payment is due to the governing body.



Figure 12.5 Sales Tax. Many businesses are required to charge a sales tax on products or services sold. (credit: modification of "Sales Tax" by Kerry Ceszyk/Flickr, CC BY 4.0)

For example, assume that each time a shoe store sells a $50 pair of shoes, it will charge the customer a sales tax of 8% of the sales price. The shoe store collects a total of $54 from the customer. The $4 sales tax is a current liability until distributed within the company's operating period to the government authority collecting sales tax.

Income taxes are required to be withheld from an employee's salary for payment to a federal, state, or local authority (hence they are known as *withholding taxes*). This withholding is a percentage of the employee's gross pay. Income taxes are discussed in greater detail in Record Transactions Incurred in Preparing Payroll.

LINK TO LEARNING

Businesses can use the Internal Revenue Service's Sales Tax Deduction Calculator and associated tips and guidance to determine their estimated sales tax obligation owed to the state and local government authority.

Footnotes

- 1 Eugene Kim. "An Overlooked Part of Amazon Will Be in the Spotlight When the Company Reports Earnings." *Business Insider*. April 28, 2016. https://www.businessinsider.com/amaz...quarter-2016-4

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11.2: Analyze, Journalize, and Report Current Liabilities

To illustrate current liability entries, we use transaction information from Sierra Sports (see Figure 12.6). Sierra Sports owns and operates a sporting goods store in the Southwest specializing in sports apparel and equipment. The company engages in regular business activities with suppliers, creditors, customers, and employees.



Figure 12.6 Sierra Sports Logo. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Accounts Payable

On August 1, Sierra Sports purchases $12,000 of soccer equipment from a manufacturer (supplier) on credit. Assume for the following examples that Sierra Sports uses the perpetual inventory method, which uses the Inventory account when the company buys, sells, or adjusts the inventory balance, such as in the following example where they qualified for a discount. In the current transaction, credit terms are 2/10, n/30, the invoice date is August 1, and shipping charges are FOB shipping point (which is included in the purchase cost).

Recall from Merchandising Transactions, that credit terms of 2/10, n/30 signal the payment terms and discount, and FOB shipping point establishes the point of merchandise ownership, the responsibility during transit, and which entity pays shipping charges. Therefore, 2/10, n/30 means Sierra Sports has ten days to pay its balance due to receive a 2% discount, otherwise Sierra Sports has net thirty days, in this case August 31, to pay in full but not receive a discount. FOB shipping point signals that since Sierra Sports takes ownership of the merchandise when it leaves the manufacturer, it takes responsibility for the merchandise in transit and will pay the shipping charges.

Sierra Sports would make the following journal entry on August 1.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 1	Inventory	12,000	
	Accounts Payable		12,000
	To recognize the purchase of equipment on credit, terms 2/10, n/30, invoice date Aug. 1		

The merchandise is purchased from the supplier on credit. In this case, Accounts Payable would increase (a credit) for the full amount due. Inventory, the asset account, would increase (a debit) for the purchase price of the merchandise.

If Sierra Sports pays the full amount owed on August 10, it qualifies for the discount, and the following entry would occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 10	Accounts Payable	12,000	
	Inventory		240
	Cash		11,760
	To recognize payment of the amount due, less discount		

Assume that the payment to the manufacturer occurs within the discount period of ten days (2/10, n/30) and is recognized in the entry. Accounts Payable decreases (debit) for the original amount due, Inventory decreases (credit) for the discount amount of $240 ($12,000 × 2%), and Cash decreases (credit) for the remaining balance due after discount.

Note that Inventory is decreased in this entry because the value of the merchandise (soccer equipment) is reduced. When applying the perpetual inventory method, this reduction is required by generally accepted accounting principles (GAAP) (under the cost principle) to reflect the actual cost of the merchandise.

A second possibility is that Sierra will return part of the purchase before the ten-day discount window has expired. Assume in this example that $1,000 of the $12,000 purchase was returned to the seller on August 8 and the remaining account payable due was paid by Sierra to the seller on August 10, which means that Sierra qualified for the remaining eligible discount. The following two journal entries represent the return of inventory and the subsequent payment for the remaining account payable owed. The initial journal entry from August 1 will still apply, because we assume that Sierra intended to keep the full $12,000 of inventory when the purchase was made.

When the $1,000 in inventory was returned on August 8, the accounts payable account and the inventory accounts should be reduced by $1,000 as demonstrated in this journal entry.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 8	Accounts Payable	1,000	
	Inventory		1,000
	To recognize return of inventory purchased		

After this transaction, Sierra still owed $11,000 and still had $11,000 in inventory from the purchase, assuming that Sierra had not sold any of it yet.

When Sierra paid the remaining balance on August 10, the company qualified for the discount. However, since Sierra only owed a remaining balance of $11,000 and not the original $12,000, the discount received was 2% of $11,000, or $220, as demonstrated in this journal entry. Since Sierra owed $11,000 and received a discount of $220, the supplier was paid $10,780. This second journal entry is the same as the one that would have recognized an original purchase of $11,000 that qualified for a discount.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 8	Accounts Payable	11,000	
	Inventory		220
	Cash		10,780
	To recognize payment of remaining accounts payable balance after qualifying for the discount		

Remember that since we are assuming that Sierra was using the perpetual inventory method, purchases, payments, and adjustments in goods available for sale are reflected in the company's Inventory account. In our example, one of the potential adjustments is that discounts received are recorded as reductions to the Inventory account.

To demonstrate this concept, after buying $12,000 in inventory, returning $1,000 in inventory, and then paying for the remaining balance and qualifying for the discount, Sierra's Inventory balance increased by $10,780, as shown.

SIERRA SPORTS Inventory Account	
Initial inventory purchase (Aug. 1)	$12,000
Return of inventory (Aug. 8)	(1,000)
Subtotal (Aug. 8)	$11,000
Discount allowed Aug. 10 (reduction in inventory)	(220)
Final Inventory after Account Payable	$10,780

If Sierra had bought $11,000 of inventory on August 1 and paid cash and taken the discount, after taking the $220 discount, the increase of Inventory on their balance sheet would have been $10,780, as it finally ended up being in our more complicated set of transactions on three different days. The important factor is that the company qualified for a 2% discount on inventory that had a retail price before discounts of $11,000.

In a final possible scenario, assume that Sierra Sports remitted payment outside of the discount window on August 28, but inside of thirty days. In this case, they did not qualify for the discount, and assuming that they made no returns they paid the full, undiscounted balance of $12,000.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 28	Accounts Payable	12,000	
	Cash		12,000
	To recognize payment of the amount due, no discount applied		

If this occurred, both Accounts Payable and Cash decreased by $12,000. Inventory is not affected in this instance because the full cost of the merchandise was paid; so, the increase in value for the inventory was $12,000, and not the $11,760 value determined in our beginning transactions where they qualified for the discount.

YOUR TURN

Accounting for Advance Payments

You are the owner of a catering company and require advance payments from clients before providing catering services. You receive an order from the Coopers, who would like you to cater their wedding on June 10. The Coopers pay you $5,500 cash on March 25. Record your journal entries for the initial payment from the Coopers, and when the catering service has been provided on June 10.

Solution

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Mar. 25	Cash	5,500	
	Unearned Revenue: Catering		5,500
	To recognize advanced payment from client		
Jun. 10	Unearned Revenue: Catering	5,500	
	Revenue: Catering		5,500
	To recognize catering revenue earned		

Unearned Revenue

Sierra Sports has contracted with a local youth football league to provide all uniforms for participating teams. The league pays for the uniforms in advance, and Sierra Sports provides the customized uniforms shortly after purchase. The following situation shows

the journal entry for the initial purchase with cash. Assume the league pays Sierra Sports for twenty uniforms (cost per uniform is $30, for a total of $600) on April 3.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 3	Cash	600	
	Unearned Uniform Revenue		600
	To recognize advanced payment for 20 uniforms at $30 each		

Sierra Sports would see an increase to Cash (debit) for the payment made from the football league. The revenue from the sale of the uniforms is $600 (20 uniforms × $30 per uniform). Unearned Uniform Revenue accounts reflect the prepayment from the league, which cannot be recognized as earned revenue until the uniforms are provided. Unearned Uniform Revenue is a current liability account that increases (credit) with the increase in outstanding product debt.

Sierra provides the uniforms on May 6 and records the following entry.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 6	Unearned Revenue: Uniforms	600	
	Revenue: Uniforms		600
	To recognize uniform revenue as earned		
May 6	Cost of Goods Sold	280	
	Inventory		280
	To recognize cost of goods sold of uniform sales		

Now that Sierra has provided all of the uniforms, the unearned revenue can be recognized as earned. This satisfies the revenue recognition principle. Therefore, Unearned Uniform Revenue would decrease (debit), and Uniform Revenue would increase (credit) for the total amount.

Let's say that Sierra only provides half the uniforms on May 6 and supplies the rest of the order on June 2. The company may not recognize revenue until a product (or a portion of a product) has been provided. This means only half the revenue can be recognized on May 6 ($300) because only half of the uniforms were provided. The rest of the revenue recognition will have to wait until June 2. Since only half of the uniforms were delivered on May 6, only half of the costs of goods sold would be recognized on May 6. The other half of the costs of goods sold would be recognized on June 2 when the other half of the uniforms were delivered. The following entries show the separate entries for partial revenue recognition.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 6	Unearned Revenue: Uniforms	300	
	Revenue: Uniforms		300
	To recognize partial uniform revenue as earned		
May 6	Cost of Goods Sold	140	
	Inventory		140
	To recognize cost of goods sold of uniform sales		
Jun. 2	Unearned Revenue: Uniforms	300	
	Revenue: Uniforms		300
	To recognize partial uniform revenue as earned		
Jun. 2	Cost of Goods Sold	140	
	Inventory		140
	To recognize cost of goods sold of uniform sales		

In another scenario using the same cost information, assume that on April 3, the league contracted for the production of the uniforms on credit with terms 5/10, n/30. They signed a contract for the production of the uniforms, so an account receivable was created for Sierra, as shown.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 3	Accounts Receivable Unearned Revenue: Uniforms *To recognize advanced payment on credit for 20 uniforms (5/10, n/30)*	600	600

Sierra and the league have worked out credit terms and a discount agreement. As such, the league can delay cash payment for ten days and receive a discount, or for thirty days with no discount assessed. Instead of cash increasing for Sierra, Accounts Receivable increases (debit) for the amount the football league owes.

The league pays for the uniforms on April 15, and Sierra provides all uniforms on May 6. The following entry shows the payment on credit.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 15	Cash Accounts Receivable *To recognize payment of the amount due; no discount applied*	600	600

The football league made payment outside of the discount period, since April 15 is more than ten days from the invoice date. Thus, they do not receive the 5% discount. Cash increases (debit) for the $600 paid by the football league, and Accounts Receivable decreases (credit).

In the next example, let's assume that the league made payment within the discount window, on April 13. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 13	Cash Sales Discount Accounts Receivable *To recognize league payment with 5 percent discount*	570 30	 600

In this case, Accounts Receivable decreases (credit) for the original amount owed, Sales Discount increases (debit) for the discount amount of $30 ($600 × 5%), and Cash increases (debit) for the $570 paid by the football league less discount.

When the company provides the uniforms on May 6, Unearned Uniform Revenue decreases (debit) and Uniform Revenue increases (credit) for $600.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 6	Unearned Revenue: Uniforms Revenue: Uniforms *To recognize uniform revenue as earned*	600	600

ETHICAL CONSIDERATIONS

Stock Options and Unearned Revenue Manipulation

The anticipated income of public companies is projected by stock market analysts through *whisper-earnings*, or forecasted earnings. It can be advantageous for a company to have its stock beat the stock market's expectation of earnings. Likewise, falling below the market's expectation can be a disadvantage. If a company's whisper-earnings are not going to be met, there could be pressure on the chief financial officer to misrepresent earnings through manipulation of unearned revenue accounts to better match the stock market's expectation.

Because many executives, other top management, and even employees have stock options, this can also provide incentive to manipulate earnings. A stock option sets a minimum price for the stock on a certain date. This is the date the option vests, at what is commonly called the *strike price*. Options are worthless if the stock price on the vesting date is lower than the price at which they

were granted. This could result in a loss of income, potentially incentivizing earnings manipulation to meet the stock market's expectations and exceed the vested stock price in the option.

Researchers have found that when executive options are about to vest, companies are more likely to present financial statements meeting or just slightly beating the earnings forecasts of analysts. The proximity of the actual earnings to earnings forecasts suggests they were manipulated because of the vesting.[2] As Douglas R. Carmichael points out, "public companies that fail to report quarterly earnings which meet or exceed analysts' expectations often experience a drop in their stock prices. This can lead to practices that sometimes include fraudulent overstatement of quarterly revenue."[3] If earnings meet or exceed expectations, a stock price can hit or surpass the vested stock price in the option. For company members with stock options, this could result in higher income. Thus, financial statements that align closely with analysts' estimates, rather than showing large projections above or below whisper-earnings, could indicate that accounting information has possibly been adjusted to meet the expected numbers. Such manipulations can be made in unearned revenue accounts.

In November 1998, the Securities and Exchange Commission (SEC) issued Practice Alert 98-3, Revenue Recognition Issues, SEC Practice Section Professional Issues Task Force, recognizing and discussing the manipulation of earnings used to exceed stock market and analysts' expectations. Accountants should watch for revenue recognition related issues in preparing the financial statements of their company or client, especially when employees' or management's stock options are about to vest.

Current Portion of a Noncurrent Note Payable

Sierra Sports takes out a bank loan on January 1, 2017 to cover expansion costs for a new store. The note amount is $360,000. The note has terms of repayment that include equal principal payments annually over the next twenty years. The annual interest rate on the loan is 9%. Interest accumulates each month based on the standard interest rate formula discussed previously, and on the current outstanding principal balance of the loan. Sierra records interest accumulation every three months, at the end of each third month. The initial loan (note) entry follows.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1	Cash	360,000	
	Notes Payable		360,000
	To recognize long-term loan, interest rate 9%		

Notes Payable increases (credit) for the full loan principal amount. Cash increases (debit) as well. On March 31, the end of the first three months, Sierra records their first interest accumulation.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Mar. 31	Interest Expense	8,100	
	Interest Payable		8,100
	To recognize interest accumulated after three months		

Interest Expense increases (debit) as does Interest Payable (credit) for the amount of interest accumulated but unpaid at the end of the three-month period. The amount $8,100 is found by using the interest formula, where the outstanding principal balance is $360,000, interest rate of 9%, and the part of the year being three out of twelve months: $360,000 × 9% × (3/12).

The same entry for interest will occur every three months until year-end. When accumulated interest is paid on January 1 of the following year, Sierra would record this entry.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1	Interest Payable	32,400	
	Cash		32,400
	To recognize interest payment for 2017		

Both Interest Payable and Cash decrease for the total interest amount accumulated during 2017. This is calculated by taking each three-month interest accumulation of $8,100 and multiplying by the four recorded interest entries for the periods. You could also compute this by taking the original principal balance and multiplying by 9%.

On December 31, 2017, the first principal payment is due. The following entry occurs to show payment of this principal amount due in the current period.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Notes Payable	18,000	
	Cash		18,000
	To recognize current principal payment for 2017		

Notes Payable decreases (debit), as does Cash (credit), for the amount of the noncurrent note payable due in the current period. This amount is calculated by dividing the original principal amount ($360,000) by twenty years to get an annual current principal payment of $18,000 ($360,000/20).

While the accounts used to record a reduction in Notes Payable are the same as the accounts used for a noncurrent note, the reporting on the balance sheet is classified in a different area. The current portion of the noncurrent note payable ($18,000) is reported under Current Liabilities, and the remaining noncurrent balance of $342,000 ($360,000 – $18,000) is classified and displayed under noncurrent liabilities, as shown in Figure 12.7.

SIERRA SPORTS
Balance Sheet
December 31, 2017

Assets		**Liabilities and Stockholders Equity**	
Current Assets		Current Liabilities	
Cash	$ 21,580	Note Payable: Current	$ 18,000
Account Receivable	2,000	Accounts Payable	9,000
Total Current Assets	23,580	Unearned Revenue	4,000
		Total Current Liabilities	31,000
Property, Plant, and Equipment			
Buildings	300,000	Long-term Liabilities	
Sporting Equipment	60,000	Notes Payable	342,000
Total Property, Plant, and Equipment	360,000		
		Stockholders' Equity	
		Common Stock	5,000
		Retained Earnings	5,580
		Total Stockholders' Equity	10,580
Total Assets	$383,580	Total Liabilities and Stockholders' Equity	$383,580

Figure 12.7 Sierra Sports Balance Sheet. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Taxes Payable

Let's consider our previous example where Sierra Sports purchased $12,000 of soccer equipment in August. Sierra now sells the soccer equipment to a local soccer league for $18,000 cash on August 20. The sales tax rate is 6%. The following revenue entry would occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 20	Cash	19,080	
	Sales Tax Payable		1,080
	Sales		18,000
	To recognize soccer equipment sale, tax rate 6%		

Cash increases (debit) for the sales amount plus sales tax. Sales Tax Payable increases (credit) for the 6% tax rate ($18,000 × 6%). Sierra's tax liability is owed to the State Tax Board. Sales increases (credit) for the original amount of the sale, not including sales tax. If Sierra's customer pays on credit, Accounts Receivable would increase (debit) for $19,080 rather than Cash.

When Sierra remits payment to the State Tax Board on October 1, the following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 1	Sales Tax Payable	1,080	
	Cash		1,080
	To recognize State Tax Board payment		

Sales Tax Payable and Cash decrease for the payment amount of $1,080. Sales tax is not an expense to the business because the company is holding it on account for another entity.

Sierra Sports payroll tax journal entries will appear in Record Transactions Incurred in Preparing Payroll.

YOUR TURN

Accounting for Purchase Discounts

You own a shipping and packaging facility and provide shipping services to customers. You have worked out a contract with a local supplier to provide your business with packing materials on an ongoing basis. Terms of your agreement allow for delayed payment of up to thirty days from the invoice date, with an incentive to pay within ten days to receive a 5% discount on the packing materials. On April 3, you purchase 1,000 boxes (Box Inventory) from this supplier at a cost per box of $1.25. You pay the amount due to the supplier on April 11. Record the journal entries to recognize the initial purchase on April 3, and payment of the amount due on April 11.

Solution

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Apr. 3	Box Inventory	1,250	
	Accounts Payable		1,250
	To recognize purchases of boxes, 5/10, n/30		
Apr. 11	Accounts Payable	1,250	
	Box Inventory		62.50
	Cash		1,187.50
	To recognize payment, less discount		

Footnotes

- 2 Jena McGregor. “How Stock Options Lead CEOs to Put Their Own Interests First.” *Washington Post*. February 11, 2014. https://www.washingtonpost.com/news/...=.24d99a4fb1a5
- 3 Douglas R. Carmichael. “Hocus-Pocus Accounting.” *Journal of Accountancy*. October 1, 1999. https://www.journalofaccountancy.com.../carmichl.html

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11.3: Define and Apply Accounting Treatment for Contingent Liabilities

What happens if your business anticipates incurring a loss or debt? Do you need to report this if you are uncertain it will occur? What if you know the loss or debt will occur but it has not happened yet? Do you have to report this event now, or in the future? These are questions businesses must ask themselves when exploring contingencies and their effect on liabilities.

A **contingency** occurs when a current situation has an outcome that is unknown or uncertain and will not be resolved until a future point in time. The outcome could be positive or negative. A **contingent liability** can produce a future debt or negative obligation for the company. Some examples of contingent liabilities include pending litigation (legal action), warranties, customer insurance claims, and bankruptcy.

While a contingency may be positive or negative, we only focus on outcomes that may produce a liability for the company (negative outcome), since these might lead to adjustments in the financial statements in certain cases. Positive contingencies do not require or allow the same types of adjustments to the company's financial statements as do negative contingencies, since accounting standards do not permit positive contingencies to be recorded.

Pending litigation involves legal claims against the business that may be resolved at a future point in time. The outcome of the lawsuit has yet to be determined but could have negative future impact on the business.

Warranties arise from products or services sold to customers that cover certain defects (see Figure 12.8). It is unclear if a customer will need to use a warranty, and when, but this is a possibility for each product or service sold that includes a warranty. The same idea applies to insurance claims (car, life, and fire, for example), and bankruptcy. There is an uncertainty that a claim will transpire, or bankruptcy will occur. If the contingencies do occur, it may still be uncertain when they will come to fruition, or the financial implications.



Figure 12.8 One-Year Warranty. Companies may offer product or service warranties. (credit: modification of "Seal Guaranteed" by "harshahars"/Pixabay, CC0)

The answer to whether or not uncertainties must be reported comes from Financial Accounting Standards Board (FASB) pronouncements.

Two Financial Accounting Standards Board (FASB) Requirements for Recognition of a Contingent Liability

There are two requirements for contingent liability recognition:

1. There is a likelihood of occurrence.
2. Measurement of the occurrence is classified as either estimable or inestimable.

Application of Likelihood of Occurrence Requirement

Let's explore the likelihood of occurrence requirement in more detail.

According to the FASB, if there is a probable liability determination before the preparation of financial statements has occurred, there is a **likelihood of occurrence**, and the liability must be disclosed and recognized. This financial recognition and disclosure are recognized in the current financial statements. The income statement and balance sheet are typically impacted by contingent liabilities.

For example, Sierra Sports has a one-year warranty on part repairs and replacements for a soccer goal they sell. The warranty is good for one year. Sierra Sports notices that some of its soccer goals have rusted screws that require replacement, but they have already sold goals with this problem to customers. There is a probability that someone who purchased the soccer goal may bring it in to have the screws replaced. Not only does the contingent liability meet the probability requirement, it also meets the measurement requirement.

Application of Measurement Requirement

The **measurement requirement** refers to the company's ability to reasonably estimate the amount of loss. Even though a reasonable estimate is the company's best guess, it should not be a frivolous number. For a financial figure to be reasonably estimated, it could be based on past experience or industry standards (see Figure 12.9). It could also be determined by the potential future, known financial outcome.

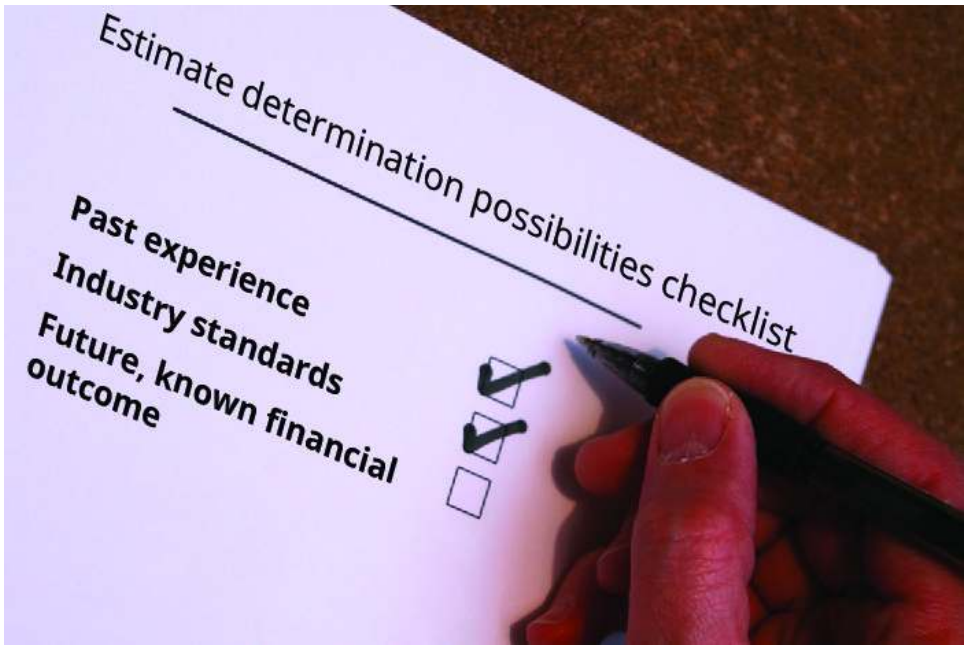


Figure 12.9 Contingent Liabilities Estimation Checklist. These are possible ways to determine a contingent liability financial estimate. (credit: modification of "Checklist" by Alan Cleaver/Flickr, CC BY 2.0)

Let's continue to use Sierra Sports' soccer goal warranty as our example. If the warranties are honored, the company should know how much each screw costs, labor cost required, time commitment, and any overhead costs incurred. This amount could be a reasonable estimate for the parts repair cost per soccer goal. Since not all warranties may be honored (warranty expired), the company needs to make a reasonable determination for the amount of honored warranties to get a more accurate figure.

Another way to establish the warranty liability could be an estimation of honored warranties as a percentage of sales. In this instance, Sierra could estimate warranty claims at 10% of its soccer goal sales.

When determining if the contingent liability should be recognized, there are four potential treatments to consider.

Let's expand our discussion and add a brief example of the calculation and application of warranty expenses. To begin, in many ways a warranty expense works similarly to the bad debt expense concept covered in Accounting for Receivables in that the anticipated expense is determined by examining past period expense experiences and then basing the current expense on current sales data. Also, as with bad debts, the warranty repairs typically are made in an accounting period sometimes months or even years after the initial sale of the product, which means that we need to estimate future costs to comply with the revenue recognition and matching principles of generally accepted accounting principles (GAAP).

Some industries have such a large number of transactions and a vast data bank of past warranty claims that they have an easier time estimating potential warranty claims, while other companies have a harder time estimating future claims. In our case, we make assumptions about Sierra Sports and build our discussion on the estimated experiences.

For our purposes, assume that Sierra Sports has a line of soccer goals that sell for $800, and the company anticipates selling 500 goals this year (2019). Past experience for the goals that the company has sold is that 5% of them will need to be repaired under their three-year warranty program, and the cost of the average repair is $200. To simplify our example, we concentrate strictly on the journal entries for the warranty expense recognition and the application of the warranty repair pool. If the company sells 500 goals in 2019 and 5% need to be repaired, then 25 goals will be repaired at an average cost of $200. The average cost of $200 × 25 goals gives an anticipated future repair cost of $5,000 for 2019. Assume for the sake of our example that in 2020 Sierra Sports made repairs that cost $2,800. Following are the necessary journal entries to record the expense in 2019 and the repairs in 2020. The resources used in the warranty repair work could have included several options, such as parts and labor, but to keep it simple we allocated all of the expenses to repair parts inventory. Since the company's inventory of supply parts (an asset) went down by $2,800, the reduction is reflected with a credit entry to repair parts inventory. First, following is the necessary journal entry to record the expense in 2019.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
2019	Warranty Expense	5,000	
	Allowance for Warranty Expense		5,000
	Anticipated future warranty expense allowance		

Next, here is the journal entry to record the repairs in 2020.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
2020	Allowance for Warranty Expense	2,800	
	Repair Parts Inventory		2,800
	To reflect the repair of goals under warranty		

Before we finish, we need to address one more issue. Our example only covered the warranty expenses anticipated from the 2019 sales. Since the company has a three-year warranty, and it estimated repair costs of $5,000 for the goals sold in 2019, there is still a balance of $2,200 left from the original $5,000. However, its actual experiences could be more, the same, or less than $2,200. If it is determined that too much is being set aside in the allowance, then future annual warranty expenses can be adjusted downward. If it is determined that not enough is being accumulated, then the warranty expense allowance can be increased.

Since this warranty expense allocation will probably be carried on for many years, adjustments in the estimated warranty expenses can be made to reflect actual experiences. Also, sales for 2020, 2021, 2022, and all subsequent years will need to reflect the same types of journal entries for their sales. In essence, as long as Sierra Sports sells the goals or other equipment and provides a warranty, it will need to account for the warranty expenses in a manner similar to the one we demonstrated.

THINK IT THROUGH

Product Recalls: Contingent Liabilities?

Consider the following scenario: A hoverboard is a self-balancing scooter that uses body position and weight transfer to control the device. Hoverboards use a lithium-ion battery pack, which was found to overheat causing an increased risk for the product to catch fire or explode. Several people were badly injured from these fires and explosions. As a result, a recall was issued in mid-2016 on most hoverboard models. Customers were asked to return the product to the original point of sale (the retailer). Retailers were required to accept returns and provide repair when available. In some cases, retailers were held accountable by consumers, and not the manufacturer of the hoverboards. You are the retailer in this situation and must decide if the hoverboard scenario creates any contingent liabilities. If so, what are the contingent liabilities? Do the conditions meet FASB requirements for contingent liability reporting? Which of the four possible treatments are best suited for the potential liabilities identified? Are there any journal entries or note disclosures necessary?

Four Potential Treatments for Contingent Liabilities

If the contingency is **probable and estimable**, it is likely to occur and can be reasonably estimated. In this case, the liability and associated expense must be journalized and included in the current period's financial statements (balance sheet and income statement) along with note disclosures explaining the reason for recognition. The note disclosures are a GAAP requirement pertaining to the full disclosure principle, as detailed in Analyzing and Recording Transactions.

If the contingent liability is **probable and inestimable**, it is likely to occur but cannot be reasonably estimated. In this case, a note disclosure is required in financial statements, but a journal entry and financial recognition should not occur until a reasonable estimate is possible.

If the contingency is **reasonably possible**, it could occur but is not probable. The amount may or may not be estimable. Since this condition does not meet the requirement of likelihood, it should not be journalized or financially represented within the financial statements. Rather, it is disclosed in the notes only with any available details, financial or otherwise.

If the contingent liability is considered **remote**, it is unlikely to occur and may or may not be estimable. This does not meet the likelihood requirement, and the possibility of actualization is minimal. In this situation, no journal entry or note disclosure in financial statements is necessary.

Financial Statement Treatments

	Journalize	Note Disclosure
Probable and estimable	Yes	Yes
Probable and inestimable	No	Yes
Reasonably possible	No	Yes
Remote	No	No

Table12.2 Four Treatments of Contingent Liabilities. Proper recognition of the four contingent liability treatments.

LINK TO LEARNING

Google, a subsidiary of **Alphabet Inc.**, has expanded from a search engine to a global brand with a variety of product and service offerings. Like many other companies, contingent liabilities are carried on **Google**'s balance sheet, report expenses related to these contingencies on its income statement, and note disclosures are provided to explain its contingent liability treatments. Check out **Google**'s contingent liability considerations in this press release for Alphabet Inc.'s First Quarter 2017 Results to see a financial statement package, including note disclosures.

Let's review some contingent liability treatment examples as they relate to our fictitious company, Sierra Sports.

Probable and Estimable

If Sierra Sports determines the cost of the soccer goal screws are $30, the labor requirement is one hour at a rate of $40 per hour, and there is no extra overhead applied, then the total estimated warranty repair cost would be $70 per goal: $30 + (1 hour × $40 per

hour). Sierra Sports sold ten goals before it discovered the rusty screw issue. The company believes that only six of those goals will have their warranties honored, based on past experience. This means Sierra will incur a warranty liability of $420 ($70 × 6 goals). The $420 is considered probable and estimable and is recorded in Warranty Liability and Warranty Expense accounts during the period of discovery (current period).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Warranty Expense	420	
	Warranty Liability		420
	To recognize estimated warranty liability for soccer goals		

An example of determining a warranty liability based on a percentage of sales follows. The sales price per soccer goal is $1,200, and Sierra Sports believes 10% of sales will result in honored warranties. The company would record this warranty liability of $120 ($1,200 × 10%) to Warranty Liability and Warranty Expense accounts.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Warranty Expense	120	
	Warranty Liability		120
	To recognize estimated warranty liabilities for soccer goals as a percentage of sales		

When the warranty is honored, this would reduce the Warranty Liability account and decrease the asset used for repair (Parts: Screws account) or Cash, if applicable. The recognition would happen as soon as the warranty is honored. This first entry shown is to recognize honored warranties for all six goals.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Warranty Liability	420	
	Parts: Screws		420
	To record an honored warranty for soccer goals		

This second entry recognizes an honored warranty for a soccer goal based on 10% of sales from the period.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Warranty Liability	120	
	Parts: Screws		120
	To recognize an honored warranty for soccer goals at 10% of sales		

As you've learned, not only are warranty expense and warranty liability journalized, but they are also recognized on the income statement and balance sheet. The following examples show recognition of Warranty Expense on the income statement Figure 12.10and Warranty Liability on the balance sheet Figure 12.11 for Sierra Sports.

SIERRA SPORTS Income Statement Year Ended December 31, 2017		
Revenue	$19,500	
Cost of Goods Sold	9,000	
Gross Profit		10,500
Expenses		
Salaries Expense	2,700	
Administrative Expense	1,500	
Warranty Expense	420	
Utilities Expense	300	
Total Expenses		4,920
Net Income		$ 5,580

Figure 12.10 Sierra Sports' Income Statement. Warranty Expense is recognized on the income statement. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

SIERRA SPORTS Balance Sheet December 31, 2017			
Assets		**Liabilities and Stockholders Equity**	
Current Assets		Current Liabilities	
Cash	$ 21,580	Note Payable: Current	$ 18,000
Accounts Receivable	2,000	Accounts Payable	8,580
Total Current Assets	23,580	Warranty Liability	420
		Unearned Revenue	4,000
Property, Plant, and Equipment		Total Current Liabilities	31,000
Buildings	300,000		
Sporting Equipment	60,000	Long-term Liabilities	
Total Property, Plant, and Equipment	360,000	Notes Payable	342,000
		Stockholders' Equity	
		Common Stock	5,000
		Retained Earnings	5,580
		Total Stockholders' Equity	10,580
Total Assets	$383,580	Total Liabilities and Stockholders' Equity	$383,580

Figure 12.11 Sierra Sports' Balance Sheet. Warranty Liability is recognized on the balance sheet. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Probable and Not Estimable

Assume that Sierra Sports is sued by one of the customers who purchased the faulty soccer goals. A settlement of responsibility in the case has been reached, but the actual damages have not been determined and cannot be reasonably estimated. This is considered probable but inestimable, because the lawsuit is very likely to occur (given a settlement is agreed upon) but the actual damages are unknown. No journal entry or financial adjustment in the financial statements will occur. Instead, Sierra Sports will include a note describing any details available about the lawsuit. When damages have been determined, or have been reasonably estimated, then journalizing would be appropriate.

Sierra Sports could say the following in its financial statement disclosures: "There is pending litigation against our company with the likelihood of settlement probable. Detailed terms and damages have not yet reached agreement, and a reasonable assessment of financial impact is currently unknown."

Reasonably Possible

Sierra Sports may have more litigation in the future surrounding the soccer goals. These lawsuits have not yet been filed or are in the very early stages of the litigation process. Since there is a past precedent for lawsuits of this nature but no establishment of guilt or formal arrangement of damages or timeline, the likelihood of occurrence is reasonably possible. The outcome is not probable but is not remote either. Since the outcome is possible, the contingent liability is disclosed in Sierra Sports' financial statement notes.

Sierra Sports could say the following in their financial statement disclosures: "We anticipate more claimants filing legal action against our company with the likelihood of settlement reasonably possible. Assignment of guilt, detailed terms, and potential damages have not been established. A reasonable assessment of financial impact is currently unknown."

Remote

Sierra Sports worries that as a result of pending litigation and losses associated with the faulty soccer goals, the company might have to file for bankruptcy. After consulting with a financial advisor, the company is pretty certain it can continue operating in the long term without restructuring. The chances are remote that a bankruptcy would occur. Sierra Sports would not recognize this remote occurrence on the financial statements or provide a note disclosure.

IFRS CONNECTION

Current Liabilities

US GAAP and International Financial Reporting Standards (IFRS) define "current liabilities" similarly and use the same reporting criteria for most all types of current liabilities. However, two primary differences exist between US GAAP and IFRS: the reporting of (1) debt due on demand and (2) contingencies.

Liquidity and solvency are measures of a company's ability to pay debts as they come due. Liquidity measures evaluate a company's ability to pay current debts as they come due, while solvency measures evaluate the ability to pay debts long term. One common liquidity measure is the current ratio, and a higher ratio is preferred over a lower one. This ratio—current assets divided by current liabilities—is lowered by an increase in current liabilities (the denominator increases while we assume that the numerator remains the same). When lenders arrange loans with their corporate customers, limits are typically set on how low certain liquidity ratios (such as the current ratio) can go before the bank can demand that the loan be repaid immediately.

In theory, debt that has not been paid and that has become "on demand" would be considered a current liability. However, in determining how to report a loan that has become "on-demand," US GAAP and IFRS differ:

- Under US GAAP, debts on which payment has been demanded because of violations of the contractual agreement between the lender and creditor are only included in current liabilities if, by the financial statement presentation date, there have been no arrangements made to pay off or restructure the debt. This allows companies time between the end of the fiscal year and the actual publication of the financial statements (typically two months) to make arrangements for repayment of the loan. Most often these loans are refinanced.
- Under IFRS, any payment or refinancing arrangements must be made by the fiscal year-end of the debtor. This difference means that companies reporting under IFRS must be proactive in assessing whether their debt agreements will be violated and make appropriate arrangements for refinancing or differing payment options prior to final year-end numbers being reported.

A second set of differences exist regarding reporting contingencies. Where US GAAP uses the term "contingencies," IFRS uses "provisions." In both cases, gain contingencies are not recorded until they are essentially realized. Both systems want to avoid prematurely recording or overstating gains based on the principles of conservatism. Loss contingencies are recorded (accrued) if certain conditions are met:

- Under US GAAP, loss contingencies are accrued if they are probable and can be estimated. Probable means "likely" to occur and is often assessed as an 80% likelihood by practitioners.
- Under IFRS, probable is defined as "more likely than not" and is typically assessed at 50% by practitioners.

The determination of whether a contingency is probable is based on the judgment of auditors and management in both situations. This means a contingent situation such as a lawsuit might be accrued under IFRS but not accrued under US GAAP. Finally, how a loss contingency is measured varies between the two options as well. For example, if a company is told it will be probable that it will lose an active lawsuit, and the legal team gives a range of the dollar value of that loss, under IFRS, the discounted midpoint of

that range would be accrued, and the range disclosed. Under US GAAP, the low end of the range would be accrued, and the range disclosed.

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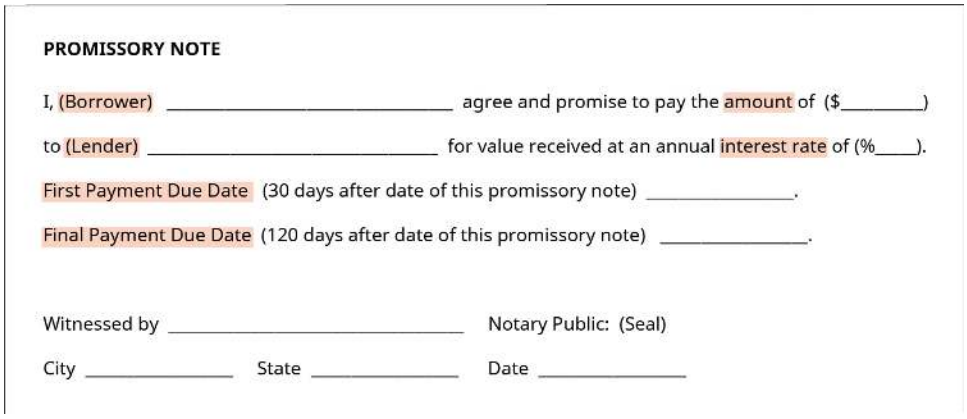
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11.4: Prepare Journal Entries to Record Short-Term Notes Payable

If you have ever taken out a payday loan, you may have experienced a situation where your living expenses temporarily exceeded your assets. You need enough money to cover your expenses until you get your next paycheck. Once you receive that paycheck, you can repay the lender the amount you borrowed, plus a little extra for the lender's assistance.

There is an ebb and flow to business that can sometimes produce this same situation, where business expenses temporarily exceed revenues. Even if a company finds itself in this situation, bills still need to be paid. The company may consider a short-term note payable to cover the difference.

A **short-term note payable** is a debt created and due within a company's operating period (less than a year). Some key characteristics of this written promise to pay (see Figure 12.12) include an established date for repayment, a specific payable amount, interest terms, and the possibility of debt resale to another party. A short-term note is classified as a current liability because it is wholly honored within a company's operating period. This payable account would appear on the balance sheet under Current Liabilities.



PROMISSORY NOTE

I, (Borrower) _____ agree and promise to pay the amount of ($_____)

to (Lender) _____ for value received at an annual interest rate of (%____).

First Payment Due Date (30 days after date of this promissory note) _____.

Final Payment Due Date (120 days after date of this promissory note) _____.

Witnessed by _____ Notary Public: (Seal)

City _____ State _____ Date _____

Figure 12.12 Short-Term Promissory Note. A promissory note includes terms of repayment, such as the date and interest rate. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Debt sale to a third party is a possibility with any loan, which includes a short-term note payable. The terms of the agreement will state this resale possibility, and the new debt owner honors the agreement terms of the original parties. A lender may choose this option to collect cash quickly and reduce the overall outstanding debt.

We now consider two short-term notes payable situations; one is created by a purchase, and the other is created by a loan.

THINK IT THROUGH

Promissory Notes: Time to Issue More Debt?

A common practice for government entities, particularly schools, is to issue short-term (promissory) notes to cover daily expenditures until revenues are received from tax collection, lottery funds, and other sources. School boards approve the note issuances, with repayments of principal and interest typically met within a few months.

The goal is to fully cover all expenses until revenues are distributed from the state. However, revenues distributed fluctuate due to changes in collection expectations, and schools may not be able to cover their expenditures in the current period. This leads to a dilemma—whether or not to issue more short-term notes to cover the deficit.

Short-term debt may be preferred over long-term debt when the entity does not want to devote resources to pay interest over an extended period of time. In many cases, the interest rate is lower than long-term debt, because the loan is considered less risky with the shorter payback period. This shorter payback period is also beneficial with amortization expenses; short-term debt typically does not amortize, unlike long-term debt.

What would you do if you found your school in this situation? Would you issue more debt? Are there alternatives? What are some positives and negatives to the promissory note practice?

Recording Short-Term Notes Payable Created by a Purchase

A short-term notes payable created by a purchase typically occurs when a payment to a supplier does not occur within the established time frame. The supplier might require a new agreement that converts the overdue accounts payable into a short-term note payable (see Figure 12.13), with interest added. This gives the company more time to make good on outstanding debt and gives the supplier an incentive for delaying payment. Also, the creation of the note payable creates a stronger legal position for the owner of the note, since the note is a negotiable legal instrument that can be more easily enforced in court actions.

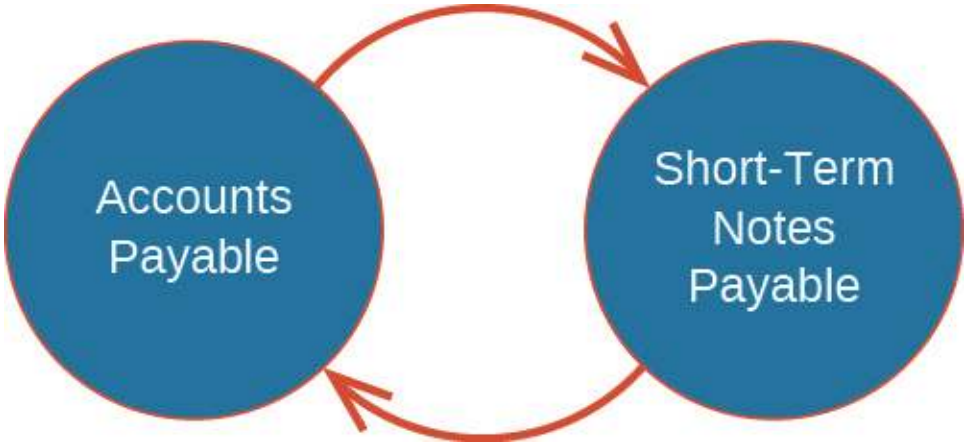


Figure 12.13 Accounts Payable Conversion. Accounts Payable may be converted into a short-term notes payable, if there is a default on payment. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

To illustrate, let's revisit Sierra Sports' purchase of soccer equipment on August 1. Sierra Sports purchased $12,000 of soccer equipment from a supplier on credit. Credit terms were 2/10, n/30, invoice date August 1. Let's assume that Sierra Sports was unable to make the payment due within 30 days. On August 31, the supplier renegotiates terms with Sierra and converts the accounts payable into a written note, requiring full payment in two months, beginning September 1. Interest is now included as part of the payment terms at an annual rate of 10%. The conversion entry from an account payable to a Short-Term Note Payable in Sierra's journal is shown.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 31	Accounts Payable	12,000	
	Short-Term Notes Payable		12,000
	To record conversion of Accounts Payable to short-term note, terms two-month repayment, 10% interest		

Accounts Payable decreases (debit) and Short-Term Notes Payable increases (credit) for the original amount owed of $12,000. When Sierra pays cash for the full amount due, including interest, on October 31, the following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 31	Short-Term Notes Payable	12,000	
	Interest Expense	200	
	Cash		12,200
	To record payment for short-term note, with interest		

Since Sierra paid the full amount due, Short-Term Notes Payable decreases (debit) for the principal amount of the debt. Interest Expense increases (debit) for two months of interest accumulation. Interest Expense is found from our earlier equation, where Interest = Principal × Annual interest rate × Part of year ($12,000 × 10% × [2/12]), which is $200. Cash decreases (credit) for $12,200, which is the principal plus the interest due.

The other short-term note scenario is created by a loan.

Recording Short-Term Notes Payable Created by a Loan

A short-term notes payable created by a loan transpires when a business incurs debt with a lender Figure 12.14. A business may choose this path when it does not have enough cash on hand to finance a capital expenditure immediately but does not need long-term financing. The business may also require an influx of cash to cover expenses temporarily. There is a written promise to pay the principal balance and interest due on or before a specific date. This payment period is within a company's operating period (less than a year). Consider a short-term notes payable scenario for Sierra Sports.



Figure 12.14 Bank Loan. A short-term note can be created from a loan. (credit: "Business Paperwork Deal" by "rawpixel"/Pixabay, CC0)

Sierra Sports requires a new apparel printing machine after experiencing an increase in custom uniform orders. Sierra does not have enough cash on hand currently to pay for the machine, but the company does not need long-term financing. Sierra borrows $150,000 from the bank on October 1, with payment due within three months (December 31), at a 12% annual interest rate. The following entry occurs when Sierra initially takes out the loan.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 1	Cash	150,000	
	Short-Term Notes Payable		150,000
	To record short-term loan, 12% interest, payable in three months		

Cash increases (debit) as does Short-Term Notes Payable (credit) for the principal amount of the loan, which is $150,000. When Sierra pays in full on December 31, the following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Short-Term Notes Payable	150,000	
	Interest Expense	4,500	
	Cash		154,500
	To record short-term loan, 12% interest, payable in three months		

Short-Term Notes Payable decreases (a debit) for the principal amount of the loan ($150,000). Interest Expense increases (a debit) for $4,500 (calculated as $150,000 principal × 12% annual interest rate × [3/12 months]). Cash decreases (a credit) for the principal amount plus interest due.

LINK TO LEARNING

Loan calculators can help businesses determine the amount they are able to borrow from a lender given certain factors, such as loan amount, terms, interest rate, and payback categorization (payback periodically or at the end of the loan, for example). A group of information technology professionals provides one such loan calculator with definitions and additional information and tools to provide more information.

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CHAPTER OVERVIEW

12: Bonds Payable

12.1: Comparison Between Equity and Debt Financing
12.2: Explain the Pricing of Long-Term Liabilities
12.3: Recording Entries for Bonds
12.4: Explain the Pricing of Long-Term Liabilities
12.5: Compute Amortization of Long-Term Liabilities Using the Effective-Interest Method
12.6: Prepare Journal Entries to Reflect the Life Cycle of Bonds

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12.1: Comparison Between Equity and Debt Financing

Brief Comparison between Equity and Debt Financing

Debt financing means borrowing money that will be repaid on a specific date in the future. Many companies have started by incurring debt. To decide whether this is a viable option, the owners need to determine whether they can afford the monthly payments to repay the debt. One positive to this scenario is that interest paid on the debt is tax-deductible and can lower the company's tax liability. On the other hand, businesses can struggle to make these payments every month, especially as they are starting out.

With **equity financing**, a business owner sells part of the business to obtain money to finance business operations. With this type of financing, the original owner gives up some portion of ownership in the company in return for cash. Each partner's share is based on their financial or other contributions.

If a business owner forms a corporation, each owner will receive shares of stock. Typically, those making the largest financial investment have the largest say in decisions about business operations. The issuance of dividends should also be considered in this set-up. Paying dividends to shareholders is not tax-deductible, but dividend payments are also not required. Additionally, a company does not have to buy back any stock it sells.

ETHICAL CONSIDERATIONS

Debt versus Equity Financing

Many start-ups and small companies with just one or two owners struggle to obtain the cash to run their operations. Owners may want to use lending, or debt financing, to obtain the money to run operations, but have to turn to investors, or equity financing. Ethical and legal obligations to investors are typically greater than ethical and legal obligations to lenders. This is because a company's owners have an ethical and legal responsibility to take investors' interests into account when making business decisions, even if the decision is not in the founding owners' best interest. The primary obligation to lenders, however, is only to pay back the money borrowed with interest. When determining which type of financing is appropriate for a business operation, the different ethical and legal obligations between having lenders or investors need to be considered.[9]

Equity Financing

For a corporation, equity financing involves trading or selling shares of stock in the business to raise funds to run the business. For a sole proprietorship, selling part of the business means it is no longer a sole proprietorship: the subsequent transaction could create either a corporation or partnership. The owners would choose which of the two to create. Equity means ownership. However, business owners can be creative in selling interest in their venture.

The main benefit of financing with equity is that the business owner is not required to pay back the invested funds, so revenue can be re-invested in the company's growth. Companies funded this way are also more likely to succeed through their initial years. The Small Business Administration suggests a new business should have access to enough cash to operate for six months without having to borrow. The disadvantages of this funding method are that someone else owns part of the business and, depending on the arrangement, may have ideas that conflict with the original owner's ideas but that cannot be disregarded.

The following characteristics are specific to equity financing:

1. No required payment to owners or shareholders; dividends or other distributions are optional. Stock owners typically invest in stocks for two reasons: the dividends that many stocks pay or the appreciation in the market value of the stocks. For example, a stock holder might buy Walmart stock for $100 per share with the expectation of selling it for much more than $100 per share at some point in the future.
2. Ownership interest held by the original or current owners can be diluted by issuing additional new shares of common stock.
3. Unlike bonds that mature, common stocks do not have a definite life. To convert the stock to cash, some of the shares must be sold.
4. In the past, common stocks were typically sold in even 100-share lots at a given market price per share. However, with Internet brokerages today, investors can buy any particular quantity they want.

Debt Financing

As you have learned, debt is an obligation to pay back an amount of money at some point in the future. Generally, a term of less than one year is considered short-term, and a term of one year or longer is considered long-term. Borrowing money for college or a car with a promise to pay back the amount to the lender generates debt. Formal debt involves a signed written document with a due date, an interest rate, and the amount of the loan. A student loan is an example of a formal debt.

The following characteristics are specific to debt financing:

1. The company is required to make timely interest payments to the holders of the bonds or notes payable.
2. The interest in cash that is to be paid by the company is generally locked in at the agreed-upon rate, and thus the same dollar payments will be made over the life of the bond. Virtually all bonds will have a maturity point. When the bond matures, the maturity value, which was the same as the contract or issuance value, is paid to whoever owns the bond.
3. The interest paid is deductible on the company's income tax return.
4. Bonds or notes payable do not dilute the company's ownership interest. The holders of the long-term liabilities do not have an ownership interest.
5. Bonds are typically sold in $1,000 increments.

Footnotes

- 9 Nolo. "Financing a Small Business: Equity or Debt?" *Forbes*. January 5, 2007. https://www.forbes.com/2007/01/05/eq...l#bd27de55819f

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12.2: Explain the Pricing of Long-Term Liabilities

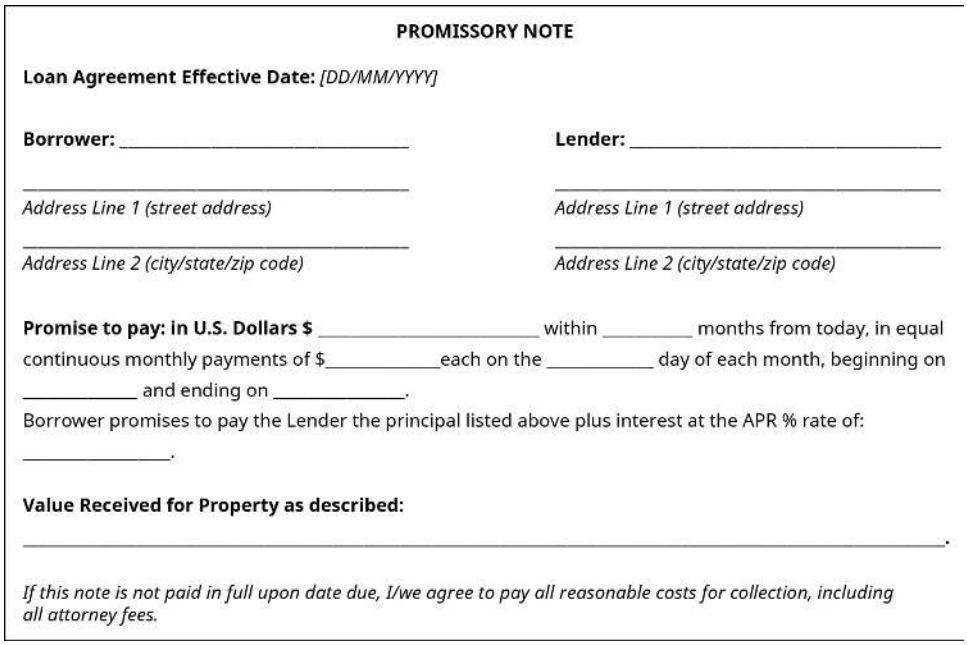
Businesses have several ways to secure financing and, in practice, will use a combination of these methods to finance the business. As you've learned, net income does not necessarily mean cash. In some cases, in the long-run, profitable operations will provide businesses with sufficient cash to finance current operations and to invest in new opportunities. However, situations might arise where the cash flow generated is insufficient to cover future anticipated expenses or expansion, and the company might need to secure additional funding.

If the extra amount needed is somewhat temporary or small, a short-term source, such as a loan, might be appropriate. When additional long-term funding needs arise, a business can choose to sell stock in the company (equity-based financing) or obtain a **long-term liability** (debt-based financing), such as a loan that is spread over a period longer than a year.

Types of Long-Term Funding

If a company needs additional funding for a major expenditure, such as expansion, the source of funding would typically be repaid over several years, or in the case of equity-based financing, over an indefinite period of time. With equity-based financing, the company sells an interest in the company's ownership by issuing shares of the company's common stock. This financing option is equity financing. Here, we will focus on two major long-term debt-based options: long-term loans and bonds.

Debt as an option for financing is an important source of funding for businesses. If a company chooses a debt-based option, the business can borrow money on an intermediate (typically two to four years) or long-term (longer than four years) basis from lenders. In the case of bonds, the funds would be provided by investors. While loans and bonds are similar in that they borrow money on which the borrower will pay interest and eventually repay the lenders, they have some important differences. First, a company can raise funds by borrowing from an individual, bank, or other lender, while a bond is typically sold to numerous investors. When a company chooses a loan, the business signs what is known as a note, and a legal relationship called a **note payable** is created between the borrower and the lender. The document lists the conditions of the financial arrangement, a fixed predetermined interest rate (or, if the agreement allows, a variable interest rate), the amount borrowed, the borrowing costs to be charged, and the timing of the payments. In some cases, companies will secure an **interest-only loan**, which means that for the life of the loan the organization pays only the interest expense that has accrued and upon maturity repays the original amount that it borrowed and still owes. For individuals, a student loan, car loan, or a mortgage can all be types of notes payable. For Olivia's car purchase in Why It Matters, a document such as a **promissory note** is typically created, representing a personal loan agreement between a lender and borrower. Figure 12.2.1 shows a sample promissory note that might be used for a simple, relatively intermediate-term loan. If we were considering a loan that would be repaid over a several-year period the document might be a little more complicated, although it would still have many of the same components of Olivia's loan document.



PROMISSORY NOTE

Loan Agreement Effective Date: *[DD/MM/YYYY]*

Borrower: _____

_____
Address Line 1 (street address)

_____
Address Line 2 (city/state/zip code)

Lender: _____

_____
Address Line 1 (street address)

_____
Address Line 2 (city/state/zip code)

Promise to pay: in U.S. Dollars $ _____ within _____ months from today, in equal continuous monthly payments of $_____each on the _____ day of each month, beginning on _____ and ending on _____.

Borrower promises to pay the Lender the principal listed above plus interest at the APR % rate of: _____.

Value Received for Property as described:

_____.

If this note is not paid in full upon date due, I/we agree to pay all reasonable costs for collection, including all attorney fees.

Figure 12.2.1: Promissory Note. A personal loan agreement is a formal contract between a lender and borrower. The document lists the conditions of the loan, including the amount borrowed, the borrowing costs to be charged, and the timing of the payments. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

If debt instruments are created with a variable interest rate that can fluctuate up or down, depending upon predetermined factors, an inflation measurement must also be included in the documentation. The Federal Funds Rate, for example, is a commonly used tool for potential adjustments in interest rates. To keep our discussion simple, we will use a fixed interest rate in our subsequent calculations.

Another difference between loans and bonds is that the note payable creates an obligation for the borrower to repay the lender on a specified date. To demonstrate the mechanics of a loan, with loans, a note payable is created for the borrower when the loan is initiated. This example assumes the loan will be paid in full by the maturity or due date. Typically, over the life of the loan, payments will be composed of both principal and interest components. The principal component paid typically reduces the amount that the borrower owes the lender. For example, assume that a company borrowed $10,000 from a lender under the following terms: a five-year life, an annual interest rate of 10%, and five annual payments at the end of the year.

Under these terms, the annual payment would be $2,637.97. The first year's payment would be allocated to an interest expense of $1,000, and the remaining amount of the payment would go to reduce the amount borrowed (principal) by $1,637.97. After the first year's payment, the company would owe a remaining balance of $8,362.03 ($10,000 – $1637.97.)

Typical long-term loans have other characteristics. For example, most long-term notes are held by one entity, meaning one party provides all of the financing. If a company bought heavy-duty equipment from Caterpillar, it would be common for the seller of the equipment to also have a division that would provide the financing for the transaction. An additional characteristic of a long-term loan is that in many, if not most, situations, the initial creator of the loan will hold it and receive and process payments until it matures.

Returning to the differences between long-term debt and bonds, another difference is that the process for issuing (selling) bonds can be very complicated, especially for companies that are subject to regulation. The bond issue must be approved by the appropriate regulatory agency, and then outside parties such as investment banks sell the bonds to, typically, a large audience of investors. It is not unusual for several months to pass between the time that the company's board of directors approves the bond offering, gets regulatory approval, and then markets and issues the bonds. This additional time is often the reason that the market rate for similar bonds in the outside business environment is higher or lower than the stated interest rate that the company committed to pay when the bond process was first begun. This difference can lead to bonds being issued (sold) at a discount or premium.

Finally, while loans can normally be paid off before they are due, in most cases bonds must be held by an owner until they mature. Because of this last characteristic, a bond, such as a thirty-year bond, might have several owners over its lifetime, while most long-term notes payable will only have one owner.

ETHICAL CONSIDERATIONS

Bond Fraud

The U.S. Department of the Treasury (DOT) defines historical bonds as "those bonds that were once valid obligations of American entities but are now worthless as securities and are quickly becoming a favorite tool of scam artists."[1] The DOT also warns against scams selling non-existent "limited edition" U.S. Treasury securities. The scam involves approaching broker-dealers and banks to act as fiduciaries for transactions. Further, the DOT notes: "The proposal to sell these fictitious securities makes misrepresentations about the way marketable securities are bought and sold, and it also misrepresents the role that we play in the original sale and issuance of our securities."[2] Many fraudulent attempts are made to sell such bonds.

According to *Business Insider*, in the commonest scam, a fake bearer bond is offered for sale for far less than its stated cover price. The difference in the cost and the cover price entices the victim to buy the bond. Again, from *Business Insider*: "Another variation is a flavor of the 'Nigerian prince' scheme; the fraudster will ask for the victim's help in depositing a recently obtained 'fortune' in bonds, promising the victim a cut in return."[3]

A diligent accountant is both educated about the investments of their company or organization and is skeptical about any investment that looks too good to be true.

YOUR TURN

Current versus Long-Term Liabilities

Below is a portion of the 2017 Balance Sheet of **Emerson, Inc.** (shown in millions of dollars).[4] There are several observations we can make from this information.

	2016	2017
Current liabilities		
Short-term borrowings and current maturities of long-term debt	$2,584	862
Long-term debt	4,051	3,794

Notice the company lists separately the Current Liabilities (listed as "Short-term borrowings and current maturities of long-term debt") and Long-term Liabilities (listed as "Long-term debt"). Also, under the "Current liabilities" heading, notice the "Short-term borrowings and current maturities of long-term debt" decreased significantly from 2016 to 2017. In 2016, Emerson held $2.584 billion in short-term borrowings and current maturities of long-term debt. This amount decreased by $1.722 billion in 2017, which is a 67% decrease. During the same timeframe, long-term debt decreased $257 million, going from $4.051 billion to $3.794 billion, which is a 6.3% decrease.

Thinking about the primary purpose of accounting, why do you think accountants separate liabilities into current liabilities and long-term liabilities?

Answer

The primary purpose of accounting is to provide stakeholders with financial information that is useful for decision making. It is important for stakeholders to understand how much cash will be required to satisfy liabilities within the next year (liquidity) as well as how much will be required to satisfy long-term liabilities (solvency). Stakeholders, especially lenders and owners, are concerned with both liquidity and solvency of the business.

Fundamentals of Bonds

Now let us look at bonds in more depth. A **bond** is a type of financial instrument that a company issues directly to investors, bypassing banks or other lending institutions, with a promise to pay the investor a specified rate of interest over a specified period

of time. When a company borrows money by selling bonds, it is said the company is “issuing” bonds. This means the company exchanges cash for a promise to repay the cash, along with interest, over a set period of time. As you’ve learned, bonds are formal legal documents that contain specific information related to the bond. In short, it is a legal contract—called a bond certificate (as shown in Figure 12.2.2) or an indenture—between the issuer (the business borrowing the money) and the lender (the investor lending the money). Bonds are typically issued in relatively small denominations, such as $1,000 so they can be placed in the market and are accessible to a greater market of investors compared to notes. The **bond indenture** is a contract that lists the features of the bond, such as the amount of money that will be repaid in the future, called the **principal** (also called face value or maturity value); the **maturity date**, the day the bond holder will receive the principal amount; and the **stated interest rate**, which is the rate of interest the issuer agrees to pay the bondholder throughout the term of the bond.



Figure 12.2.2: Bond Certificate. If you bought this $1,000 bond on July 1, 2018 and received this bond certificate, it had three important pieces of information: the maturity date (June 30, 2023, 5 years from the issue date when the company will pay back the $1,000; the principal amount ($1,000) which is the amount you will receive in 2023; and the stated annual interest rate (5%) which they will use to determine how much cash to send you each year (0.05 × $1,000 = $50 interest a year for 5 years). (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

For a typical bond, the issuer commits to paying a stated interest rate either once a year (annually) or twice a year (semiannually). It is important to understand that the stated rate will not go up or down over the life of the bond. This means the borrower will pay the same semiannual or annual interest payment on the same dates for the life of the bond. In other words, when an investor buys a typical bond, the investor will receive, in the future, two major cash flows: periodic interest payments paid either annually or semiannually based on the stated rate of the bond, and the maturity value, which is the total amount paid to the owner of the bond on the maturity date.

LINK TO LEARNING

The website for the nonprofit Kiva allows you to lend money to people around the world. The borrower makes monthly payments to pay the loan back. The companies Prosper and LendingClub let you borrow or lend money to people in the U.S. who then make monthly payments, with interest, to pay it back.

The process of preparing a bond issuance for sale and then selling on the primary market is lengthy, complex, and is usually performed by underwriters—finance professionals who specialize in issuing bonds and other financial instruments. Here, we will only examine transactions concerning issuance, interest payments, and the sale of existing bonds.

There are two other important characteristics of bonds to discuss. First, for most companies, the total value of bonds issued can often range from hundreds of thousands to several million dollars. The primary reason for this is that bonds are typically used to help finance significant long-term projects or activities, such as the purchase of equipment, land, buildings, or another company.

CONCEPTS IN PRACTICE

Apple Inc. Issues Bonds

On May 11, 2017, **Apple Inc.** issued bonds to get cash. **Apple Inc.** submitted a form to the Securities and Exchange Commission (www.sec.gov) to announce their intentions.

Apple Bonds Issued May 11, 2017

Maturity	Interest Rate	Bond Amount
2020	Floating rate (variable)	$ 500,000,000.00
2022	Floating rate (variable)	750,000,000.00
2020	1.80% fixed	1,000,000,000.00
2022	2.30% fixed	1,000,000,000.00
2024	2.85% fixed	1,750,000,000.00
2027	3.20% fixed	2,000,000,000.00
		$7,000,000,000.00

On May 3 of the same year, **Apple Inc.** had issued their 10-Q (quarterly report) that showed the following assets.

APPLE INC.
Condensed Consolidated Balance Sheets (Unaudited)
(In millions, except number of shares which are reflected in thousands and par value)

Assets	April 1, 2017	September 24, 2016
Current assets:		
Cash and cash equivalents	$15,157	$20,484

Apple Inc. reported it had $15 billion dollars in cash and a total of $101 billion in Current Assets. Why did it need to issue bonds to raise $7 billion more?

Analysts suggested that **Apple** would use the cash to pay shareholder dividends. Even though **Apple** reported billions of dollars in cash, most of the cash was in foreign countries because that was where the products had been sold. Tax laws vary by country, but if **Apple** transferred the cash to a US bank account, they would have to pay US income tax on it, at a tax rate as high as 39%. So, **Apple** was much better off borrowing and paying 3.2% interest, which is tax deductible, than bringing the cash to the US and paying a 39% income tax.

However, it's important to remember that in the United States, Congress can change tax laws at any time, so what was then current tax law when this transaction occurred could change in the future.

The second characteristic of bonds is that bonds are often sold to several investors instead of to one individual investor.

When establishing the stated rate of interest the business will pay on a bond, bond underwriters consider many factors, including the interest rates on government treasury bonds (which are assumed to be risk-free), rates on comparable bond offerings, and firm-specific factors related to the business's risk (including its ability to repay the bond). The more likely the possibility that a company will default on the bond, meaning they either miss an interest payment or do not return the maturity amount to the bond's owner when it matures, the higher the interest rate is on the bond. It is important to understand that the stated rate will not change over the life of any one bond once it is issued. However, the stated rate on future new bonds may change as economic circumstances and the company's financial position changes.

Bonds themselves can have different characteristics. For example, a **debenture** is an unsecured bond issued based on the good name and reputation of the company. These companies are not pledging other assets to cover the amount in case they fail to pay the debt, or **default**. The opposite of a debenture is a **secured bond**, meaning the company is pledging a specific asset as collateral for the bond. With a secured bond, if the company goes under and cannot pay back the bond, the pledged asset would be sold, and the proceeds would be distributed to the bondholders.

There are **term bonds**, or single-payment bonds, meaning the entire bond will be repaid all at once, rather than in a series of payments. And there are **serial bonds**, or bonds that will mature over a period of time and will be repaid in a series of payments.

A **callable bond** (also known as a redeemable bond) is one that can be repurchased or "called" by the issuer of the bond. If a company sells callable bonds with an 8% interest rate and the interest rate the bank is offering subsequently drops to 5%, the company can borrow at that new rate of 5%, call the 8% bonds, and pay them off (even if the purchaser does not want to sell them back). In essence, the institution would be lowering its rate of interest to borrow money from 8% to 5% by calling the bond.

Putable bonds give the bondholder the right to decide whether to sell it back early or keep it until it matures. It is essentially the opposite of a callable bond.

A **convertible bond** can be converted to common stock in a one-way, one-time conversion. Under what conditions would it make sense to convert? Suppose the face-value interest rate of the bond is 8%. If the company is doing well this year, such that there is an expectation that shareholders will receive a significant dividend and the stock price will rise, the stock might appear to be more valuable than the return on the bond.

THINK IT THROUGH

Callable versus Putable Bonds

Which type of bond is better for the corporation issuing the bond: callable or putable?

ETHICAL CONSIDERATIONS

Junk Bonds

Junk bonds, which are also called speculative or high-yield bonds, are a specific type of bond that can be attractive to certain investors. On one hand, junk bonds are attractive because the bonds pay a rate of interest that is significantly higher than the average market rate. On the other hand, the bonds are riskier because the issuing company is deemed to have a higher risk of defaulting on the bonds. If the economy or the company's financial condition deteriorates, the company will be unable to repay the money borrowed. In short, junk bonds are deemed to be high risk, high reward investments.

The development of the junk bond market, which occurred during the 1970s and 1980s, is attributed to Michael Milken, the so-called "junk bond king." Milken amassed a large fortune by using junk bonds as a means of financing corporate mergers and acquisitions. It is estimated that during the 1980s, Milken earned between $200 million and $550 million per year.[5] In 1990, however, Milken's winning streak came to an end when, according to the *New York Times*, he was indicted on "98 counts of racketeering, securities fraud, mail fraud and other crimes."[6] He later pleaded guilty to six charges, resulting in a 10-year prison sentence, of which he served two, and was as also forced to pay over $600 million in fines and settlements.[7]

Today, Milken remains active in philanthropic activities and, as a cancer survivor, remains committed to medical research.

Pricing Bonds

Imagine a concert-goer who has an extra ticket for a good seat at a popular concert that is sold out. The concert-goer purchased the ticket from the box office at its face value of $100. Because the show is sold out, the ticket could be resold at a premium. But what happens if the concert-goer paid $100 for the ticket and the show is not popular and does not sell out? To convince someone to purchase the ticket from her instead of the box office, the concert-goer will need to sell the ticket at a discount. Bonds behave in the same way as this concert ticket.

Bond quotes can be found in the financial sections of newspapers or on the Internet on many financial websites. Bonds are quoted as a percentage of the bond's maturity value. The percentage is determined by dividing the current market (selling) price by the maturity value, and then multiplying the value by 100 to convert the decimal into a percentage. In the case of a $30,000 bond discounted to $27,591.94 because of an increase in the market rate of interest, the bond quote would be $27,591.24/$30,000 × 100, or 91.9708. Using another example, a quote of 88.50 would mean that the bonds in question are selling for 88.50% of the maturity value. If an investor were considering buying a bond with a $10,000 maturity value, the investor would pay 88.50% of the maturity value of $10,000, or $8,850.00. If the investor was considering bonds with a maturity value of $100,000, the price would be

$88,500. If the quote were over 100, this would indicate that the market interest rate has decreased from its initial rate. For example, a quote of 123.45 indicates that the investor would pay $123,450 for a $100,000 bond.

Figure 12.2.3 shows a bond issued on July 1, 2018. It is a promise to pay the holder of the bond $1,000 on June 30, 2023, and 5% of $1,000 every year. We will use this bond to explore how a company addresses interest rate changes when issuing bonds.



Figure 12.2.3: Bond Certificate. A bond certificate shows the terms of the bond. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

On this bond certificate, we see the following:

- The $1,000 principal or maturity value.
- The interest rate printed on the face of the bond is the stated interest rate, the contract rate, the face rate, or the **coupon rate**. This rate is the interest rate used to calculate the interest payment on bonds.

Footnotes

- 1 U.S. Department of the Treasury. “Historical Bond Fraud.” September 21, 2012. https://www.treasury.gov/about/organ...ond-Fraud.aspx
- 2 U.S. Department of the Treasury. “Examples of Known Phony Securities.” April 5, 2013. https://www.treasury.gov/about/organ...ecurities.aspx
- 3 Lawrence Delavigne. “Fake Bearer Bonds Were Just the Beginning of Huge Wave of Bond-Fraud.” *Business Insider*. October 12, 2009. https://www.businessinsider.com/bond...e-rise-2009-10
- 4 Emerson. *2017 Annual Report*. Emerson Electric Company. 2017. https://www.emerson.com/documents/co...en-2883292.pdf
- 5 James Chen. “Micheal Milken.” January 22, 2018. https://www.investopedia.com/terms/m...haelmilken.asp
- 6 Kurt Eichenwald. “Milken Set to Pay a $600 Million Fine in Wall St. Fraud.” April 21, 1990. https://www.nytimes.com/1990/04/21/b...pagewanted=all
- 7 Michael Buchanan. “November 21, 1990, Michael Milken Sentenced to 10 Years for Security Law Violations.” November 20, 2011. reasonabledoubt.org/criminall...rime-history-1

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12.3: Recording Entries for Bonds

Bond Prices and Interest Rates

The price of a bond issue often differs from its face value. The amount a bond sells for above face value is a **premium**. The amount a bond sells for below face value is a **discount**. A difference between face value and issue price exists whenever the market rate of interest for similar bonds differs from the contract rate of interest on the bonds. The **effective interest rate** (also called the yield) is the minimum rate of interest that investors accept on bonds of a particular risk category. The higher the risk category, the higher the minimum rate of interest that investors accept. The **contract rate of interest** is also called the stated, coupon, or nominal rate is the rate used to pay interest. Firms state this rate in the bond indenture, print it on the face of each bond, and use it to determine the amount of cash paid each interest period. The market rate fluctuates from day to day, responding to factors such as the interest rate the Federal Reserve Board charges banks to borrow from it; government actions to finance the national debt; and the supply of, and demand for, money.

Market and contract rates of interest are likely to differ. Issuers must set the contract rate before the bonds are actually sold to allow time for such activities as printing the bonds. Assume, for instance, that the contract rate for a bond issue is set at 12%. If the market rate is equal to the contract rate, the bonds will sell at their face value. However, by the time the bonds are sold, the market rate could be higher or lower than the contract rate.

Market Rate = Contract Rate	Bond sells at par (or face or 100%)
Market Rate < Contract Rate	Bonds sells at premium (price greater than 100%)
Market Rate > Contract Rate	Bond sells at discount (price less than 100%)

As shown above, if the market rate is lower than the contract rate, the bonds will sell for more than their face value. Thus, if the market rate is 10% and the contract rate is 12%, the bonds will sell at a premium as the result of investors bidding up their price. However, if the market rate is higher than the contract rate, the bonds will sell for less than their face value. Thus, if the market rate is 14% and the contract rate is 12%, the bonds will sell at a discount. Investors are not interested in bonds bearing a contract rate less than the market rate unless the price is reduced. Selling bonds at a premium or a discount allows the purchasers of the bonds to earn the market rate of interest on their investment.

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12.4: Explain the Pricing of Long-Term Liabilities

Issuing Bonds When the Contract and Market Rates Are the Same

If the stated rate and the market rate are both 5%, the bond will be issued at **par value**, which is the value assigned to stock in the company's charter, typically set at a very small arbitrary amount, which serves as legal capital; in our example, the part value is $1,000. The purchaser will give the company $1,000 today and will receive $50 at the end of every year for 5 years. In 5 years, the purchaser will receive the maturity value of the $1,000. The bond's quoted price is 100.00. That is, the bond will sell at 100% of the $1,000 face value, which means the seller of the bond will receive (and the investor will pay) $1,000.00. You will learn the calculations used to determine a bond's quoted price later; here, we will provide the quoted price for any calculations.

LINK TO LEARNING

The Securities and Exchange Commission website Investor.gov provides an explanation of corporate bonds to learn more.

Issuing Bonds at a Premium

The stated interest rate is not the only rate affecting bonds. There is also the market interest rate, also called the effective interest rate or bond yield. The amount of money that borrowers receive on the date the bonds are issued is influenced by the terms stated on the bond indenture *and* on the market interest rate, which is the rate of interest that investors can earn on similar investments. The market interest rate is influenced by many factors external to the business, such as the overall strength of the economy, the value of the U.S. dollar, and geopolitical factors.

This **market interest rate** is the rate determined by supply and demand, the current overall economic conditions, and the credit worthiness of the borrower, among other factors. Suppose that, while a company has been busy during the long process of getting its bonds approved and issued (it might take several months), the interest rate changed because circumstances in the market changed. At this point, the company cannot change the rate used to market the bond issue. Instead, the company might have to sell the bonds at a price that will be the equivalent of having a different stated rate (one that is equivalent to a market rate based on the company's financial characteristics at the time of the issuance (sale) of the bonds).

If the company offers 5% (the bond rate used to market the bond issue) and the market rate prior to issuance drops to 4%, the bonds will be in high demand. The company is scheduled to pay a higher interest rate than everyone else, so it can issue them for more than face value, or at a premium. In this example, where the stated interest rate is higher than the market interest rate, let's say the bond's quoted price is 104.46. That is, the bond will sell at 104.46% of the $1,000 face value, which means the seller of the bond will receive and the investor will pay $1,044.60.

Issuing Bonds at a Discount

Now let's consider a situation when the company's bonds prior to issuance are scheduled to pay 5% and the market rate jumps to 7% at issuance. No one will want to buy the bonds at 5% when they can earn more interest elsewhere. The company will have to sell the $1,000 bond for less than $1,000, or at a discount. In this example, where the stated interest rate is lower than the market interest rate, the bond's quoted price is 91.80. That is, the bond will sell at 91.80% of the $1,000 face value, which means the seller of the bond will receive (and the investor will pay) $918.00.

Sale of Bonds before Maturity

Let's look at bonds from the perspective of the issuer and the investor. As we previously discussed, bonds are often classified as long-term liabilities because the money is borrowed for long periods of time, up to 30 years in some cases. This provides the business with the money necessary to fund long-term projects and investments in the business. Due to unanticipated circumstances, the investors, on the other hand, may not want to wait up to 30 years to receive the maturity value of the bond. While the investor will receive periodic interest payments while the bond is held, investors may want to receive the current market value prior to the maturity date. Therefore, from the investor's perspective, one of the advantages of investing in bonds is that they are typically easy to sell in the secondary market should the investor need the money before the maturity date, which may be many years in the future. The **secondary market** is an organized market where previously issued stocks and bonds can be traded after they are issued.

If a bond sells on the secondary market after it has been issued, the terms of the bond (a particular interest rate, at a determined timeframe, and a given maturity value) do not change. If an investor buys a bond after it is issued or sells it before it matures, there is the possibility that the investor will receive more or less for the bond than the amount the bond was originally sold for. This change in value may occur if the market interest rate differs from the stated interest rate.

CONTINUING APPLICATION

Debt Considerations for Grocery Stores

Every company faces internal decisions when it comes to borrowing funds for improvements and/or expansions. Consider the improvements your local grocery stores have made over the past couple of years. Just like any large retail business, if grocery stores don't invest in each property by adding services, upgrading the storefront, or even making more energy-efficient changes, the location can fall out of popularity.

Such investments require large amounts of capital infusion. The primary available investment funds for privately-owned grocery chains are bank loans or owners' capital. This limitation often restricts the expansions or upgrades such a company can do at any one time. Publicly-traded grocery chains can also borrow funds from a bank, but other options, like issuing bonds or more stock can also help fund development. Thus publicly-traded grocery chains have more options to fund improvements and can therefore expand their share of the market more easily, unlike their private smaller counterparts who must decide what improvement is the most critical.

Fundamentals of Interest Calculation

Since interest is paid on long-term liabilities, we now need to examine the process of calculating interest. Interest can be calculated in several ways, some more common than others. For our purposes, we will explore interest calculations using the simple method and the compounded method. Regardless of the method involved, there are three components that we need when calculating interest:

1. Amount of money borrowed (called the principal).
2. Interest rate for the time frame of the loan. Note that interest rates are usually stated in annual terms (e.g., 8% per year). If the timeframe is excluded, an annual rate should be assumed. Pay particular attention to how often the interest is to be paid because this will affect the rate used in the calculation:

   Interest rate = Annual rate / Payments per period

   For example, if the rate on a bond is 6% per year but the interest is paid semi-annually, the rate used in the interest calculation should be 3% because the interest applies to a 6-month timeframe (6% ÷ 2). Similarly, if the rate on a bond is 8% per year but the interest is paid quarterly, the rate used in the interest calculation should be 2% (8% ÷ 4).
3. Time period for which we are calculating the interest.

Let's explore simple interest first. We use the following formula to calculate interest in dollars:

Principal is the amount of money invested or borrowed, *interest rate* is the interest rate paid or earned, and *time* is the length of time the principal is borrowed or invested. Consider a bank deposit of $100 that remains in the account for 3 years, earning 6% per year with the bank paying simple interest. In this calculation, the interest rate is 6% a year, paid once at the end of the year. Using the interest rate formula from above, the interest rate remains 6% (6% ÷ 1). Using 6% interest per year earned on a $100 principal provides the following results in the first three years (Figure 12.4.1):

- Year 1: The $100 in the bank earns 6% interest, and at the end of the year, the bank pays $6.00 in interest, making the amount in the bank account $106 ($100 principal + $6 interest).
- Year 2: Assuming we do not withdraw the interest, the $106 in the bank earns 6% interest on the principal ($100), and at the end of the year, the bank pays $6 in interest, making the total amount $112.
- Year 3: Again, assuming we do not withdraw the interest, $112 in the bank earns 6% interest on the principal ($100), and at the end of the year, the bank pays $6 in interest, making the total amount $118.

Year	1	2	3
Initial investment	$ 100.00	$ 100.00	$ 100.00
Annual interest rate, 6%	0.06	0.06	0.06
Interest earned	$ 6.00	$ 6.00	$ 6.00
Add amount to date	$100.00	$106.00	$112.00
= Total cash	$106.00	$112.00	$118.00

Figure 12.4.1: Simple Interest. Simple interest earns money only on the principal. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

With simple interest, the amount paid is always based on the principal, not on any interest earned.

Another method commonly used for calculating interest involves compound interest. **Compound interest** means that the interest earned also earns interest. Figure 12.4.2 shows the same deposit with compounded interest.

Year	1	2	3
Initial investment	$100.00	$106.00	$112.36
Annual interest rate, 6%	0.06	0.06	0.06
Interest earned	$ 6.00	$ 6.36	$ 6.74
Add amount to date	$100.00	$106.00	$112.36
= Total cash	$106.00	$112.36	$119.10

Figure 12.4.2: Compund Interest. Compound interest earns money on the principal plus interest earned in a previous period. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

In this case, investing $100 today in a bank that pays 6% per year for 3 years with compound interest will produce $119.10 at the end of the three years, instead of $118.00, which was earned with simple interest.

At this point, we need to provide an assumption we make in this chapter. Since financial institutions typically cannot deal in fractions of a cent, in calculations such as the above, we will round the final answer to the nearest cent, if necessary. For example, the final cash total at the end of the third year in the above example would be $119.1016. However, we rounded the answer to the nearest cent for convenience. In the case of a car or home loan, the rounding can lead to a higher or lower adjustment in your final payment. For example, you might finance a car loan by borrowing $20,000 for 48 months with monthly payments of $469.70 for the first 47 months and $469.74 for the final payment.

LINK TO LEARNING

Go to the Securities and Exchange Commission website for an explanation of US Savings Bonds to learn more.

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12.5: Compute Amortization of Long-Term Liabilities Using the Effective-Interest Method

Bonds Payable

As you've learned, each time a company issues an interest payment to bondholders, amortization of the discount or premium, if one exists, impacts the amount of interest expense that is recorded. Amortization of the discounts increases the amount of interest expense and premiums reduce the amount of interest expense. There are two methods used to amortize bond discounts or premiums: the effective-interest method and the straight-line method.

Our calculations have used what is known as the **effective-interest method**, a method that calculates interest expense based on the carrying value of the bond and the market interest rate. Generally accepted accounting principles (GAAP) require the use of the effective-interest method unless there is no significant difference between the effective-interest method and the straight-line method, a method that allocates the same amount of the bond discount or premium for each interest payment. The effective interest amortization method is more accurate than the straight-line method. International Financial Reporting Standards (IFRS) require the use of the effective-interest method, with no exceptions.

The **straight-line method** doesn't base its calculation of amortization for a period base on a changing carrying value like the effective-interest method does; instead, it allocates the same amount of premium or discount amortation for each of the bond's payment periods.

For example, assume that $500,000 in bonds were issued at a price of $540,000 on January 1, 2019, with the first annual interest payment to be made on December 31, 2019. Assume that the stated interest rate is 10% and the bond has a four-year life. If the straight-line method is used to amortize the $40,000 premium, you would divide the premium of $40,000 by the number of payments, in this case four, giving a $10,000 per year amortization of the premium. Figure 12.5.1 shows the effects of the premium amortization after all of the 2019 transactions are considered. The net effect of creating the $40,000 premium and writing off $10,000 of it gives the company an interest expense of $40,000 instead of $50,000, since the $50,000 expense is reduced by the $10,000 premium write down at the end of the year.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2019	Cash	540,000	
	Bonds Payable		500,000
	Premium on Bonds Payable		40,000
Jan. 1, 2019	Interest Expense	50,000	
	Cash		50,000
Jan. 1, 2019	Premium on Bonds Payable	10,000	
	Interest Expense		10,000

Figure 12.5.1: Premium Amortization Using the Straight-Line Method. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Issued When Market Rate Equals Contract Rate

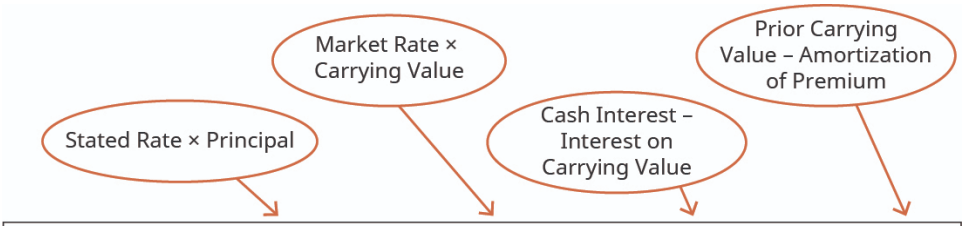
Assume a company issues a $100,000 bond with a 5% stated rate when the market rate is also 5%. The bond was issued at par, meaning it sold for $100,000. There was no premium or discount to amortize, so there is no application of the effective-interest method in this example.

Issued at a Premium

The same company also issued a 5-year, $100,000 bond with a stated rate of 5% when the market rate was 4%. This bond was issued at a premium, for $104,460. The amount of the premium is $4,460, which will be amortized over the life of the bond using the effective-interest method. This method of amortizing the interest expense associated with a bond is similar to the amortization of the note payable described earlier, in which the principal was separated from the interest payments using the interest rate times the principal.

Begin by assuming the company issued all the bonds on January 1 of year 1 and the first interest payment will be made on December 31 of year 1. The amortization table begins on January 1, year 1, with the carrying value of the bond: the face value of the bond plus the bond premium.

On December 31, year 1, the company will have to pay the bondholders $5,000 (0.05 × $100,000). The *cash interest payment* is the amount of interest the company must pay the bondholder. The company promised 5% when the market rate was 4% so it received more money. But the company is only paying interest on $100,000—not on the full amount received. The difference in the sale price was a result of the difference in the interest rates so both rates are used to compute the true interest expense.

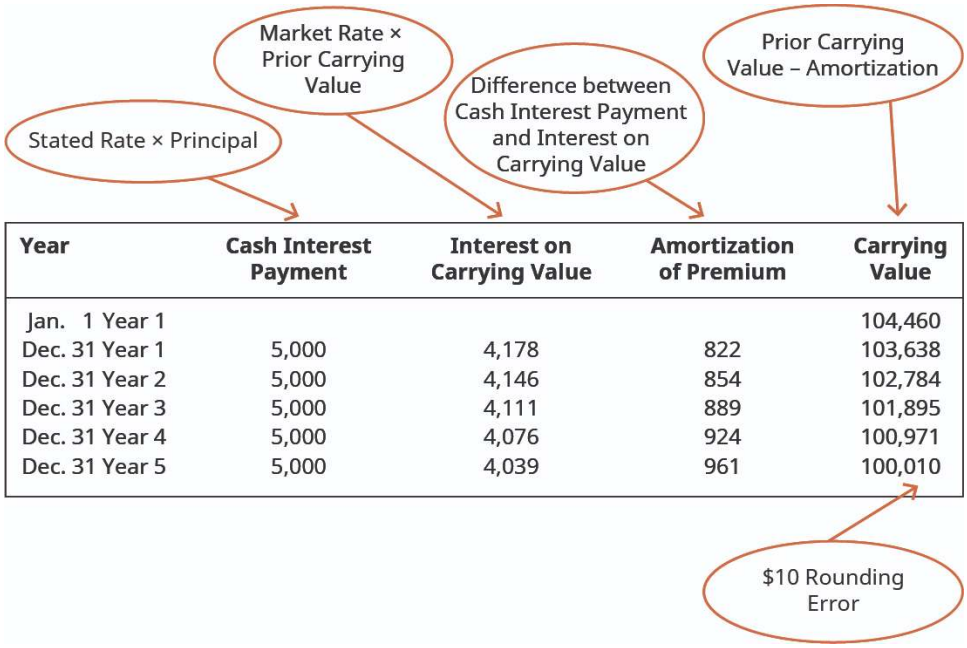


Year	Cash Interest Payment	Interest on Carrying Value	Amortization of Premium	Carrying Value
Jan. 1 Year 1				104,460
Dec. 31 Year 1	5,000	4,178	822	103,638

Assets = Liabilities + Equity + Revenue – Expenses

Cash		Bonds Payable		Premium on Bonds Payable		Interest Expense	
	5,000		100,000		4,460	5,000	
				822			822
					3,638	4,178	

The interest on the carrying value is the market rate of interest times the carrying value: 0.04 × $104,460 = $4,178. If the company had issued the bonds with a stated rate of 4%, and received $104,460, it would be paying $4,178 in interest. The difference between the cash interest payment and the interest on the carrying value is the amount to be amortized the first year. The complete amortization table for the bond is shown in Figure 12.5.2. The table is necessary to provide the calculations needed for the adjusting journal entries.



Year	Cash Interest Payment	Interest on Carrying Value	Amortization of Premium	Carrying Value
Jan. 1 Year 1				104,460
Dec. 31 Year 1	5,000	4,178	822	103,638
Dec. 31 Year 2	5,000	4,146	854	102,784
Dec. 31 Year 3	5,000	4,111	889	101,895
Dec. 31 Year 4	5,000	4,076	924	100,971
Dec. 31 Year 5	5,000	4,039	961	100,010

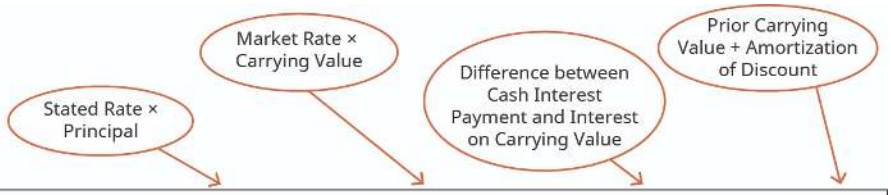
Figure 12.5.2: Bond Amortization Table. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Issued at a Discount

The company also issued $100,000 of 5% bonds when the market rate was 7%. It received $91,800 cash and recorded a Discount on Bonds Payable of $8,200. This amount will need to be amortized over the 5-year life of the bonds. Using the same format for an amortization table, but having received $91,800, interest payments are being made on $100,000.

Year	Cash Interest Payment	Interest on Carrying Value	Amortization of Discount	Carrying Value
Jan. 1 Year 1				91,800
Dec. 31 Year 1	5,000	6,426	1,426	93,226

The cash interest payment is still the stated rate times the principal. The interest on carrying value is still the market rate times the carrying value. The difference in the two interest amounts is used to amortize the discount, but now the amortization of discount amount is added to the carrying value.



Year	Cash Interest Payment	Interest on Carrying Value	Amortization of Discount	Carrying Value
Jan. 1 Year 1				91,800
Dec. 31 Year 1	5,000	6,426	1,426	93,226
Dec. 31 Year 2	5,000	6,526	1,526	94,752
Dec. 31 Year 3	5,000	6,633	1,633	96,384
Dec. 31 Year 4	5,000	6,747	1,747	98,131
Dec. 31 Year 5	5,000	6,869	1,869	100,000

Figure 12.5.3 illustrates the relationship between rates whenever a premium or discount is created at bond issuance.



Figure 12.5.3: Stated Rate and Market Rate. When the stated rate is higher than the market rate, the bond is issued at a premium. When the stated rate is lower than the market rate, the bond is issued at a discount. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

CONCEPTS IN PRACTICE

Bond Ratings

Investors intending to purchase corporate bonds may find it overwhelming to decide which company would be the best to invest in. Investors are concerned with two primary factors: the return *on* the investment (meaning, the periodic interest payments) and the return *of* the investment (meaning, payment of the face value on the maturity date). While there are risks with any investment, attempting to maximize the return *on* the investment and maximizing the likelihood receiving the return *of* the investment would take a significant amount of time for the investor. To become informed and make a wise investment, the investor would have to spend many hours analyzing the financial statements of potential companies to invest in.

One resource investors find useful when screening investment opportunities is through the use of rating agencies. Rating agencies specialize in analyzing financial and other company information in order to assess and rate a company's riskiness as an investment. A particularly useful website is Investopedia which highlights the rating system for three large rating agencies—Moody's, Standard & Poor's, and Fitch Ratings. The rating systems, shown below, are somewhat similar to academic grading scales, with rankings ranging from A (highest quality) to D (lowest quality):

Rating Agencies[8]

Credit Risk	Moody's	Standard & Poor's	Fitch Ratings
Investment Grade	—	—	—
Highest Quality	Aaa	AAA	AAA
High Quality	Aa1, Aa2, Aa3	AA+, AA, AA–	AA+, AA, A–
Upper Medium	A1, A2, A3	A+, A, A–	A+, A, A–
Medium	Baa1, Baa2, Baa3	BBB+, BBB, BBB–	BBB+, BBB, BBB–
Not Investment Grade	Ba1	BB+	BB+
Speculative Medium	Ba2, Ba3	BB, BB–	BB, BB–
Speculative Lower Grade	B1, B2, B3	B+, B, B–	B+, B, B–
Speculative Risky	Caa1	CCC+	CCC
Speculative Poor Standing	Caa2, Caa3	CCC, CCC–	—
No Payments / Bankruptcy	Ca / C	—	—
In Default	—	D	DDD, DD, D

Table 12.5.1

Footnotes

- 8 Michael Schmidt. "When to Trust Bond Rating Agencies." Investopedia. September 29, 2018. https://www.investopedia.com/article...g-agencies.asp

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12.6: Prepare Journal Entries to Reflect the Life Cycle of Bonds

Recall from the discussion in Explain the Pricing of Long-Term Liabilities that one way that businesses can generate long-term financing is by borrowing from lenders.

In this section, we will explore the journal entries related to bonds. Earlier, we found that cash flows related to a bond include the following:

1. The receipt of cash when the bond is issued
2. Payment of interest each period
3. Repayment of the bond at maturity

A journal entry must be made for each of these transactions. As we go through the journal entries, it is important to understand that we are analyzing the accounting transactions from the perspective of the issuer of the bond. These are considered long-term liabilities. The investor would make the opposite journal entries. For example, on the issue date of a bond, the borrower receives cash while the lender pays cash.

A final point to consider relates to accounting for the interest costs on the bond. Recall that the bond indenture specifies how much interest the borrower will pay with each periodic payment based on the stated rate of interest. The periodic interest payments to the buyer (investor) will be the same over the course of the bond. It may help to think of personal loan examples. For example, if you or your family have ever borrowed money from a bank for a car or home, the payments are typically the same each month. The interest payments will be the same because of the rate stipulated in the bond indenture, regardless of what the market rate does. The amount of interest cost that we will recognize in the journal entries, however, will change over the course of the bond term, assuming that we are using the effective interest.

IFRS CONNECTION

Defining Long-Term Liabilities

Under both IFRS and US GAAP, the general definition of a long-term liability is similar. However, there are many types of long-term liabilities, and various types have specific measurement and reporting criteria that may differ between the two sets of accounting standards. With two exceptions, bonds payable are primarily the same under the two sets of standards.

The first difference pertains to the method of interest amortization. Beyond FASB's preferred method of interest amortization discussed here, there is another method, the straight-line method. This method is permitted under US GAAP if the results produced by its use would not be materially different than if the effective-interest method were used. IFRS does not permit straight-line amortization and only allows the effective-interest method.

The second difference pertains to how the bonds are reported on the books. Under US GAAP, bonds are recorded at face value and the premium or discount is recorded in a separate account. IFRS does not use "premium" or "discount" accounts. Instead, under IFRS, the carrying value of bonds issued at either a premium or discount is shown on the balance sheet at its net. For example, $100,000 bonds issued at a discount of $4,000 would be recorded under US GAAP as

Under IFRS, these bonds would be reported as

Obviously, the above example implies that, in the subsequent entries to recognize interest expense, under IFRS, the Bonds Payable account is amortized directly for the increase or reduction in bond principal. Suppose in this example that the cash interest was $200 and the interest expense for the first interest period was $250. The entry to record the transaction under the two different standards would be as follows:

Under US GAAP:

Under IFRS:

> Note that under either method, the interest expense and the carrying value of the bonds stays the same.

Issuance of Bonds

Since the process of underwriting a bond issuance is lengthy and extensive, there can be several months between the determination of the specific characteristics of a bond issue and the actual issuance of the bond. Before the bonds can be issued, the underwriters perform many time-consuming tasks, including setting the bond interest rate. The bond interest rate is influenced by specific factors relating to the company, such as existing debt balances and the ability of the company to repay the funds, as well as the market rate, which is influenced by many external economic factors.

Because of the time lag caused by underwriting, it is not unusual for the market rate of the bond to be different from the stated interest rate. The difference in the stated rate and the market rate determine the accounting treatment of the transactions involving bonds. When the bond is issued at par, the accounting treatment is simplest. It becomes more complicated when the stated rate and the market rate differ.

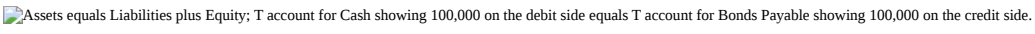
Issued When Market Rate Equals Contract Rate

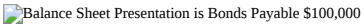
First, we will explore the case when the stated interest rate is equal to the market interest rate when the bonds are issued.

Returning to our example of a $1,000, 5-year bond with a stated interest rate of 5%, at issuance, the market rate was 5% and the sales price was quoted at 100, which means the seller of the bond will receive (and the investor will pay) 100% of the $1,000 face value of the bond. The journal entry to record the sale of 100 of these bonds is:



Since the book value is equal to the amount that will be owed in the future, no other account is included in the journal entry.

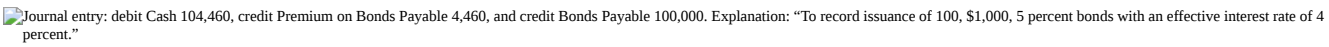




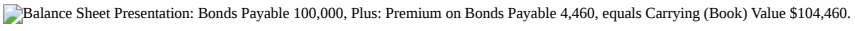
Issued at a Premium

If, during the timeframe of establishing the bond stated rate and issuing the bonds, the market rate drops below the stated interest, the bonds would become more valuable. In other words, the investors will earn a higher rate on these bonds than if the investors purchased similar bonds elsewhere in the market. Naturally, investors would want to purchase these bonds and earn a higher interest rate. The increased demand drives up the bond price to a point where investors earn the same interest as similar bonds. Earlier, we found that the sale price of a $1,000, 5-year bond with a stated rate of 5% and a market rate of 4% is 104.46. That is, the bond will sell at 104.46% of the $1,000 face value, which means the seller of the bond will receive (and the investor will pay) $1,044.60.

Selling 100 of these bonds, would yield $104,460.



The financial statement presentation looks like this:

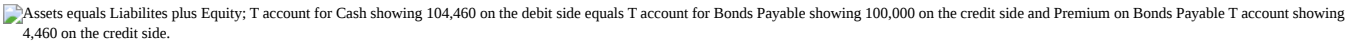


On the date that the bonds were issued, the company received cash of $104,460.00 but agreed to pay $100,000.00 in the future for 100 bonds with a $1,000 face value. The difference in the amount received and the amount owed is called the *premium*. Since they promised to pay 5% while similar bonds earn 4%, the company received more cash upfront. In other words, they sold the bond at a premium. They did this because the cost of the premium plus the 5% interest on the face value is mathematically the same as receiving the face value but paying 4% interest. The interest rate was effectively the same.

The **premium on bonds payable** account is a contra liability account. It is contra because it increases the amount of the Bonds Payable liability account. It is “married” to the Bonds Payable account on the balance sheet. If one of the accounts appears, both must appear. The Premium will disappear over time as it is amortized, but it will decrease the interest expense, which we will see in subsequent journal entries.

Taken together, the Bond Payable liability of $100,000 and the Premium on Bond Payable contra liability of $4,460 show the bond’s carrying value or **book value**—the value that assets or liabilities are recorded at in the company’s financial statements.

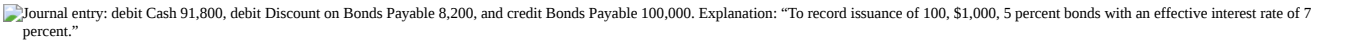
The effect on the accounting equation looks like this:

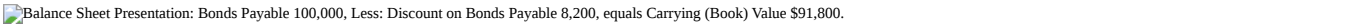

Assets equals Liabilites plus Equity; T account for Cash showing 104,460 on the debit side equals T account for Bonds Payable showing 100,000 on the credit side and Premium on Bonds Payable T account showing 4,460 on the credit side.

It looks like the issuer will have to pay back $104,460, but this is not quite true. If the bonds were to be paid off today, the full $104,460 would have to be paid back. But as time passes, the Premium account is amortized until it is zero. The bondholders have bonds that say the issuer will pay them $100,000, so that is all that is owed at maturity. The premium will disappear over time and will reduce the amount of interest incurred.

Issued at a Discount

Bonds issued at a discount are the exact opposite in concept as bonds issued at a premium. If, during the timeframe of establishing the bond stated rate and issuing the bonds, the market rate rises above the stated interest on the bonds, the bonds become less valuable because investors can earn a higher rate of interest on other similar bonds. In other words, the investors will earn a lower rate on these bonds than if the investors purchased similar bonds elsewhere in the market. Naturally, investors would not want to purchase these bonds and earn a lower interest rate than could be earned elsewhere. The decreased demand drives down the bond price to a point where investors earn the same interest for similar bonds. Earlier, we found the sale price of a $1,000, 5-year bond with a stated interest rate of 5% and a market rate of 7% is 91.80. That is, the bond will sell at 91.80% of the $1,000 face value, which means the seller of the bond will receive (and the investor will pay) $918.00. On selling 100 of the $1,000 bonds today, the journal entry would be:

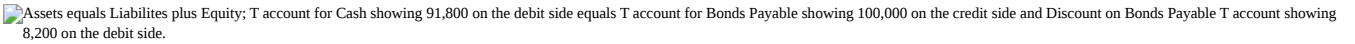

Journal entry: debit Cash 91,800, debit Discount on Bonds Payable 8,200, and credit Bonds Payable 100,000. Explanation: “To record issuance of 100, $1,000, 5 percent bonds with an effective interest rate of 7 percent.”


Balance Sheet Presentation: Bonds Payable 100,000, Less: Discount on Bonds Payable 8,200, equals Carrying (Book) Value $91,800.

Today, the company receives cash of $91,800.00, and it agrees to pay $100,000.00 in the future for 100 bonds with a $1,000 face value. The difference in the amount received and the amount owed is called the *discount*. Since they promised to pay 5% while similar bonds earn 7%, the company, accepted less cash up front. In other words, they sold the bond at a discount. They did this because giving a discount but still paying only 5% interest on the face value is mathematically the same as receiving the face value but paying 7% interest. The interest rate was effectively the same.

Like the Premium on Bonds Payable account, the **discount on bonds payable** account is a contra liability account and is “married” to the Bonds Payable account on the balance sheet. The Discount will disappear over time as it is amortized, but it will increase the interest expense, which we will see in subsequent journal entries.

The effect on the accounting equation looks like this:


Assets equals Liabilites plus Equity; T account for Cash showing 91,800 on the debit side equals T account for Bonds Payable showing 100,000 on the credit side and Discount on Bonds Payable T account showing 8,200 on the debit side.

First and Second Semiannual Interest Payment

When a company issues bonds, they make a promise to pay interest annually or sometimes more often. If the interest is paid annually, the journal entry is made on the last day of the bond’s year. If interest was promised semiannually, entries are made twice a year.

CONCEPTS IN PRACTICE

Municipal Bonds

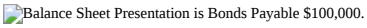
Municipal bonds are a specific type of bonds that are issued by governmental entities such as towns and school districts. These bonds are issued in order to finance specific projects (such as water treatment plants and school building construction) that require a large investment of cash. The primary benefit to the issuing entity (i.e., the town or school district) is that cash can be obtained more quickly than, for example, collecting taxes and fees over a long period of time. This allows the project to be completed sooner, which is a benefit to the community.

Municipal bonds, like other bonds, pay periodic interest based on the stated interest rate and the face value at the end of the bond term. However, corporate bonds often pay a higher rate of interest than municipal bonds. Despite the lower interest rate, one benefit of municipal bonds relates to the tax treatment of the periodic interest payments for investors. With corporate bonds, the periodic interest payments are considered taxable income to the investor. For example, if an investor receives $1,000

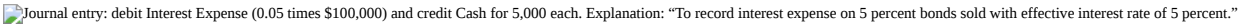
of interest and is in the 25% tax bracket, the investor will have to pay $250 of taxes on the interest, leaving the investor with an after-tax payment of $750. With municipal bonds, interest payments are exempt from federal tax. So the same investor receiving $1,000 of interest from a municipal bond would pay no income tax on the interest income. This tax-exempt status of municipal bonds allows the entity to attract investors and fund projects more easily.

Interest Payment: Issued When Market Rate Equals Contract Rate

Recall that the Balance Sheet presentation of the bond when the market rate equals the stated rate is as follows:


Balance Sheet Presentation is Bonds Payable $100,000.

In this example, the company issued 100 bonds with a face value of $1,000, a 5-year term, and a stated interest rate of 5% when the market rate was 5% and received $100,000. As previously discussed, since the bonds were sold when the market rate equals the stated rate, the carrying value of the bonds is $100,000. These bonds did not specify when interest was paid, so we can assume that it is an annual payment. If the bonds were issued on January 1, the company would pay interest on December 31 and the journal entry would be:


Journal entry: debit Interest Expense (0.05 times $100,000) and credit Cash for 5,000 each. Explanation: “To record interest expense on 5 percent bonds sold with effective interest rate of 5 percent.”

The interest expense is calculated by taking the Carrying Value ($100,000) multiplied by the market interest rate (5%). The stated rate is used when calculating the interest cash payment. The company is obligated by the bond indenture to pay 5% per year based on the face value of the bond. When the situation changes and the bond is sold at a discount or premium, it is easy to get confused and incorrectly use the market rate here. Since the market rate and the stated rate are the same in this example, we do not have to worry about any differences between the amount of interest expense and the cash paid to bondholders. This journal entry will be made every year for the 5-year life of the bond.

When performing these calculations, the rate is adjusted for more frequent interest payments. If the company had issued 5% bonds that paid interest semiannually, interest payments would be made twice a year, but each interest payment would only be half an annual interest payment. Earning interest for a full year at 5% annually is the equivalent of receiving half of that amount each six months. So, for semiannual payments, we would divide 5% by 2 and pay 2.5% every six months.

CONCEPTS IN PRACTICE

Mortgage Debt

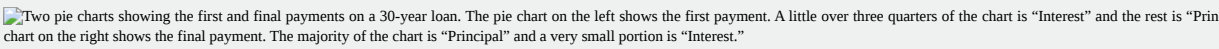
According to Statista the amount of mortgage debt—debt incurred to purchase homes—in the United States was $14.9 trillion on 2017. This value does not include the interest cost—the cost of borrowing—related to the debt.

A common loan term for those borrowing money to buy a house is 30 years. Each month, the borrower must make payments on the loan, which would add up to 360 payments for a 30-year loan. Recall from previous discussions on amortization that each payment can be divided into two components: the interest expense and the amount that is applied to reduce the principal.

In order to calculate the amount of interest and principal reduction for each payment, banks and borrowers often use amortization tables. While amortization tables are easily created in Microsoft Excel or other spreadsheet applications, there are many websites that have easy-to-use amortization tables. The popular lending website Zillow has a loan calculator to calculate the monthly payments of a loan as well as an amortization table that shows how much interest and principal reduction is applied for each payment.

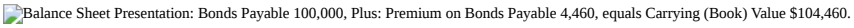
For example, borrowing $200,000 for 30 years at an interest rate of 5% would require the borrow to repay a total $386,513. The monthly payment on this loan is $1,073.64. This amount represents the $200,000 borrowed and $186,513 of interest cost. If the borrower chose a 15-year loan, the total payments drops significantly to $266,757, but the monthly payments increase to $1,581.59.

Because interest is calculated based on the outstanding loan balance, the amount of interest paid in the first payment is much more than the amount of interest in the final payment. The pie charts below show the amount of the $1,073.64 payment allocated to interest and loan reduction for the first and final payments, respectively, on the 30-year loan.

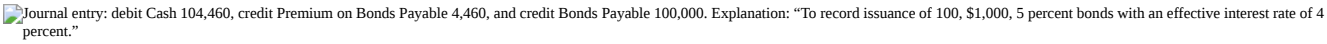

Two pie charts showing the first and final payments on a 30-year loan. The pie chart on the left shows the first payment. A little over three quarters of the chart is “Interest” and the rest is “Principal.” The pie chart on the right shows the final payment. The majority of the chart is “Principal” and a very small portion is “Interest.”

Interest Payment: Issued at a Premium

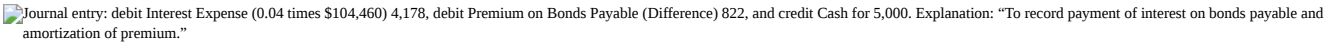
Recall that the Balance Sheet presentation of the bond when the market rate at issue is lower than the stated rate is as follows:


Balance Sheet Presentation: Bonds Payable 100,000, Plus: Premium on Bonds Payable 4,460, equals Carrying (Book) Value $104,460.

In this scenario, the sale price of a $1,000, 5-year bond with a stated rate of 5% and a market rate of 4% was $1,044.60. If the company sold 100 of these bonds, it would receive $104,460 and the journal entry would be:


Journal entry: debit Cash 104,460, credit Premium on Bonds Payable 4,460, and credit Bonds Payable 100,000. Explanation: "To record issuance of 100, $1,000, 5 percent bonds with an effective interest rate of 4 percent."

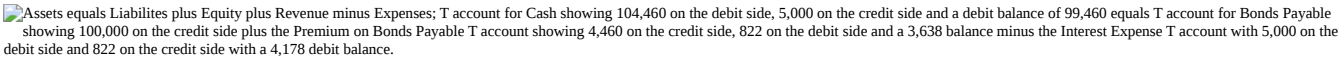
Again, let's assume that the bonds pay interest annually. At the end of the bond's year, we would record the interest expense:


Journal entry: debit Interest Expense (0.04 times $104,460) 4,178, debit Premium on Bonds Payable (Difference) 822, and credit Cash for 5,000. Explanation: "To record payment of interest on bonds payable and amortization of premium."

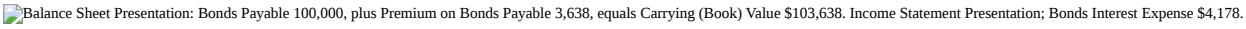
The interest expense determination is calculated using the *effective interest* amortization interest method. Under the effective-interest method, the interest expense is calculated by taking the Carrying (or Book) Value ($104,460) multiplied by the market interest rate (4%). The amount of the cash payment in this example is calculated by taking the face value of the bond ($100,000) multiplied by the stated rate.

Since the market rate and the stated rate are different, we need to account for the difference between the amount of interest expense and the cash paid to bondholders. The amount of the premium amortization is simply the difference between the interest expense and the cash payment. Another way to think about amortization is to understand that, with each cash payment, we need to reduce the amount carried on the books in the Bond Premium account. Since we originally credited Bond Premium when the bonds were issued, we need to debit the account each time the interest is paid to bondholders because the carrying value of the bond has changed. Note that the company received more for the bonds than face value, but it is only paying interest on $100,000.

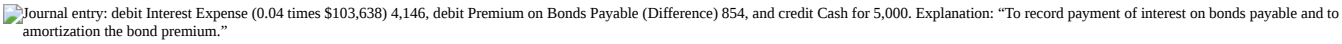
The partial effect of the first period's interest payment on the company's accounting equation in year one is:


Assets equals Liabilites plus Equity plus Revenue minus Expenses; T account for Cash showing 104,460 on the debit side, 5,000 on the credit side and a debit balance of 99,460 equals T account for Bonds Payable showing 100,000 on the credit side plus the Premium on Bonds Payable T account showing 4,460 on the credit side, 822 on the debit side and a 3,638 balance minus the Interest Expense T account with 5,000 on the debit side and 822 on the credit side with a 4,178 debit balance.

And the financial-statement presentation at the end of year 1 is:

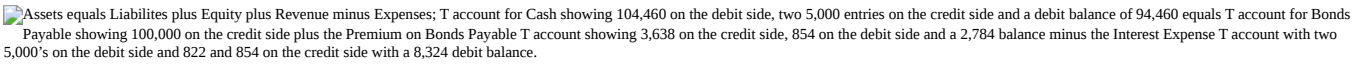

Balance Sheet Presentation: Bonds Payable 100,000, plus Premium on Bonds Payable 3,638, equals Carrying (Book) Value $103,638. Income Statement Presentation; Bonds Interest Expense $4,178.

The journal entry for year 2 is:

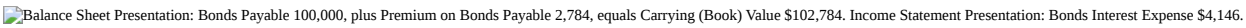

Journal entry: debit Interest Expense (0.04 times $103,638) 4,146, debit Premium on Bonds Payable (Difference) 854, and credit Cash for 5,000. Explanation: "To record payment of interest on bonds payable and to amortization the bond premium."

The interest expense is calculated by taking the Carrying (or Book) Value ($103,638) multiplied by the market interest rate (4%). The amount of the cash payment in this example is calculated by taking the face value of the bond ($100,000) multiplied by the stated rate (5%). Since the market rate and the stated rate are different, we again need to account for the difference between the amount of interest expense and the cash paid to bondholders.

The partial effect on the accounting equation in year two is:


Assets equals Liabilites plus Equity plus Revenue minus Expenses; T account for Cash showing 104,460 on the debit side, two 5,000 entries on the credit side and a debit balance of 94,460 equals T account for Bonds Payable showing 100,000 on the credit side plus the Premium on Bonds Payable T account showing 3,638 on the credit side, 854 on the debit side and a 2,784 balance minus the Interest Expense T account with two 5,000's on the debit side and 822 and 854 on the credit side with a 8,324 debit balance.

And the financial-statement presentation at the end of year 2 is:


Balance Sheet Presentation: Bonds Payable 100,000, plus Premium on Bonds Payable 2,784, equals Carrying (Book) Value $102,784. Income Statement Presentation: Bonds Interest Expense $4,146.

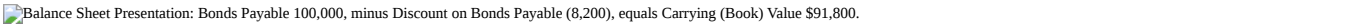
By the end of the 5th year, the bond premium will be zero, and the company will only owe the Bonds Payable amount of $100,000.

LINK TO LEARNING

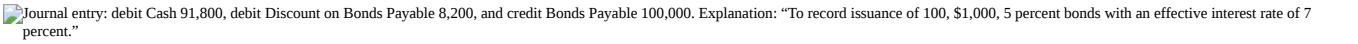
A mortgage calculator provides monthly payment estimates for a long-term loan like a mortgage. To use the calculator, enter the cost of the house to be purchased, the amount of cash to be borrowed, the number of years over which the mortgage is to be paid back (generally 30 years), and the current interest rate. The calculator returns the amount of the mortgage payment. Mortgages are long-term liabilities that are used to finance real estate purchases. We tend to think of them as home loans, but they can also be used for commercial real estate purchases.

Interest Payment: Issued at a Discount

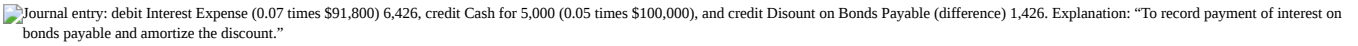
Recall that the Balance Sheet presentation of the bond when the market rate at issue was higher than the stated rate is as follows:


Balance Sheet Presentation: Bonds Payable 100,000, minus Discount on Bonds Payable (8,200), equals Carrying (Book) Value $91,800.

We found the sale price of a $1,000, 5-year bond with a stated interest rate of 5% and a market rate of 7% was $918.00. We then showed the journal entry to record sale of 100 bonds:

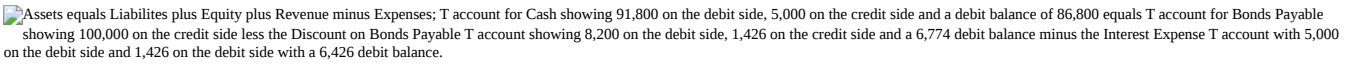

Journal entry: debit Cash 91,800, debit Discount on Bonds Payable 8,200, and credit Bonds Payable 100,000. Explanation: “To record issuance of 100, $1,000, 5 percent bonds with an effective interest rate of 7 percent.”

At the end of the bond’s first year, we make this journal entry:

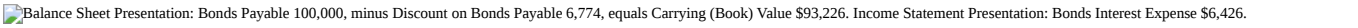

Journal entry: debit Interest Expense (0.07 times $91,800) 6,426, credit Cash for 5,000 (0.05 times $100,000), and credit Disount on Bonds Payable (difference) 1,426. Explanation: “To record payment of interest on bonds payable and amortize the discount.”

The interest expense is calculated by taking the Carrying Value ($91,800) multiplied by the market interest rate (7%). The amount of the cash payment in this example is calculated by taking the face value of the bond ($100,000) and multiplying it by the stated rate (5%). Since the market rate and the stated rate are different, we need to account for the difference between the amount of interest expense and the cash paid to bondholders. The amount of the discount amortization is simply the difference between the interest expense and the cash payment. Since we originally debited Bond Discount when the bonds were issued, we need to credit the account each time the interest is paid to bondholders because the carrying value of the bond has changed. Note that the company received less for the bonds than face value but is paying interest on the $100,000.

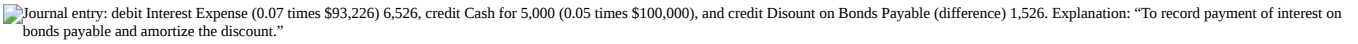
The partial effect on the accounting equation in year one is:


Assets equals Liabilites plus Equity plus Revenue minus Expenses; T account for Cash showing 91,800 on the debit side, 5,000 on the credit side and a debit balance of 86,800 equals T account for Bonds Payable showing 100,000 on the credit side less the Discount on Bonds Payable T account showing 8,200 on the debit side, 1,426 on the credit side and a 6,774 debit balance minus the Interest Expense T account with 5,000 on the debit side and 1,426 on the debit side with a 6,426 debit balance.

And the financial-statement presentation at the end of year 1 is:

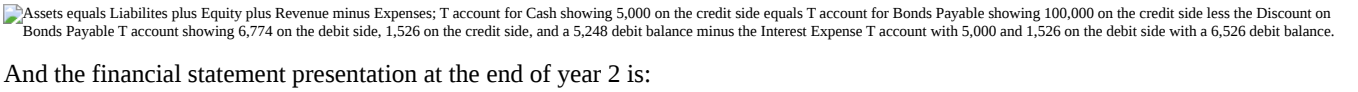

Balance Sheet Presentation: Bonds Payable 100,000, minus Discount on Bonds Payable 6,774, equals Carrying (Book) Value $93,226. Income Statement Presentation: Bonds Interest Expense $6,426.

The journal entry for year 2 is:

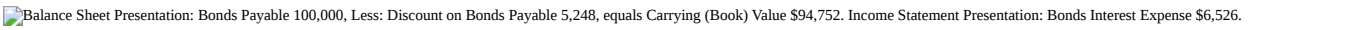

Journal entry: debit Interest Expense (0.07 times $93,226) 6,526, credit Cash for 5,000 (0.05 times $100,000), and credit Disount on Bonds Payable (difference) 1,526. Explanation: “To record payment of interest on bonds payable and amortize the discount.”

The interest expense is calculated by taking the Carrying Value ($93,226) multiplied by the market interest rate (7%). The amount of the cash payment in this example is calculated by taking the face value of the bond ($100,000) multiplied by the stated rate (5%). Again, we need to account for the difference between the amount of interest expense and the cash paid to bondholders by crediting the Bond Discount account.

The partial effect on the accounting equation in year two is:


Assets equals Liabilites plus Equity plus Revenue minus Expenses; T account for Cash showing 5,000 on the credit side equals T account for Bonds Payable showing 100,000 on the credit side less the Discount on Bonds Payable T account showing 6,774 on the debit side, 1,526 on the credit side, and a 5,248 debit balance minus the Interest Expense T account with 5,000 and 1,526 on the debit side with a 6,526 debit balance.

And the financial statement presentation at the end of year 2 is:


Balance Sheet Presentation: Bonds Payable 100,000, Less: Discount on Bonds Payable 5,248, equals Carrying (Book) Value $94,752. Income Statement Presentation: Bonds Interest Expense $6,526.

By the end of the 5th year, the bond premium will be zero and the company will only owe the Bonds Payable amount of $100,000.

Retirement of Bonds When the Bonds Were Issued at Par

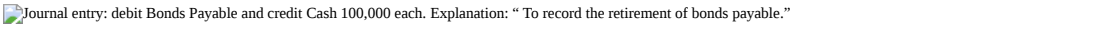
At some point, a company will need to record **bond retirement**, when the company pays the obligation. Often, they will retire bonds when they mature. For example, earlier we demonstrated the issuance of a five-year bond, along with its first two interest payments. If we had carried out recording all five interest payments, the next step would have been the maturity and retirement of the bond. At this stage, the bond issuer would pay the maturity value of the bond to the owner of the bond, whether that is the original owner or a secondary investor.

This example demonstrates the least complicated method of a bond issuance and retirement at maturity. There are other possibilities that can be much more complicated and beyond the scope of this course. For example, a bond might be callable by the issuing company, in which the company may pay a call premium paid to the current owner of the bond. Also, a bond might be called while there is still a premium or discount on the bond, and that can complicate the retirement process. Situations like these will be addressed in later accounting courses.

To continue with our example, assume that the company issued 100 bonds with a face value of $1,000, a 5-year term, and a stated interest rate of 5% when the market rate was 5% and received $100,000. It was recorded in this way:


Journal entry: debit Cash and credit Bonds Payable 100,000 each. Explanation: “To record issuance of 100, $1,000, 5 percent bonds with an effective interest rate of 5 percent.”

At the end of 5 years, the company will retire the bonds by paying the amount owed. To record this action, the company would debit Bonds Payable and credit Cash. Remember that the bond payable retirement debit entry will always be the face amount of the bonds since, when the bond matures, any discount or premium will have been completely amortized.


Journal entry: debit Bonds Payable and credit Cash 100,000 each. Explanation: “ To record the retirement of bonds payable.”

12.6: Prepare Journal Entries to Reflect the Life Cycle of Bonds is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

CHAPTER OVERVIEW

13: Equity

13.1: Types of Businesses and Business Activities

13.2: Explain the Process of Securing Equity Financing through the Issuance of Stock

13.3: Analyze and Record Transactions for the Issuance and Repurchase of Stock

13.4: Record Transactions and the Effects on Financial Statements for Cash Dividends, Property Dividends, Stock Dividends, and Stock Splits

13.5: Compare and Contrast Owners' Equity versus Retained Earnings

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13.1: Types of Businesses and Business Activities

Forms of Business Organizations

Accountants frequently refer to a business organization as an **accounting entity** or a **business entity**. A business entity is any business organization, such as a hardware store or grocery store, that exists as an economic unit. For accounting purposes, each business organization or entity has an existence separate from its owner(s), creditors, employees, customers, and other businesses. This separate existence of the business organization is known as the **business entity concept**. Thus, in the accounting records of the business entity, the activities of each business should be kept separate from the activities of other businesses and from the personal financial activities of the owner(s).

As you will see shortly, the business entity concept applies to the four main forms of businesses—single proprietorships, partnerships, and corporations. Thus, for accounting purposes, all four business forms are separate from other business entities and from their owner(s).

- A **single proprietorship** is an unincorporated business owned by an individual and often managed by that same person. Single proprietors include physicians, lawyers, electricians, and other people in business for themselves. Many small service businesses and retail establishments are also single proprietorships. No legal formalities are necessary to organize such businesses, and usually business operations can begin with only a limited investment. The most attractive feature of a proprietorship is that there is **no** "double taxation". Both proprietorships and partnerships do not pay taxes on profits at the business level. The only taxes paid are at the personal level—this occurs when proprietors and partners pay taxes on their share of their company's income. On the other hand, a business owner is personally liable for all debts of his or her company. This is called unlimited liability. If you're a sole proprietorship and the debts of your business exceed its assets, creditors can seize your personal assets to cover the proprietorship's outstanding business debt.
- A **partnership** is an unincorporated business owned by two or more persons associated as partners. Often the same persons who own the business also manage the business. Many small retail establishments and professional practices, such as dentists, physicians, attorneys, and many CPA firms, are partnerships. Unlimited liability is even riskier in the case of a partnership. Each partner is personally liable not only for his or her own actions but also for the actions of all the partners. If, through mismanagement by one of your partners, the partnership is forced into bankruptcy, the creditors can go after you for all outstanding debts of the partnership.
- A **corporation** is a business incorporated under the laws of a state and owned by a few stockholders or thousands of stockholders. Almost all large businesses and many small businesses are incorporated. The corporation is unique in that it is a separate legal business entity. The owners of the corporation are **stockholders**, or **shareholders**. Stockholders do not directly manage the corporation. They elect a board of directors to represent their interests.

Accounting is necessary for all forms of business organizations, and each company must follow generally accepted accounting principles (GAAP).

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13.2: Explain the Process of Securing Equity Financing through the Issuance of Stock

A **corporation** is a legal business structure involving one or more individuals (owners) who are legally distinct (separate) from the business that is created under state laws. The owners of a corporation are called **stockholders** (or shareholders) and may or may not be employees of the corporation. Most corporations rely on a combination of debt (liabilities) and equity (stock) to raise capital. Both debt and equity financing have the goal of obtaining funding, often referred to as capital, to be used to acquire other assets needed for operations or expansion. **Capital** consists of the total cash and other assets owned by a company found on the left side of the accounting equation. The method of financing these assets is evidenced by looking at the right side of the accounting equation, either recorded as liabilities or shareholders' equity.

The Organization of a Corporation

Incorporation is the process of forming a company into a corporate legal entity. The advantages of incorporating are available to a corporation regardless of size, from a corporation with one shareholder to those with hundreds of thousands of shareholders. To issue stock, an entity must first be incorporated in a state.

The process of incorporating requires filing the appropriate paperwork and receiving approval from a governmental entity to operate as a corporation. Each state has separate requirements for creating a corporation, but ultimately, each state grants a corporation the right to conduct business in the respective state in which the corporation is formed. The steps to incorporate are similar in most states:

1. The founders (incorporators) choose an available business name that complies with the state's corporation rules. A state will not allow a corporation to choose a name that is already in use or that has been in use in recent years. Also, similar names might be disallowed.
2. The founders of a corporation prepare **articles of incorporation** called a "charter," which defines the basic structure and purpose of the corporation and the amount of capital stock that can be issued or sold.
3. The founders file the articles of incorporation with the Department of State of the state in which the incorporation is desired. Once the articles are filed and any required fees are paid, the government approves the incorporation.
4. The incorporators hold an organizational meeting to elect the board of directors. Board meetings must be documented with formal board minutes (a written record of the items discussed, decisions made, and action plans resulting from the meeting). The board of directors generally meets at least annually. **Microsoft**, for example, has 14 directors on its board.[1] Boards may have more or fewer directors than this, but most boards have a minimum of at least three directors.
5. The board of directors prepares and adopts corporate bylaws. These bylaws lay out the operating rules for the corporation. Templates for drawing up corporate bylaws are usually available from the state to ensure that they conform with that state's requirements.
6. The board of directors agrees upon a par value price for the stock. Par value is a legal concept discussed later in this section. The price that the company receives (the initial market value) will be determined by what the purchasing public is willing to pay. For example, the company might set the par value at $1 per share, while the investing public on the day of issuance might be willing to pay $30 per share for the stock.

CONCEPTS IN PRACTICE

Deciding Where to Incorporate

With 50 states to choose from, how do corporations decide where to incorporate? Many corporations are formed in either Delaware or Nevada for several reasons. Delaware is especially advantageous for large corporations because it has some of the most flexible business laws in the nation and its court system has a division specifically for handling business cases that operates without juries. Additionally, companies formed in Delaware that do not transact business in the state do not need to pay state corporate income tax. Delaware imposes no personal tax for non-residents, and shareholders can be non-residents. In addition, stock shares owned by non-Delaware residents are not subject to Delaware state taxation.

Because of these advantages, Delaware dominated the share of business incorporation for several decades. In recent years, though, other states are seeking to compete for these businesses by offering similarly attractive benefits of incorporation. Nevada in

particular has made headway. It has no state corporate income tax and does not impose any fees on shares or shareholders. After the initial set up fees, Nevada has no personal or franchise tax for corporations or their shareholders. Nevada, like Delaware, does not require shareholders to be state residents. If a corporation chooses to incorporate in Delaware, Nevada, or any state that is not its home state, it will need to register to do business in its home state. Corporations that transact in states other than their state of incorporation are considered *foreign* and may be subject to fees, local taxes, and annual reporting requirements that can be time consuming and expensive.

Advantages of the Corporate Form

Compared to other forms of organization for businesses, corporations have several advantages. A corporation is a separate legal entity, it provides limited liability for its owner or owners, ownership is transferable, it has a continuing existence, and capital is generally easy to raise.

Separate Legal Entity

A sole proprietorship, a partnership, and a corporation are different types of business entities. However, only a corporation is a legal entity. As a separate legal entity, a corporation can obtain funds by selling shares of stock, it can incur debt, it can become a party to a contract, it can sue other parties, and it can be sued. The owners are separate from the corporation. This separate legal status complies with one of the basic accounting concepts—the **accounting entity concept**, which indicates that the economic activity of an entity (the corporation) must be kept separate from the personal financial affairs of the owners.

Limited Liability

Many individuals seek to incorporate a business because they want the protection of limited liability. A corporation usually limits the liability of an investor to the amount of his or her investment in the corporation. For example, if a corporation enters into a loan agreement to borrow a sum of money and is unable to repay the loan, the lender cannot recover the amount owed from the shareholders (owners) unless the owners signed a personal guarantee. This is the opposite of partnerships and sole proprietorships. In partnerships and sole proprietorships, the owners can be held responsible for any unpaid financial obligations of the business and can be sued to pay obligations.

Transferable Ownership

Shareholders in a corporation can transfer shares to other parties without affecting the corporation's operations. In effect, the transfer takes place between the parties outside of the corporation. In most corporations, the company generally does not have to give permission for shares to be transferred to another party. No journal entry is recorded in the corporation's accounting records when a shareholder sells his or her stock to another shareholder. However, a memo entry must be made in the corporate stock ownership records so any dividends can be issued to the correct shareholder.

Continuing Existence

From a legal perspective, a corporation is granted existence forever with no termination date. This legal aspect falls in line with the basic accounting concept of the **going concern assumption**, which states that absent any evidence to the contrary, a business will continue to operate in the indefinite future. Because ownership of shares in a corporation is transferrable, re-incorporation is not necessary when ownership changes hands. This differs from a partnership, which ends when a partner dies, or from a sole proprietorship, which ends when the owner terminates the business.

Ease of Raising Capital

Because shares of stock can be easily transferred, corporations have a sizeable market of investors from whom to obtain capital. More than 65 million American households[2] hold investments in the securities markets. Compared to sole proprietorships (whose owners must obtain loans or invest their own funds) or to partnerships (which must typically obtain funds from the existing partners or seek other partners to join; although some partnerships are able borrow from outside parties), a corporation will find that capital is relatively easy to raise.

Disadvantages of the Corporate Form

As compared to other organizations for businesses, there are also disadvantages to operating as a corporation. They include the costs of organization, regulation, and taxation.

Costs of Organization

Corporations incur costs associated with organizing the corporate entity, which include attorney fees, promotion costs, and filing fees paid to the state. These costs are debited to an account called **organization costs**. Assume that on January 1, Rayco Corporation made a payment for $750 to its attorney to prepare the incorporation documents and paid $450 to the state for filing fees. Rayco also incurred and paid $1,200 to advertise and promote the stock offering. The total organization costs are $2,400 ($750 + $450 + $1,200). The journal entry recorded by Rayco is a $2,400 debit to Organization Costs and a $2,400 credit to Cash.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1	Organization Costs Expense	2,400	
	Cash		2,400
	To record organization costs		

Organization costs are reported as part of the operating expenses on the corporation's income statement.

Regulation

Compared to partnerships and sole proprietorships, corporations are subject to considerably more regulation both by the states in which they are incorporated and the states in which they operate. Each state provides limits to the powers that a corporation may exercise and specifies the rights and liabilities of shareholders. The **Securities and Exchange Commission (SEC)** is a federal agency that regulates corporations whose shares are listed and traded on security exchanges such as the New York Stock Exchange (NYSE), the National Association of Securities Dealers Automated Quotations Exchange (NASDAQ), and others; it accomplishes this through required periodic filings and other regulations. States also require the filing of periodic reports and payment of annual fees.

Taxation

As legal entities, typical corporations (C corporations, named after the specific subchapter of the Internal Revenue Service code under which they are taxed), are subject to federal and state income taxes (in those states with corporate taxes) based on the income they earn. Stockholders are also subject to income taxes, both on the dividends they receive from corporations and any gains they realize when they dispose of their stock. The income taxation of both the corporate entity's income and the stockholder's dividend is referred to as **double taxation** because the income is taxed to the corporation that earned the income and then taxed again to stockholders when they receive a distribution of the corporation's income.

Corporations that are closely held (with fewer than 100 stockholders) can be classified as S corporations, so named because they have elected to be taxed under subchapter S of the Internal Revenue Service code. For the most part, S corporations pay no income taxes because the income of the corporation is divided among and passed through to each of the stockholders, each of whom pays income taxes on his or her share. Both Subchapter S (Sub S) and similar Limited Liability Companies (LLCs) are not taxed at the business entity but instead pass their taxable income to their owners.

Financing Options: Debt versus Equity

Before exploring the process for securing corporate financing through equity, it is important to review the advantages and disadvantages of acquiring capital through debt. When deciding whether to raise capital by issuing debt or equity, a corporation needs to consider dilution of ownership, repayment of debt, cash obligations, budgeting impacts, administrative costs, and credit risks.

Dilution of Ownership

The most significant consideration of whether a company should seek funding using debt or equity financing is the effect on the company's financial position. Issuance of debt does not dilute the company's ownership as no additional ownership shares are issued. Issuing debt, or borrowing, creates an increase in cash, an asset, and an increase in a liability, such as notes payable or bonds payable. Because borrowing is independent of an owner's ownership interest in the business, it has no effect on stockholders' equity, and ownership of the corporation remains the same as illustrated in the accounting equation in Figure 14.2.



Figure 14.2 Debt Financing. Debt financing increases assets and liabilities but has no effect on stockholders' equity. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

On the other hand, when a corporation issues stock, it is financing with equity. The same increase in cash occurs, but financing causes an increase in a capital stock account in stockholders' equity as illustrated in the accounting equation in Figure 14.3.



Figure 14.3 Equity Financing. Equity financing increases assets and stockholders' equity but has no effect on liabilities. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

This increase in stockholders' equity implies that more shareholders will be allowed to vote and will participate in the distribution of profits and assets upon liquidation.

Repayment of Debt

A second concern when choosing between debt and equity financing relates to the repayment to the lender. A lender is a debt holder entitled to repayment of the original principal amount of the loan plus interest. Once the debt is paid, the corporation has no additional obligation to the lender. This allows owners of a corporation to claim a larger portion of the future earnings than would be possible if more stock were sold to investors. In addition, the interest component of the debt is an expense, which reduces the amount of income on which a company's income tax liability is calculated, thereby lowering the corporation's tax liability and the actual cost of the loan to the company.

Cash Obligations

The most obvious difference between debt and equity financing is that with debt, the principal and interest must be repaid, whereas with equity, there is no repayment requirement. The decision to declare dividends is solely up to the board of directors, so if a company has limitations on cash, it can skip or defer the declaration of dividends. When a company obtains capital through debt, it must have sufficient cash available to cover the repayment. This can put pressure on the company to meet debt obligations when cash is needed for other uses.

Budgeting

Except in the case of variable interest loans, loan and interest payments are easy to estimate for the purpose of budgeting cash payments. Loan payments do not tend to be flexible; instead the principal payment is required month after month. Moreover, interest costs incurred with debt are an additional fixed cost to the company, which raises the company's break-even point (total revenue equals total costs) as well as its cash flow demands.

Cost Differences

Issuing debt rather than equity may reduce additional administration costs associated with having additional shareholders. These costs may include the costs for informational mailings, processing and direct-depositing dividend payments, and holding shareholder meetings. Issuing debt also saves the time associated with shareholder controversies, which can often defer certain management actions until a shareholder vote can be conducted.

Risk Assessment by Creditors

Borrowing commits the borrower to comply with debt covenants that can restrict both the financing options and the opportunities that extend beyond the main business function. This can limit a company's vision or opportunities for change. For example, many debt covenants restrict a corporation's **debt-to-equity ratio**, which measures the portion of debt used by a company relative to the amount of stockholders' equity, calculated by dividing total debt by total equity.

$$\text{Debt-to-Equity Ratio} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

When a company borrows additional funds, its total debt (the numerator) rises. Because there is no change in total equity, the denominator remains the same, causing the debt-to-equity ratio to increase. Because an increase in this ratio usually means that the company will have more difficulty in repaying the debt, lenders and investors consider this an added risk. Accordingly, a business is limited in the amount of debt it can carry. A debt agreement may also restrict the company from borrowing additional funds.

To increase the likelihood of debt repayment, a debt agreement often requires that a company's assets serve as collateral, or for the company's owners to guarantee repayment. Increased risks to the company from high-interest debt and high amounts of debt, particularly when the economy is unstable, include obstacles to growth and the potential for insolvency resulting from the costs of holding debt. These important considerations should be assessed prior to determining whether a company should choose debt or equity financing.

THINK IT THROUGH

Financing a Business Expansion

You are the CFO of a small corporation. The president, who is one of five shareholders, has created an innovative new product that is testing well with substantial demand. To begin manufacturing, $400,000 is needed to acquire the equipment. The corporation's balance sheet shows total assets of $2,400,000 and total liabilities of $600,000. Most of the liabilities relate to debt that carries a covenant requiring that the company maintain a debt-to-equity ratio not exceeding 0.50 times. Determine the effect that each of the two options of obtaining additional capital will have on the debt covenant. Prepare a brief memo outlining the advantages of issuing shares of common stock.

How Stocks Work

The Securities and Exchange Commission (SEC) (www.sec.gov) is a government agency that regulates large and small public corporations. Its mission is "to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation."[3] The SEC identifies these as its five primary responsibilities:

- Inform and protect investors
- Facilitate capital information
- Enforce federal securities laws
- Regulate securities markets
- Provide data

Under the Securities Act of 1933,[4] all corporations that make their shares available for sale publicly in the United States are expected to register with the SEC. The SEC's registration requirement covers all securities—not simply shares of stock—including most tradable financial instruments. The Securities Act of 1933, also known as the "truth in securities law," aims to provide investors with the financial data they need to make informed decisions. While some companies are exempt from filing documents with the SEC, those that offer securities for sale in the U.S. and that are not exempt must file a number of forms along with financial statements audited by certified public accountants.

Private versus Public Corporations

Both private and public corporations become incorporated in the same manner through the state governmental agencies that handles incorporation. The journal entries and financial reporting are the same whether a company is a public or a private corporation. A **private corporation** is usually owned by a relatively small number of investors. Its shares are not publicly traded, and the ownership of the stock is restricted to only those allowed by the board of directors.

The SEC defines a **publicly traded company** as a company that "discloses certain business and financial information regularly to the public" and whose "securities trade on public markets."[5] A company can initially operate as private and later decide to "go

public," while other companies go public at the point of incorporation. The process of going public refers to a company undertaking an **initial public offering (IPO)** by issuing shares of its stock to the public for the first time. After its IPO, the corporation becomes subject to public reporting requirements and its shares are frequently listed on a stock exchange.[6]

CONCEPTS IN PRACTICE

Spreading the Risk

The **East India Company** became the world's first publicly traded company as the result of a single factor—risk. During the 1600s, single companies felt it was too risky to sail from the European mainland to the East Indies. These islands held vast resources and trade opportunities, enticing explorers to cross the Atlantic Ocean in search of fortunes. In 1600, several shipping companies joined forces and formed "Governor and Company of Merchants of London trading with the East Indies," which was referred to as the **East India Company**. This arrangement allowed the shipping companies—the investors—to purchase shares in multiple companies rather than investing in a single voyage. If a single ship out of a fleet was lost at sea, investors could still generate a profit from ships that successfully completely their voyages.[7]

The Secondary Market

A corporation's shares continue to be bought and sold by the public after the initial public offering. Investors interested in purchasing shares of a corporation's stock have several options. One option is to buy stock on the **secondary market**, an organized market where previously issued stocks and bonds can be traded after they are issued. Many investors purchase through stock exchanges like the New York Stock Exchange or NASDAQ using a brokerage firm. A full-service brokerage firm provides investment advice as well as a variety of financial planning services, whereas a discount brokerage offers a reduced commission and often does not provide investment advice. Most of the **stock trading**—buying and selling of shares by investors—takes place through **brokers**, registered members of the stock exchange who buy and sell stock on behalf of others. Online access to trading has broadened the secondary market significantly over the past few decades. Alternatively, stocks can be purchased from **investment bankers**, who provide advice to companies wishing to issue new stock, purchase the stock from the company issuing the stock, and then resell the securities to the public.[8]

Marketing a Company's Stock

Once a corporation has completed the incorporation process, it can issue stock. Each share of stock sold entitles the shareholder (the investor) to a percentage of ownership in the company. Private corporations are usually owned by a small number of investors and are not traded on a public exchange. Regardless of whether the corporation is public or private, the steps to finding investors are similar:

1. Have a trusted and reliable management team. These should be experienced professionals who can guide the corporation.
2. Have a financial reporting system in place. Accurate financial reporting is key to providing potential investors with reliable information.
3. Choose an investment banker to provide advice and to assist in raising capital. Investment bankers are individuals who work in a financial institution that is primarily in the business of raising capital for corporations.
4. Write the company's story. This adds personality to the corporation. What is the mission, why it will be successful, and what sets the corporation apart?
5. Approach potential investors. Selecting the right investment bankers will be extremely helpful with this step.

Capital Stock

A company's corporate charter specifies the classes of shares and the number of shares of each class that a company can issue. There are two classes of capital stock—common stock and preferred stock. The two classes of stock enable a company to attract capital from investors with different risk preferences. Both classes of stock can be sold by either public or non-public companies; however, if a company issues only one class, it must be common stock. Companies report both common and preferred stock in the stockholders' equity section of the balance sheet.

Common Stock

A company's primary class of stock issued is **common stock**, and each share represents a partial claim to ownership or a share of the company's business. For many companies, this is the only class of stock they have authorized. Common stockholders have four basic rights.

1. Common stockholders have the right to vote on corporate matters, including the selection of corporate directors and other issues requiring the approval of owners. Each share of stock owned by an investor generally grants the investor one vote.
2. Common stockholders have the right to share in corporate net income proportionally through dividends.
3. If the corporation should have to liquidate, common stockholders have the right to share in any distribution of assets after all creditors and any preferred stockholders have been paid.
4. In some jurisdictions, common shareholders have a **preemptive right**, which allows shareholders the option to maintain their ownership percentage when new shares of stock are issued by the company. For example, suppose a company has 1,000 shares of stock issued and plans to issue 200 more shares. A shareholder who currently owns 50 shares will be given the right to buy a percentage of the new issue equal to his current percentage of ownership. His current percentage of ownership is 5%:

Original ownership percentage=501,000=5%Original ownership percentage=501,000=5%

This shareholder will be given the right to buy 5% of the new issue, or 10 new shares.

Number of new shares to be purchases=5%×200shares=10sharesNumber of new shares to be purchases=5%×200shares=10shares

Should the shareholder choose not to buy the shares, the company can offer the shares to other investors. The purpose of the preemptive right is to prevent new issuances of stock from reducing the ownership percentage of the current shareholders. If the shareholder in our example is not offered the opportunity to buy 5% of the additional shares (his current ownership percentage) and the new shares are sold to other investors, the shareholder's ownership percentage will drop because the total shares issued will increase.

Total number of issues shares after the new issue=1,000+200=1,200sharesTotal number of issues shares after the new issue=1,000+200=1,200shares

New ownership percentage=501,200=4.17%New ownership percentage=501,200=4.17%

The shareholder would now own only 4.17% of the corporation, compared to the previous 5%.

Preferred Stock

A company's charter may authorize more than one class of stock. **Preferred stock** has unique rights that are "preferred," or more advantageous, to shareholders than common stock. The classification of preferred stock is often a controversial area in accounting as some researchers believe preferred stock has characteristics closer to that of a stock/bond hybrid security, with characteristics of debt rather than a true equity item. For example, unlike common stockholders, preferred shareholders typically do not have voting rights; in this way, they are similar to bondholders. In addition, preferred shares do not share in the common stock dividend distributions. Instead, the "preferred" classification entitles shareholders to a dividend that is fixed (assuming sufficient dividends are declared), similar to the fixed interest rate associated with bonds and other debt items. Preferred stock also mimics debt in that preferred shareholders have a priority of dividend payments over common stockholders. While there may be characteristics of both debt and equity, preferred stock is still reported as part of stockholders' equity on the balance sheet.

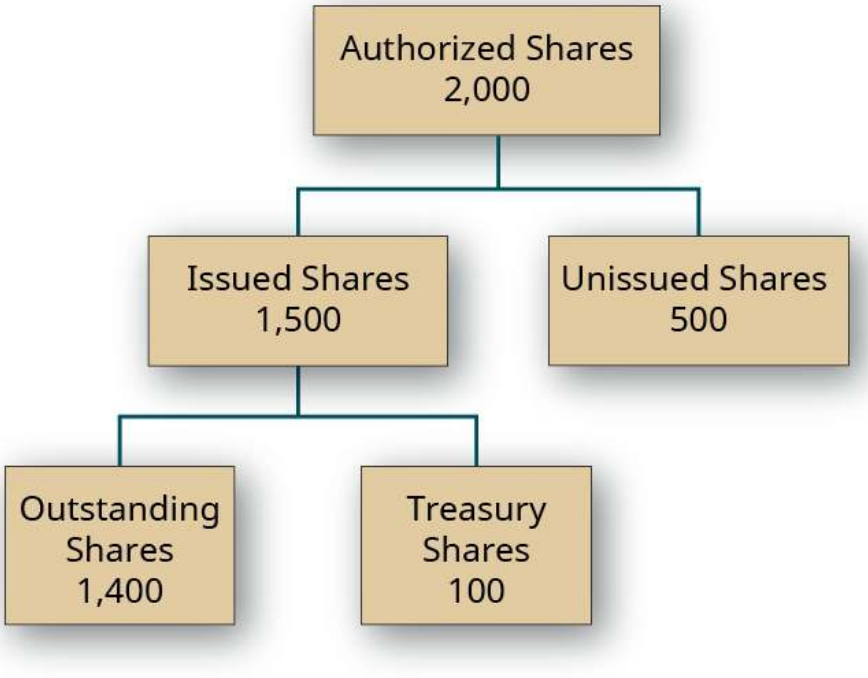
Not every corporation authorizes and issues preferred stock, and there are some important characteristics that corporations should consider when deciding to issue preferred stock. The price of preferred stock typically has less volatility in the stock market. This makes it easier for companies to more reliably budget the amount of the expected capital contribution since the share price is not expected to fluctuate as freely as for common stock. For the investor, this means there is less chance of large gains or losses on the sale of preferred stock.

The Status of Shares of Stock

The corporate charter specifies the number of **authorized shares**, which is the maximum number of shares that a corporation can issue to its investors as approved by the state in which the company is incorporated. Once shares are sold to investors, they are considered **issued shares**. Shares that are issued and are currently held by investors are called **outstanding shares** because they are

"out" in the hands of investors. Occasionally, a company repurchases shares from investors. While these shares are still issued, they are no longer considered to be outstanding. These repurchased shares are called **treasury stock**.

Assume that Waystar Corporation has 2,000 shares of capital stock authorized in its corporate charter. During May, Waystar issues 1,500 of these shares to investors. These investors are now called stockholders because they "hold" shares of stock. Because the other 500 authorized shares have not been issued they are considered unissued shares. Now assume that Waystar buys back 100 shares of stock from the investors who own the 1,500 shares. Only 1,400 of the issued shares are considered outstanding, because 100 shares are now held by the company as treasury shares.



Stock Values

Two of the most important values associated with stock are market value and par value. The **market value of stock** is the price at which the stock of a public company trades on the stock market. This amount does not appear in the corporation's accounting records, nor in the company's financial statements.

Most corporate charters specify the **par value** assigned to each share of stock. This value is printed on the stock certificates and is often referred to as a face value because it is printed on the "face" of the certificate. Incorporators typically set the par value at a very small arbitrary amount because it is used internally for accounting purposes and has no economic significance. Because par value often has some legal significance, it is considered to be legal capital. In some states, par value is the minimum price at which the stock can be sold. If for some reason a share of stock with a par value of one dollar was issued for less than its par value of one dollar known as issuing at a **stock discount**, the shareholder could be held liable for the difference between the issue price and the par value if liquidation occurs and any creditors remain unpaid.

Under some state laws, corporations are sometimes allowed to issue **no-par stock**—a stock with no par value assigned. When this occurs, the company's board of directors typically assigns a **stated value** to each share of stock, which serves as the company's legal capital. Companies generally account for stated value in the accounting records in the same manner as par value. If the company's board fails to assign a stated value to no-par stock, the entire proceeds of the stock sale are treated as legal capital. A portion of the stockholders' equity section of **Frontier Communications Corporation**'s balance sheet as of December 31, 2017 displays the reported preferred and common stock. The par value of the preferred stock is $0.01 per share and $0.25 per share for common stock. The legal capital of the preferred stock is $192.50, while the legal capital of the common stock is $19,883.[9]

FRONTIER COMMUNICATIONS CORPORATION Stockholders' Equity For the Month Ended December 31, 2017	
Preferred Stock, $0.01 par value (50,000 authorized shares, 11.125%, Series A, 19,250 shares issued and outstanding)	$ 192.50
Common Stock, $0.25 par value (175,000 authorized shares, 79,532 issued, and 78,441 and 78,170 outstanding, at December 31, 2017 and 2016, respectively)	19,883.00

ETHICAL CONSIDERATIONS

Shareholders, Stakeholders, and the Business Judgment Rule

Shareholders are the owners of a corporation, whereas stakeholders have an interest in the outcome of decisions of the corporation. Courts have ruled that, "A business corporation is organized and carried on primarily for the profit of the stockholders" as initially ruled in the early case *Dodge v. Ford Motor Co.*, 204 Mich. 459, 170 N.W. 668 (Mich. 1919). This early case outlined the "business judgment rule." It allows for a corporation to use its judgment in how to run the company in the best interests of the shareholders, but also allows the corporation the ability to make decisions for the benefit of the company's stakeholders. The term known as the "business judgment rule" has been expanded in numerous cases to include making decisions directly for the benefit of stakeholders, thereby allowing management to run a company in a prudent fashion. The stakeholder theories started in the *Dodge* case have been expended to allow corporations to make decisions for the corporation's benefit, including decisions that support stakeholder rights.

Prudent management of a corporation includes making decisions that support stakeholders and shareholders. A shareholder is also a stakeholder in any decision. A stakeholder is anyone with an interest in the outcome in the corporation's decision, even if the person owns no financial interest in the corporation. Corporations need to take a proactive step in managing stakeholder concerns and issues. Strategies on how to manage stakeholder needs have been developed from both a moral perspective and a risk management perspective. Both approaches allow management to understand the issues related to their stakeholders and to make decisions in the best interest of the corporation and its owners. Proper stakeholder management should allow corporations to develop profitable long-term plans that lead to greater viability of the corporation.

Footnotes

- 1 Microsoft Corporation. "Board of Directors." https://www.microsoft.com/en-us/Inve...directors.aspx
- 2 Financial Samurai. "What Percent of Americans Hold Stocks?" February 18, 2019. https://www.financialsamurai.com/wha...ns-own-stocks/
- 3 U.S. Securities and Exchange Commission. "What We Do." June 10, 2013. https://www.sec.gov/Article/whatwedo.html
- 4 U.S. Securities and Exchange Commission. "Registration under the Securities Act of 1933." https://www.investor.gov/additional-...ities-act-1933
- 5 U. S. Securities and Exchange Commission. "Public Companies." https://www.investor.gov/introductio...blic-companies
- 6 U.S. Securities and Exchange Commission. "Companies, Going Public." October 14, 2014. https://www.sec.gov/fast-answers/ans...publichtm.html
- 7 Johnson Hur. "History of The Stock Market." BeBusinessed.com. October 2016. https://bebusinessed.com/history/his...-stock-market/
- 8 Dr. Econ. "Why Do Investment Banks Syndicate a New Securities Issue (and Related Questions)." Federal Reserve Bank of San Francisco. December 1999. https://www.frbsf.org/education/publ...ent-insurance/
- 9 Frontier Communications Corporation. 10-K Filing. February 28, 2018. https://www.sec.gov/Archives/edgar/d...tement_Schedul

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13.3: Analyze and Record Transactions for the Issuance and Repurchase of Stock

Chad and Rick have successfully incorporated La Cantina and are ready to issue common stock to themselves and the newly recruited investors. The proceeds will be used to open new locations. The corporate charter of the corporation indicates that the par value of its common stock is $1.50 per share. When stock is sold to investors, it is very rarely sold at par value. Most often, shares are issued at a value in excess of par. This is referred to as issuing stock at a premium. Stock with no par value that has been assigned a stated value is treated very similarly to stock with a par value.

Stock can be issued in exchange for cash, property, or services provided to the corporation. For example, an investor could give a delivery truck in exchange for a company's stock. Another investor could provide legal fees in exchange for stock. The general rule is to recognize the assets received in exchange for stock at the asset's fair market value.

Typical Common Stock Transactions

The company plans to issue most of the shares in exchange for cash, and other shares in exchange for kitchen equipment provided to the corporation by one of the new investors. Two common accounts in the equity section of the balance sheet are used when issuing stock—Common Stock and Additional Paid-in Capital from Common Stock. Common Stock consists of the par value of all shares of common stock issued. **Additional paid-in capital** from common stock consists of the excess of the proceeds received from the issuance of the stock over the stock's par value. When a company has more than one class of stock, it usually keeps a separate additional paid-in capital account for each class.

Issuing Common Stock with a Par Value in Exchange for Cash

When a company issues new stock for cash, assets increase with a debit, and equity accounts increase with a credit. To illustrate, assume that La Cantina issues 8,000 shares of common stock to investors on January 1 for cash, with the investors paying cash of $21.50 per share. The total cash to be received is $172,000.

8,000shares×$21.50=$172,0008,000shares×$21.50=$172,000

The transaction causes Cash to increase (debit) for the total cash received. The Common Stock account increases (credit) with a credit for the par value of the 8,000 shares issued: 8,000 × $1.50, or $12,000. The excess received over the par value is reported in the Additional Paid-in Capital from Common Stock account. Since the shares were issued for $21.50 per share, the excess over par value per share of $20 ($21.50 − $1.50) is multiplied by the number of shares issued to arrive at the Additional Paid-in Capital from Common Stock credit.

($21.50−$1.50)×8,000=$160,000($21.50−$1.50)×8,000=$160,000

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1	Cash	172,000	
	Common Stock		12,000
	Additional Paid-in Capital from Common Stock		160,000
	To record the issuance of $1.50 par value common stock for cash		

Issuing Common Stock with a Par Value in Exchange for Property or Services

When a company issues stock for property or services, the company increases the respective asset account with a debit and the respective equity accounts with credits. The asset received in the exchange—such as land, equipment, inventory, or any services provided to the corporation such as legal or accounting services—is recorded at the fair market value of the stock or the asset or services received, whichever is more clearly determinable.

To illustrate, assume that La Cantina issues 2,000 shares of authorized common stock in exchange for legal services provided by an attorney. The legal services have a value of $8,000 based on the amount the attorney would charge. Because La Cantina's stock is not actively traded, the asset will be valued at the more easily determinable market value of the legal services. La Cantina must recognize the market value of the legal services as an increase (debit) of $8,000 to its Legal Services Expense account. Similar to recording the stock issued for cash, the Common Stock account is increased by the par value of the issued stock, $1.50 × 2,000

shares, or $3,000. The excess of the value of the legal services over the par value of the stock appears as an increase (credit) to the Additional Paid-in Capital from Common Stock account:

$8,000−$3,000=$5,000$8,000−$3,000=$5,000

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1	Legal Services Expense	8,000	
	Common Stock		3,000
	Additional Paid-in Capital from Common Stock		5,000
	To record the issuance of $1.50 par value common stock in exchange for legal services provided		

Just after the issuance of both investments, the stockholders' equity account, Common Stock, reflects the total par value of the issued stock; in this case, $3,000 + $12,000, or a total of $15,000. The amounts received in excess of the par value are accumulated in the Additional Paid-in Capital from Common Stock account in the amount of $5,000 + $160,000, or $165,000. A portion of the equity section of the balance sheet just after the two stock issuances by La Cantina will reflect the Common Stock account stock issuances as shown in Figure 14.4.

LA CANTINA Partial Stockholders' Equity Section of the Balance Sheet For the Month Ended December 31, 2020	
Stockholders' Equity	
Common Stock, $1.50 par value, 20,000 shares authorized,	
10,000 issued and outstanding	$ 15,000
Additional Paid-in Capital from Common Stock	165,000

Figure 14.4 Partial Stockholder's Equity for La Cantina. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Issuing No-Par Common Stock with a Stated Value

Not all stock has a par value specified in the company's charter. In most cases, no-par stock is assigned a stated value by the board of directors, which then becomes the legal capital value. Stock with a stated value is treated as if the stated value is a par value. Assume that La Cantina's 8,000 shares of common stock issued on June 1 for $21.50 were issued at a stated value of $1.50 rather than at a par value. The total cash to be received remains $172,000 (8,000 shares × $21.50), which is recorded as an increase (debit) to Cash. The Common Stock account increases with a credit for the stated value of the 8,000 shares issued: 8,000 × $1.50, or $12,000. The excess received over the stated value is reported in the Additional Paid-in Capital from Common Stock account at $160,000, based on the issue price of $21.50 per share less the stated value of $1.50, or $20, times the 8,000 shares issued:

($21.50−$1.50)×8,000=$160,000($21.50−$1.50)×8,000=$160,000

The transaction looks identical except for the explanation.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1	Cash	172,000	
	Common Stock		12,000
	Additional Paid-in Capital from Common Stock		160,000
	To record the issuance of $1.50 stated value common stock for cash		

If the 8,000 shares of La Cantina's common stock had been no-par, and no stated value had been assigned, the $172,000 would be debited to Cash, with a corresponding increase in the Common Stock account as a credit of $172,000. No entry would be made to Additional Paid-in Capital account as it is reserved for stock issue amounts above par or stated value. The entry would appear as:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1	Cash	172,000	
	Common Stock		172,000
	To record the issuance of no-par common stock for cash		

Issuing Preferred Stock

A few months later, Chad and Rick need additional capital to develop a website to add an online presence and decide to issue all 1,000 of the company's authorized preferred shares. The 5%, $8 par value, preferred shares are sold at $45 each. The Cash account increases with a debit for $45 times 1,000 shares, or $45,000. The Preferred Stock account increases for the par value of the preferred stock, $8 times 1,000 shares, or $8,000. The excess of the issue price of $45 per share over the $8 par value, times the 1,000 shares, is credited as an increase to Additional Paid-in Capital from Preferred Stock, resulting in a credit of $37,000.

($45−$8)×1,000=$37,000($45−$8)×1,000=$37,000

The journal entry is:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1	Cash	45,000	
	Preferred Stock		8,000
	Additional Paid-in Capital from Preferred Stock		37,000
	To record the issuance of $8 par value preferred stock for cash		

Figure 14.5 shows what the equity section of the balance sheet will reflect after the preferred stock is issued.

LA CANTINA Partial Stockholders' Equity Section of the Balance Sheet For the Month Ended December 31, 2020	
Stockholders' Equity	
5% Preferred Stock. $8 par value, 1,000 shares authorized,	
1,000 shares issued and outstanding	$ 8,000
Additional Paid-in Capital from Preferred Stock	37,000
Common Stock, $1.50 par value, 20,000 shares authorized,	
10,000 shares issued and outstanding	15,000
Additional Paid-in Capital from Common Stock	165,000
Retained Earnings	xx

Figure 14.5 Partial Stockholders' Equity for La Cantina. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Notice that the corporation presents preferred stock before common stock in the Stockholders' Equity section of the balance sheet because preferred stock has preference over common stock in the case of liquidation. GAAP requires that each class of stock displayed in this section of the balance sheet includes several items that must be disclosed along with the respective account names. The required items to be disclosed are:

- Par or stated value
- Number of shares authorized
- Number of shares issued
- Number of shares outstanding
- If preferred stock, the dividend rate

Treasury Stock

Sometimes a corporation decides to purchase its own stock in the market. These shares are referred to as treasury stock. A company might purchase its own outstanding stock for a number of possible reasons. It can be a strategic maneuver to prevent another

company from acquiring a majority interest or preventing a hostile takeover. A purchase can also create demand for the stock, which in turn raises the market price of the stock. Sometimes companies buy back shares to be used for employee stock options or profit-sharing plans.

THINK IT THROUGH

Walt Disney Buys Back Stock

The **Walt Disney Company** has consistently spent a large portion of its cash flows in buying back its own stock. According to *The Motley Fool*, the **Walt Disney Company** bought back 74 million shares in 2016 alone. Read the *Motley Fool* article and comment on other options that **Walt Disney** may have had to obtain financing.

Acquiring Treasury Stock

When a company purchases treasury stock, it is reflected on the balance sheet in a contra equity account. As a contra equity account, Treasury Stock has a debit balance, rather than the normal credit balances of other equity accounts. The total cost of treasury stock reduces total equity. In substance, treasury stock implies that a company owns shares of itself. However, owning a portion of one's self is not possible. Treasury shares do not carry the basic common shareholder rights because they are not outstanding. Dividends are not paid on treasury shares, they provide no voting rights, and they do not receive a share of assets upon liquidation of the company. There are two methods possible to account for treasury stock—the cost method, which is discussed here, and the par value method, which is a more advanced accounting topic. The cost method is so named because the amount in the Treasury Stock account at any point in time represents the number of shares held in treasury times the original cost paid to acquire each treasury share.

Assume Duratech's net income for the first year was $3,100,000, and that the company has 12,500 shares of common stock issued. During May, the company's board of directors authorizes the repurchase of 800 shares of the company's own common stock as treasury stock. Each share of the company's common stock is selling for $25 on the open market on May 1, the date that Duratech purchases the stock. Duratech will pay the market price of the stock at $25 per share times the 800 shares it purchased, for a total cost of $20,000. The following journal entry is recorded for the purchase of the treasury stock under the cost method.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 1	Treasury Stock	20,000	
	Cash		20,000
	To record the purchase of treasury stock for cash		

Even though the company is purchasing stock, there is no asset recognized for the purchase. An entity cannot own part of itself, so no asset is acquired. Immediately after the purchase, the equity section of the balance sheet (Figure 14.6) will show the total cost of the treasury shares as a deduction from total stockholders' equity.

DURATECH Partial Stockholders' Equity Section of the Balance Sheet For the Month Ended December 31, 2020	
Stockholders' Equity	
5% Preferred Stock. $8 par value, 1,000 shares authorized,	
1,000 shares issued and outstanding	$ 8,000
Additional Paid-in Capital from Preferred Stock	37,000
Common Stock, $1.50 par value, 20,000 shares authorized,	
10,000 shares issued, 9,200 shares outstanding	15,000
Additional Paid-in Capital from Common Stock	70,000
Retained Earnings	31,000
	161,000
Treasury Stock (800 shares) at cost	(20,000)
Total Stockholders' Equity	$141,000

Figure 14.6 Partial Stockholders' Equity Section of the Balance Sheet for Duratech. After the purchase of treasury stock, the stockholders' equity section of the balance sheet is shown as a deduction from total stockholders' equity. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Notice on the partial balance sheet that the number of common shares outstanding changes when treasury stock transactions occur. Initially, the company had 10,000 common shares issued and outstanding. The 800 repurchased shares are no longer outstanding, reducing the total outstanding to 9,200 shares.

CONCEPTS IN PRACTICE

Reporting Treasury Stock for Nestlé Holdings Group

Nestlé Holdings Group sells a number of major brands of food and beverages including **Gerber**, **Häagen-Dazs**, **Purina**, and **Lean Cuisine**. The company's statement of stockholders' equity shows that it began with 990 million Swiss francs (CHF) in treasury stock at the beginning of 2016. In 2017, it acquired additional shares at a cost of 3,547 million CHF, raising its total treasury stock to 4,537 million CHF at the end of 2017, primarily due to a share buy-back program.[10]

NESTLE HOLDING GROUP Consolidated Statement of Changes in Equity For the Year Ended December 31, 2017					
Millions (CHF)	**Share Capital**	**Treasury Shares**	**Paid-in Capital**	**Other**	**Total Equity**
Equity as of December 31, 2016	311	(990)	82,870	(16,210)	65,981
Profit for the year			7,538		7,538
Other comprehensive income			252		252
Dividends			(7,468)		(7,468)
Treasury Shares		(3,719)	113		(3,606)
Other		172	869	(961)	80
Equity at December 31, 2017	311	(4,537)	84,174	(17,171)	62,777

Reissuing Treasury Stock above Cost

Management typically does not hold treasury stock forever. The company can resell the treasury stock at cost, above cost, below cost, or retire it. If La Cantina reissues 100 of its treasury shares at cost ($25 per share) on July 3, a reversal of the original purchase for the 100 shares is recorded. This has the effect of increasing an asset, Cash, with a debit, and decreasing the Treasury Stock account with a credit. The original cost paid for each treasury share, $25, is multiplied by the 100 shares to be resold, or $2,500. The journal entry to record this sale of the treasury shares at cost is:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 3	Cash	2,500	
	Treasury Stock		2,500
	To record the sale of 100 shares of treasury stock at cost		

If the treasury stock is resold at a price higher than its original purchase price, the company debits the Cash account for the amount of cash proceeds, reduces the Treasury Stock account with a credit for the cost of the treasury shares being sold, and credits the Paid-in Capital from Treasury Stock account for the difference. Even though the difference—the selling price less the cost—looks like a gain, it is treated as additional capital because gains and losses only result from the disposition of economic resources (assets). Treasury Stock is not an asset. Assume that on August 1, La Cantina sells another 100 shares of its treasury stock, but this time the selling price is $28 per share. The Cash Account is increased by the selling price, $28 per share times the number of shares resold, 100, for a total debit to Cash of $2,800. The Treasury Stock account decreases by the cost of the 100 shares sold, 100 × $25 per share, for a total credit of $2,500, just as it did in the sale at cost. The difference is recorded as a credit of $300 to Additional Paid-in Capital from Treasury Stock.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 1	Cash	2,800	
	Treasury Stock		2,500
	Additional Paid-in Capital from Treasury Stock		300
	To record the sale of 100 shares of treasury stock above cost		

Reissuing Treasury Stock Below Cost

If the treasury stock is reissued at a price below cost, the account used for the difference between the cash received from the resale and the original cost of the treasury stock depends on the balance in the Paid-in Capital from Treasury Stock account. Any balance that exists in this account will be a credit. The transaction will require a debit to the Paid-in Capital from Treasury Stock account to the extent of the balance. If the transaction requires a debit greater than the balance in the Paid-in Capital account, any additional difference between the cost of the treasury stock and its selling price is recorded as a reduction of the Retained Earnings account as a debit. If there is no balance in the Additional Paid-in Capital from Treasury Stock account, the entire debit will reduce retained earnings.

Assume that on October 9, La Cantina sells another 100 shares of its treasury stock, but this time at $23 per share. Cash is increased for the selling price, $23 per share times the number of shares resold, 100, for a total debit to Cash of $2,300. The Treasury Stock account decreases by the cost of the 100 shares sold, 100 × $25 per share, for a total credit of $2,500. The difference is recorded as a debit of $200 to the Additional Paid-in Capital from Treasury Stock account. Notice that the balance in this account from the August 1 transaction was $300, which was sufficient to offset the $200 debit. The transaction is recorded as:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 9	Cash	2,300	
	Additional Paid-in Capital from Treasury Stock	200	
	Treasury Stock		2,500
	To record the sale of 100 shares of treasury stock below cost		

Treasury stock transactions have no effect on the number of shares authorized or issued. Because shares held in treasury are not outstanding, each treasury stock transaction will impact the number of shares outstanding. A corporation may also purchase its own stock and retire it. Retired stock reduces the number of shares issued. When stock is repurchased for retirement, the stock must be removed from the accounts so that it is not reported on the balance sheet. The balance sheet will appear as if the stock was never issued in the first place.

YOUR TURN

Understanding Stockholders' Equity

Wilson Enterprises reports the following stockholders' equity:

WILSON ENTERPRISES, INC. Stockholders' Equity Section of the Balance Sheet For the Month Ended December 31, 2020	
Stockholders' Equity	
Preferred Stock, $100 par value, 10,000 shares authorized, 10,000 shares issued and outstanding	$ 1,000,000
Common Stock, $1 par value, 2,000,000 shares authorized, 1,200,000 shares issued, and 1,180,000 shares outstanding	1,200,000
Additional Paid-in Capital	16,800,000
Retained Earnings	3,670,000
	22,670,000
Treasury Stock (20,000 shares)	(240,000)
Total Stockholders' Equity	$22,430,000

Figure 14.7 Wilson Enterprises, Inc., Stockholders' Equity Section of the Balance Sheet, For the Month Ended December 31, 2020. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Based on the partial balance sheet presented, answer the following questions:

A. At what price was each share of treasury stock purchased?
B. What is reflected in the additional paid-in capital account?
C. Why is there a difference between the common stock shares issued and the shares outstanding?

Solution

A. $240,000 ÷ 20,000 = $12 per share. B. The difference between the market price and the par value when the stock was issued. C. Treasury stock.

Footnotes

- 10 Nestlé. "Annual Report 2017." 2017. www.nestle.com/investors/annual-report
- 11 Julie Bort. "Twitter's IPO Created 1,600 New Millionaires and a $2.2 Billion Tax Bill, Analyst Says." *Business Insider*. November 11, 2013. http://www.businessinsider.com/twitt...naires-2013-11

13.3: Analyze and Record Transactions for the Issuance and Repurchase of Stock is shared under a CC BY-NC-SA license and was authored, remixed, and/or curated by LibreTexts.

- **14.2: Analyze and Record Transactions for the Issuance and Repurchase of Stock** by OpenStax is licensed CC BY-NC-SA 4.0. Original source: https://openstax.org/details/books/principles-financial-accounting.

13.4: Record Transactions and the Effects on Financial Statements for Cash Dividends, Property Dividends, Stock Dividends, and Stock Splits

Do you remember playing the board game Monopoly when you were younger? If you landed on the Chance space, you picked a card. The Chance card may have paid a $50 dividend. At the time, you probably were just excited for the additional funds.

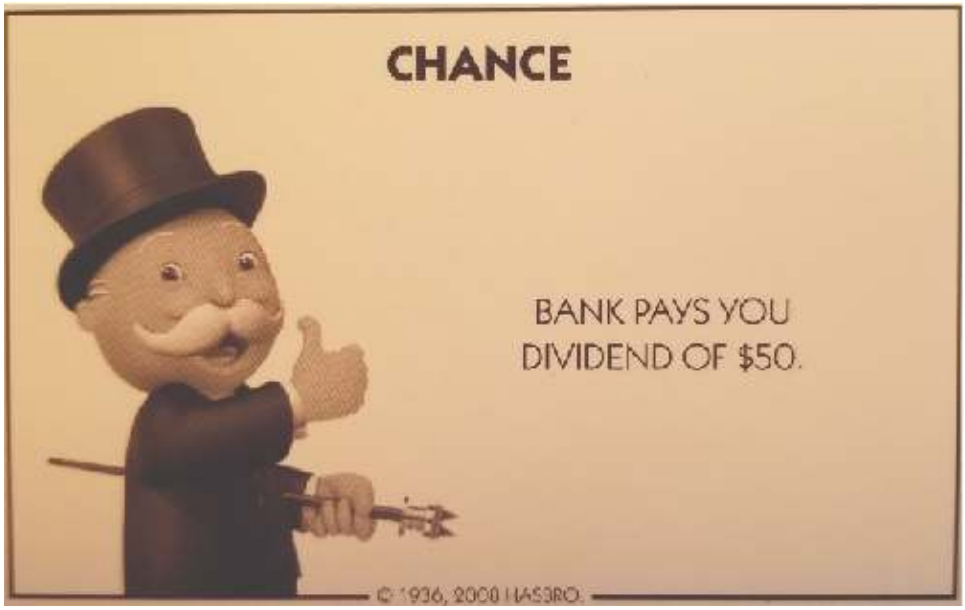


Figure 14.8 Chance Card. A Chance card from a Monopoly game indicates that the bank pays you a dividend of $50. (credit: modification of "Monopoly Chance Card" by Kerry Ceszyk/Flickr, CC BY 4.0)

For corporations, there are several reasons to consider sharing some of their earnings with investors in the form of dividends. Many investors view a dividend payment as a sign of a company's financial health and are more likely to purchase its stock. In addition, corporations use dividends as a marketing tool to remind investors that their stock is a profit generator.

This section explains the three types of dividends—cash dividends, property dividends, and stock dividends—along with stock splits, showing the journal entries involved and the reason why companies declare and pay dividends.

The Nature and Purposes of Dividends

Stock investors are typically driven by two factors—a desire to earn income in the form of dividends and a desire to benefit from the growth in the value of their investment. Members of a corporation's board of directors understand the need to provide investors with a periodic return, and as a result, often declare dividends up to four times per year. However, companies can declare dividends whenever they want and are not limited in the number of annual declarations. Dividends are a distribution of a corporation's earnings. They are not considered expenses, and they are not reported on the income statement. They are a distribution of the net income of a company and are not a cost of business operations.

CONCEPTS IN PRACTICE

So Many Dividends

The declaration and payment of dividends varies among companies. In December 2017 alone, 4,506 U.S. companies declared either cash, stock, or property dividends—the largest number of declarations since 2004.[12] It is likely that these companies waited to declare dividends until after financial statements were prepared, so that the board and other executives involved in the process were able to provide estimates of the 2017 earnings.

Some companies choose not to pay dividends and instead reinvest all of their earnings back into the company. One common scenario for situation occurs when a company experiencing rapid growth. The company may want to invest all their retained earnings to support and continue that growth. Another scenario is a mature business that believes retaining its earnings is more likely to result in an increased market value and stock price. In other instances, a business may want to use its earnings to purchase

new assets or branch out into new areas. Most companies attempt **dividend smoothing**, the practice of paying dividends that are relatively equal period after period, even when earnings fluctuate. In exceptional circumstances, some corporations pay a **special dividend**, which is a one-time extra distribution of corporate earnings. A special dividend usually stems from a period of extraordinary earnings or a special transaction, such as the sale of a division. Some companies, such as **Costco Wholesale Corporation**, pay recurring dividends and periodically offer a special dividend. While **Costco**'s regular quarterly dividend is $0.57 per share, the company issued a $7.00 per share cash dividend in 2017.[13] Companies that have both common and preferred stock must consider the characteristics of each class of stock.

Note that dividends are distributed or paid only to shares of stock that are outstanding. Treasury shares are not outstanding, so no dividends are declared or distributed for these shares. Regardless of the type of dividend, the declaration always causes a decrease in the retained earnings account.

Dividend Dates

A company's board of directors has the power to formally vote to declare dividends. The **date of declaration** is the date on which the dividends become a legal liability, the date on which the board of directors votes to distribute the dividends. Cash and property dividends become liabilities on the declaration date because they represent a formal obligation to distribute economic resources (assets) to stockholders. On the other hand, stock dividends distribute additional shares of stock, and because stock is part of equity and not an asset, stock dividends do not become liabilities when declared.

At the time dividends are declared, the board establishes a date of record and a date of payment. The **date of record** establishes who is entitled to receive a dividend; stockholders who own stock on the date of record are entitled to receive a dividend even if they sell it prior to the date of payment. Investors who purchase shares after the date of record but before the payment date are not entitled to receive dividends since they did not own the stock on the date of record. These shares are said to be sold **ex dividend**. The **date of payment** is the date that payment is issued to the investor for the amount of the dividend declared.

Cash Dividends

Cash dividends are corporate earnings that companies pass along to their shareholders. To pay a cash dividend, the corporation must meet two criteria. First, there must be sufficient cash on hand to fulfill the dividend payment. Second, the company must have sufficient retained earnings; that is, it must have enough residual assets to cover the dividend such that the Retained Earnings account does not become a negative (debit) amount upon declaration. On the day the board of directors votes to declare a cash dividend, a journal entry is required to record the declaration as a liability.

Accounting for Cash Dividends When Only Common Stock Is Issued

Small private companies like La Cantina often have only one class of stock issued, common stock. Assume that on December 16, La Cantina's board of directors declares a $0.50 per share dividend on common stock. As of the date of declaration, the company has 10,000 shares of common stock issued and holds 800 shares as treasury stock. The total cash dividend to be paid is based on the number of shares outstanding, which is the total shares issued less those in treasury. Outstanding shares are 10,000 – 800, or 9,200 shares. The cash dividend is:

9,200shares×$0.50=$4,6009,200shares×$0.50=$4,600

The journal entry to record the declaration of the cash dividends involves a decrease (debit) to Retained Earnings (a stockholders' equity account) and an increase (credit) to Cash Dividends Payable (a liability account).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 9	Retained Earnings	4,600	
	Cash Dividends Payable		4,600
	To record the declaration of a cash dividend		

While a few companies may use a temporary account, Dividends Declared, rather than Retained Earnings, most companies debit Retained Earnings directly. Ultimately, any dividends declared cause a decrease to Retained Earnings.

The second significant dividend date is the date of record. The date of record determines which shareholders will receive the dividends. There is no journal entry recorded; the company creates a list of the stockholders that will receive dividends.

The date of payment is the third important date related to dividends. This is the date that dividend payments are prepared and sent to shareholders who owned stock on the date of record. The related journal entry is a fulfillment of the obligation established on the declaration date; it reduces the Cash Dividends Payable account (with a debit) and the Cash account (with a credit).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 15	Cash Dividends Payable	4,600	
	Cash		4,600
	To record the payment of a cash dividend		

Property Dividends

A **property dividend** occurs when a company declares and distributes assets other than cash. The dividend typically involves either the distribution of shares of another company that the issuing corporation owns (one of its assets) or a distribution of inventory. For example, **Walt Disney Company** may choose to distribute tickets to visit its theme parks. **Anheuser-Busch InBev**, the company that owns the Budweiser and Michelob brands, may choose to distribute a case of beer to each shareholder. A property dividend may be declared when a company wants to reward its investors but doesn't have the cash to distribute, or if it needs to hold onto its existing cash for other investments. Property dividends are not as common as cash or stock dividends. They are recorded at the fair market value of the asset being distributed. To illustrate accounting for a property dividend, assume that Duratech Corporation has 60,000 shares of $0.50 par value common stock outstanding at the end of its second year of operations, and the company's board of directors declares a property dividend consisting of a package of soft drinks that it produces to each holder of common stock. The retail value of each case is $3.50. The amount of the dividend is calculated by multiplying the number of shares by the market value of each package:

60,000shares×$3.50=$210,00060,000shares×$3.50=$210,000

The declaration to record the property dividend is a decrease (debit) to Retained Earnings for the value of the dividend and an increase (credit) to Property Dividends Payable for the $210,000.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Retained Earnings	210,000	
	Property Dividends Payable		210,000
	To record the declaration of a property dividend		

The journal entry to distribute the soft drinks on January 14 decreases both the Property Dividends Payable account (debit) and the Cash account (credit).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 14	Property Dividends Payable	210,000	
	Inventory		210,000
	To record the distribution of a property dividend		

Comparing Small Stock Dividends, Large Stock Dividends, and Stock Splits

Companies that do not want to issue cash or property dividends but still want to provide some benefit to shareholders may choose between small stock dividends, large stock dividends, and stock splits. Both small and large stock dividends occur when a company distributes additional shares of stock to existing stockholders.

There is no change in total assets, total liabilities, or total stockholders' equity when a small stock dividend, a large stock dividend, or a stock split occurs. Both types of stock dividends impact the accounts in stockholders' equity. A stock split causes no change in any of the accounts within stockholders' equity. The impact on the financial statement usually does not drive the decision to choose between one of the stock dividend types or a stock split. Instead, the decision is typically based on its effect on the market. Large stock dividends and stock splits are done in an attempt to lower the market price of the stock so that it is more affordable to potential investors. A small stock dividend is viewed by investors as a distribution of the company's earnings. Both small and large

stock dividends cause an increase in common stock and a decrease to retained earnings. This is a method of capitalizing (increasing stock) a portion of the company's earnings (retained earnings).

Stock Dividends

Some companies issue shares of stock as a dividend rather than cash or property. This often occurs when the company has insufficient cash but wants to keep its investors happy. When a company issues a **stock dividend**, it distributes additional shares of stock to existing shareholders. These shareholders do not have to pay income taxes on stock dividends when they receive them; instead, they are taxed when the investor sells them in the future.

A stock dividend distributes shares so that after the distribution, all stockholders have the exact same percentage of ownership that they held prior to the dividend. There are two types of stock dividends—small stock dividends and large stock dividends. The key difference is that small dividends are recorded at market value and large dividends are recorded at the stated or par value.

Small Stock Dividends

A **small stock dividend** occurs when a stock dividend distribution is less than 25% of the total outstanding shares based on the shares outstanding prior to the dividend distribution. To illustrate, assume that Duratech Corporation has 60,000 shares of $0.50 par value common stock outstanding at the end of its second year of operations. Duratech's board of directors declares a 5% stock dividend on the last day of the year, and the market value of each share of stock on the same day was $9. Figure 14.9 shows the stockholders' equity section of Duratech's balance sheet just prior to the stock declaration.

DURATECH
Stockholders' Equity Section of the Balance Sheet
For the Month Ended December 31, 2020

Stockholders' Equity	
Common Stock, $0.50 par value, 100,000 shares authorized, 60,000 shares issued and outstanding	$ 30,000
Additional Paid-in Capital	44,000
Retained Earnings	51,000
Total Stockholders' Equity	$125,000

Figure 14.9 Stockholders' Equity for Duratech. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The 5% common stock dividend will require the distribution of 60,000 shares times 5%, or 3,000 additional shares of stock. An investor who owns 100 shares will receive 5 shares in the dividend distribution (5% × 100 shares). The journal entry to record the stock dividend declaration requires a decrease (debit) to Retained Earnings for the market value of the shares to be distributed: 3,000 shares × $9, or $27,000. An increase (credit) to the Common Stock Dividends Distributable is recorded for the par value of the stock to be distributed: 3,000 × $0.50, or $1,500. The excess of the market value over the par value is reported as an increase (credit) to the Additional Paid-in Capital from Common Stock account in the amount of $25,500.

JOURNAL

Date	Account	Debit	Credit
Dec. 31	Retained Earnings	27,000	
	Common Stock Dividend Distributable		1,500
	Additional Paid-in Capital from Common Stock		25,500
	To record the declaration of a 5% stock dividend		

If the company prepares a balance sheet prior to distributing the stock dividend, the Common Stock Dividend Distributable account is reported in the equity section of the balance sheet beneath the Common Stock account. The journal entry to record the stock dividend distribution requires a decrease (debit) to Common Stock Dividend Distributable to remove the distributable amount from that account, $1,500, and an increase (credit) to Common Stock for the same par value amount.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 7	Common Stock Dividend Distributable	1,500	
	Common Stock		1,500
	To record the distribution of a 5% stock dividend		

To see the effects on the balance sheet, it is helpful to compare the stockholders' equity section of the balance sheet before and after the small stock dividend.

DURATECH
Stockholders' Equity Section of the Balance Sheet
For the Month Ended December 31, 2020

Stockholders' Equity	Before the Stock Dividend	Stock Dividend Effect	After the Stock Dividend
Common Stock, $0.50 par value	$ 30,000	$ 1,500	$ 31,500
Additional Paid-in Capital	44,000	25,500	69,500
Retained Earnings	51,000	(27,000)	24,000
Total Stockholders' Equity	$125,000	$ 0	$125,000

After the distribution, the total stockholders' equity remains the same as it was prior to the distribution. The amounts within the accounts are merely shifted from the earned capital account (Retained Earnings) to the contributed capital accounts (Common Stock and Additional Paid-in Capital). However, the number of shares outstanding has changed. Prior to the distribution, the company had 60,000 shares outstanding. Just after the distribution, there are 63,000 outstanding. The difference is the 3,000 additional shares of the stock dividend distribution. The company still has the same total value of assets, so its value does not change at the time a stock distribution occurs. The increase in the number of outstanding shares does not dilute the value of the shares held by the existing shareholders. The market value of the original shares plus the newly issued shares is the same as the market value of the original shares before the stock dividend. For example, assume an investor owns 200 shares with a market value of $10 each for a total market value of $2,000. She receives 10 shares as a stock dividend from the company. She now has 210 shares with a total market value of $2,000. Each share now has a theoretical market value of about $9.52.

Large Stock Dividends

A **large stock dividend** occurs when a distribution of stock to existing shareholders is greater than 25% of the total outstanding shares just before the distribution. The accounting for large stock dividends differs from that of small stock dividends because a large dividend impacts the stock's market value per share. While there may be a subsequent change in the market price of the stock after a small dividend, it is not as abrupt as that with a large dividend.

To illustrate, assume that Duratech Corporation's balance sheet at the end of its second year of operations shows the following in the stockholders' equity section prior to the declaration of a large stock dividend.

DURATECH
Stockholders' Equity Section of the Balance Sheet
For the Month Ended December 31, 2020

Stockholders' Equity	
Common Stock, $0.50 par value, 100,000 shares authorized, 60,000 shares issued and outstanding	$ 30,000
Additional Paid-in Capital	44,000
Retained Earnings	51,000
Total Stockholders' Equity	$125,000

Also assume that Duratech's board of directors declares a 30% stock dividend on the last day of the year, when the market value of each share of stock was $9. The 30% stock dividend will require the distribution of 60,000 shares times 30%, or 18,000 additional shares of stock. An investor who owns 100 shares will receive 30 shares in the dividend distribution (30% × 100 shares). The

journal entry to record the stock dividend declaration requires a decrease (debit) to Retained Earnings and an increase (credit) to Common Stock Dividends Distributable for the par or stated value of the shares to be distributed: 18,000 shares × $0.50, or $9,000. The journal entry is:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Retained Earnings	9,000	
	Common Stock Dividends Distributable		9,000
	To record the declaration of a 30% stock dividend		

The subsequent distribution will reduce the Common Stock Dividends Distributable account with a debit and increase the Common Stock account with a credit for the $9,000.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Common Stock Dividends Distributable	9,000	
	Common Stock		9,000
	To record the distribution of a 30% stock dividend		

There is no consideration of the market value in the accounting records for a large stock dividend because the number of shares issued in a large dividend is large enough to impact the market; as such, it causes an immediate reduction of the market price of the company's stock.

In comparing the stockholders' equity section of the balance sheet before and after the large stock dividend, we can see that the total stockholders' equity is the same before and after the stock dividend, just as it was with a small dividend (Figure 14.10).

DURATECH Stockholders' Equity Section of the Balance Sheet For the Month Ended December 31, 2020			
Stockholders' Equity	**Before the Stock Dividend**	**Stock Dividend Effect**	**After the Stock Dividend**
Common Stock, $0.50 par value	$ 30,000	$ 9,000	$ 39,000
Additional Paid-in Capital	44,000		44,000
Retained Earnings	51,000	(9,000)	42,000
Total Stockholders' Equity	$125,000	$ 0	$125,000

Figure 14.10 Stockholders' Equity Section of the Balance Sheet for Duratech. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Similar to distribution of a small dividend, the amounts within the accounts are shifted from the earned capital account (Retained Earnings) to the contributed capital account (Common Stock) though in different amounts. The number of shares outstanding has increased from the 60,000 shares prior to the distribution, to the 78,000 outstanding shares after the distribution. The difference is the 18,000 additional shares in the stock dividend distribution. No change to the company's assets occurred; however, the potential subsequent increase in market value of the company's stock will increase the investor's perception of the value of the company.

Stock Splits

A traditional **stock split** occurs when a company's board of directors issue new shares to existing shareholders in place of the old shares by increasing the number of shares and reducing the par value of each share. For example, in a 2-for-1 stock split, two shares of stock are distributed for each share held by a shareholder. From a practical perspective, shareholders return the old shares and receive two shares for each share they previously owned. The new shares have half the par value of the original shares, but now the shareholder owns twice as many. If a 5-for-1 split occurs, shareholders receive 5 new shares for each of the original shares they owned, and the new par value results in one-fifth of the original par value per share.

While a company technically has no control over its common stock price, a stock's market value is often affected by a stock split. When a split occurs, the market value per share is reduced to balance the increase in the number of outstanding shares. In a 2-for-1 split, for example, the value per share typically will be reduced by half. As such, although the number of outstanding shares and the

price change, the total market value remains constant. If you buy a candy bar for $1 and cut it in half, each half is now worth $0.50. The total value of the candy does not increase just because there are more pieces.

A stock split is much like a large stock dividend in that both are large enough to cause a change in the market price of the stock. Additionally, the split indicates that share value has been increasing, suggesting growth is likely to continue and result in further increase in demand and value. Companies often make the decision to split stock when the stock price has increased enough to be out of line with competitors, and the business wants to continue to offer shares at an attractive price for small investors.

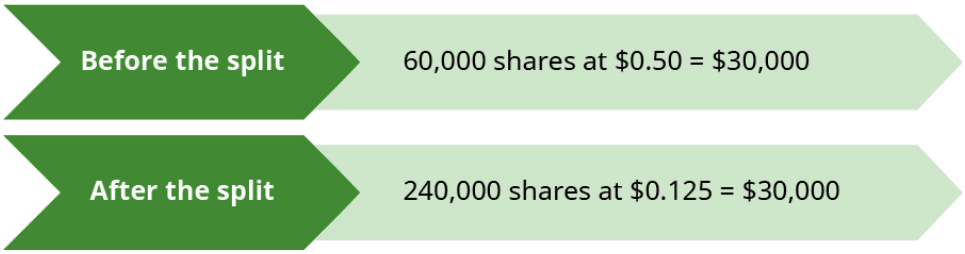
CONCEPTS IN PRACTICE

Samsung Boasts a 50-to-1 Stock Split

In May of 2018, **Samsung Electronics**[14] had a 50-to-1 stock split in an attempt to make it easier for investors to buy its stock. **Samsung**'s market price of each share prior to the split was an incredible 2.65 won ("won" is a Japanese currency), or $2,467.48. Buying one share of stock at this price is rather expensive for most people. As might be expected, even after a slight drop in trading activity just after the split announcement, the reduced market price of the stock generated a significant increase to investors by making the price per share less expensive. The split caused the price to drop to 0.053 won, or $49.35 per share. This made the stock more accessible to potential investors who were previously unable to afford a share at $2,467.

A **reverse stock split** occurs when a company attempts to increase the market price per share by reducing the number of shares of stock. For example, a 1-for-3 stock split is called a reverse split since it reduces the number of shares of stock outstanding by two-thirds and triples the par or stated value per share. The effect on the market is to increase the market value per share. A primary motivator of companies invoking reverse splits is to avoid being delisted and taken off a stock exchange for failure to maintain the exchange's minimum share price.

Accounting for stock splits is quite simple. No journal entry is recorded for a stock split. Instead, the company prepares a memo entry in its journal that indicates the nature of the stock split and indicates the new par value. The balance sheet will reflect the new par value and the new number of shares authorized, issued, and outstanding after the stock split. To illustrate, assume that Duratech's board of directors declares a 4-for-1 common stock split on its $0.50 par value stock. Just before the split, the company has 60,000 shares of common stock outstanding, and its stock was selling at $24 per share. The split causes the number of shares outstanding to increase by four times to 240,000 shares (4 × 60,000), and the par value to decline to one-fourth of its original value, to $0.125 per share ($0.50 ÷ 4). No change occurs to the dollar amount of any general ledger account.



The split typically causes the market price of stock to decline immediately to one-fourth of the original value—from the $24 per share pre-split price to approximately $6 per share post-split ($24 ÷ 4), because the total value of the company did not change as a result of the split. The total stockholders' equity on the company's balance sheet before and after the split remain the same.

DURATECH
Stockholders' Equity Section of the Balance Sheet
For the Month Ended December 31, 2020

Stockholders' Equity	Before the Stock Split	Stock Split Effect	After the Stock Split
Common Stock	$ 30,000	$ 0	$ 30,000
Additional Paid-in Capital	44,000		44,000
Retained Earnings	51,000	0	51,000
Total Stockholders' Equity	$125,000	$ 0	$125,000

THINK IT THROUGH

Accounting for a Stock Split

You have just obtained your MBA and obtained your dream job with a large corporation as a manager trainee in the corporate accounting department. Your employer plans to offer a 3-for-2 stock split. Briefly indicate the accounting entries necessary to recognize the split in the company's accounting records and the effect the split will have on the company's balance sheet.

YOUR TURN

Dividend Accounting

Cynadyne, Inc.'s has 4,000 shares of $0.20 par value common stock authorized, 2,800 issued, and 400 shares held in treasury at the end of its first year of operations. On May 1, the company declared a $1 per share cash dividend, with a date of record on May 12, to be paid on May 25. What journal entries will be prepared to record the dividends?

Solution

A journal entry for the dividend declaration and a journal entry for the cash payout:

To record the declaration:

May 1	Retained Earnings	2,400	
	Dividends Payable		2,400
	To record board of directors authorizing cash dividends		

Date of declaration, May 12, no entry.

To record the payment:

May 25	Dividends Payable	2,400	
	Cash		2,400
	To record cash payout of dividends		

THINK IT THROUGH

Recording Stock Transactions

In your first year of operations the following transactions occur for a company:

- Net profit for the year is $16,000
- 100 shares of $1 par value common stock are issued for $32 per share
- The company purchases 10 shares at $35 per share
- The company pays a cash dividend of $1.50 per share

Prepare journal entries for the above transactions and provide the balance in the following accounts: Common Stock, Dividends, Paid-in Capital, Retained Earnings, and Treasury Stock.

Footnotes

- 12 Ironman at Political Calculations. "Dividends by the Numbers through January 2018." Seeking Alpha. February 9, 2018. seekingalpha.com/article/414...s-january-2018
- 13 Jing Pan. "Will Costco Wholesale Corporation Pay a Special Dividend in 2018?" Income Investors. May 9, 2018. https://www.incomeinvestors.com/will...nd-2018/38865/
- 14 Joyce Lee. "Trading in Samsung Electronics Shares Surges after Stock Split." *Reuters*. May 3, 2018. https://www.reuters.com/article/us-s...-idUSKBN1I500B

13.4: Record Transactions and the Effects on Financial Statements for Cash Dividends, Property Dividends, Stock Dividends, and Stock Splits is shared under a CC BY-NC-SA license and was authored, remixed, and/or curated by LibreTexts.

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13.5: Compare and Contrast Owners' Equity versus Retained Earnings

Owners' equity represents the business owners' share of the company. It is often referred to as net worth or net assets in the financial world and as stockholders' equity or shareholders' equity when discussing businesses operations of corporations. From a practical perspective, it represents everything a company owns (the company's assets) minus all the company owes (its liabilities). While "owners' equity" is used for all three types of business organizations (corporations, partnerships, and sole proprietorships), only sole proprietorships name the balance sheet account "owner's equity" as the entire equity of the company belongs to the sole owner. Partnerships (to be covered more thoroughly in Partnership Accounting) often label this section of their balance sheet as "partners' equity." All three forms of business utilize different accounting for the respective equity transactions and use different equity accounts, but they all rely on the same relationship represented by the basic accounting equation (Figure 14.11).



Figure 14.11 Accounting Equation. The relationship among assets, liabilities, and equity is represented in the accounting equation. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Three Forms of Business Ownership

Businesses operate in one of three forms—sole proprietorships, partnerships, or corporations. Sole proprietorships utilize a single account in owners' equity in which the owner's investments and net income of the company are accumulated and distributions to the owner are withdrawn. Partnerships utilize a separate capital account for each partner, with each capital account holding the respective partner's investments and the partner's respective share of net income, with reductions for the distributions to the respective partners. Corporations differ from sole proprietorships and partnerships in that their operations are more complex, often due to size. Unlike these other entity forms, owners of a corporation usually change continuously.

The stockholders' equity section of the balance sheet for corporations contains two primary categories of accounts. The first is paid-in capital, or **contributed capital**—consisting of amounts paid in by owners. The second category is **earned capital**, consisting of amounts earned by the corporation as part of business operations. On the balance sheet, retained earnings is a key component of the earned capital section, while the stock accounts such as common stock, preferred stock, and additional paid-in capital are the primary components of the contributed capital section.

CONCEPTS IN PRACTICE

Contributed Capital and Earned Capital

The stockholders' equity section of **Cracker Barrel Old Country Store, Inc.**'s consolidated balance sheet as of July 28, 2017, and July 29, 2016, shows the company's contributed capital and the earned capital accounts.[15]

CRACKER BARREL OLD COUNTRY STORE, INC
Consolidated Balance Sheets

	(In thousands except share data) July 28, 2017	July 29, 2016
Shareholders' Equity:		
Preferred Stock – 100,000,000 shares of $.01 par value authorized; 300,000 shares designated as Series A Junior Participating Preferred Stock; no shares issued	-	-
Common Stock – 400,000,000 shares of $.01 par value authorized; 2017 – 24,055,682 shares issued and outstanding; 2016 – 23,956,134 shares issued and outstanding	241	240
Additional Paid-in Captial	55,659	51,462
Accumulated Other Comprehensive Loss	(4,229)	(13,740)
Retained Earnings	492,836	488,481
Total Shareholders' Equity	$544,507	$526,443

Contributed Capital →
Earned Capital →

Characteristics and Functions of the Retained Earnings Account

Retained earnings is the primary component of a company's earned capital. It generally consists of the cumulative net income minus any cumulative losses less dividends declared. A basic statement of retained earnings is referred to as an analysis of retained

earnings because it shows the changes in the retained earnings account during the period. A company preparing a full set of financial statements may choose between preparing a statement of retained earnings, if the activity in its stock accounts is negligible, or a statement of stockholders' equity, for corporations with activity in their stock accounts. A statement of retained earnings for Clay Corporation for its second year of operations (Figure 14.12) shows the company generated more net income than the amount of dividends it declared.

CLAY CORPORATION
Statement of Retained Earnings
For the Year Ended December 31, 2020

Retained Earnings, January 1, 2020		$ 24,000
Net Income		33,000
		57,000
Cash Dividends declared	$(12,500)	
Stock Dividends declared	(6,500)	(19,000)
Retained Earnings, December 31, 2020		$ 38,000

Figure 14.12 Statement of Retained Earnings for Clay Corporation. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

When the retained earnings balance drops below zero, this negative or debit balance is referred to as a **deficit in retained earnings**.

Restrictions to Retained Earnings

Retained earnings is often subject to certain restrictions. **Restricted retained earnings** is the portion of a company's earnings that has been designated for a particular purpose due to legal or contractual obligations. Some of the restrictions reflect the laws of the state in which a company operates. Many states restrict retained earnings by the cost of treasury stock, which prevents the legal capital of the stock from dropping below zero. Other restrictions are contractual, such as debt covenants and loan arrangements; these exist to protect creditors, often limiting the payment of dividends to maintain a minimum level of earned capital.

Appropriations of Retained Earnings

A company's board of directors may designate a portion of a company's retained earnings for a particular purpose such as future expansion, special projects, or as part of a company's risk management plan. The amount designated for a particular purpose is classified as **appropriated retained earnings**.

There are two options in accounting for appropriated retained earnings, both of which allow the corporation to inform the financial statement users of the company's future plans. The first accounting option is to make no journal entry and disclose the amount of appropriation in the notes to the financial statement. The second option is to record a journal entry that transfers part of the unappropriated retained earnings into an Appropriated Retained Earnings account. To illustrate, assume that on March 3, Clay Corporation's board of directors appropriates $12,000 of its retained earnings for future expansion. The company's retained earnings account is first renamed as Unappropriated Retained Earnings. The journal entry decreases the Unappropriated Retained Earnings account with a debit and increases the Appropriated Retained Earnings account with a credit for $12,000.

JOURNAL

Date	Account	Debit	Credit
Mar. 3	Unappropriated Retained Earnings	12,000	
	Appropriated Retained Earnings		12,000
	To record the appropriation of retained earnings		

The company will report the appropriate retained earnings in the earned capital section of its balance sheet. It should be noted that an appropriation does not set aside funds nor designate an income statement, asset, or liability effect for the appropriated amount. The appropriation simply designates a portion of the company's retained earnings for a specific purpose, while signaling that the earnings are being retained in the company and are not available for dividend distributions.

Statement of Stockholders' Equity

The statement of retained earnings is a subsection of the statement of stockholders' equity. While the retained earnings statement shows the changes between the beginning and ending balances of the retained earnings account during the period, the **statement of stockholders' equity** provides the changes between the beginning and ending balances of each of the stockholders' equity accounts, including retained earnings. The format typically displays a separate column for each stockholders' equity account, as shown for Clay Corporation in Figure 14.13. The key events that occurred during the year—including net income, stock issuances, and dividends—are listed vertically. The stockholders' equity section of the company's balance sheet displays only the ending balances of the accounts and does not provide the activity or changes during the period.

CLAY CORPORATION
Statement of Stockholders' Equity
For the Year Ended December 31, 2020

	Common Stock, $1 par	Additional Paid-in Capital	Treasury Stock, at cost $3	Retained Earnings	Totals
Beginning balance, January 1, 2020	$5,000	$64,000	$(1,200)	$ 24,000	$ 91,800
Net Income				33,000	33,000
Common Stock issued, 800 shares	800	3,600			4,400
Cash Dividends declared				(12,500)	(12,500)
Stock Dividends declared				(6,500)	(6,500)
Treasury Stock acquired, 600 shares			(4,200)		(4,200)
Ending balance, December 31, 2020	$5,800	$67,600	$(5,400)	$ 38,000	$106,000

Figure 14.13 Statement of Stockholders' Equity for Clay Corporation. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Nearly all public companies report a statement of stockholders' equity rather than a statement of retained earnings because GAAP requires disclosure of the changes in stockholders' equity accounts during each accounting period. It is significantly easier to see the changes in the accounts on a statement of stockholders' equity rather than as a paragraph note to the financial statements.

IFRS CONNECTION

Corporate Accounting and IFRS

Both U.S. GAAP and IFRS require the reporting of the various owners' accounts. Under U.S. GAAP, these accounts are presented in a statement that is most often called the Statement of Stockholders' Equity. Under IFRS, this statement is usually called the Statement of Changes in Equity. Some of the biggest differences between U.S. GAAP and IFRS that arise in reporting the various accounts that appear in those statements relate to either categorization or terminology differences.

U.S. GAAP divides owners' accounts into two categories: contributed capital and retained earnings. IFRS uses three categories: share capital, accumulated profits and losses, and reserves. The first two IFRS categories correspond to the two categories used under U.S. GAAP. What about the third category, reserves? Reserves is a category that is used to report items such as revaluation surpluses from revaluing long-term assets (see the Long-Term Assets Feature Box: IFRS Connection for details), as well as other equity transactions such as unrealized gains and losses on available-for-sale securities and transactions that fall under Other Comprehensive Income (topics typically covered in more advanced accounting classes). U.S. GAAP does not use the term "reserves" for any reporting.

There are also differences in terminology between U.S. GAAP and IFRS shown in Table 14.1.

Terminology Differences between U.S. GAAP and IFRS

U.S. GAAP	IFRS
Common stock	Share capital
Preferred stock	Preference shares
Additional paid-in capital	Share premium
Stockholders	Shareholders
Retained earnings	Retained profits or accumulated profits
Retained earnings deficit	Accumulated losses

Table14.1

All of this information pertains to publicly traded corporations, but what about corporations that are not publicly traded? Most corporations in the U.S. are not publicly traded, so do these corporations use U.S. GAAP? Some do; some do not. A non-public corporation can use cash basis, tax basis, or full accrual basis of accounting. Most corporations would use a full accrual basis of accounting such as U.S. GAAP. Cash and tax basis are most likely used only by sole proprietors or small partnerships.

However, U.S. GAAP is not the only full accrual method available to non-public corporations. Two alternatives are IFRS and a simpler form of IFRS, known as IFRS for Small and Medium Sized Entities, or SMEs for short. In 2008, the AICPA recognized the IASB as a standard setter of acceptable GAAP and designated IFRS and IFRS for SMEs as an acceptable set of generally accepted accounting principles. However, it is up to each State Board of Accountancy to determine if that state will allow the use of IFRS or IFRS for SMEs by non-public entities incorporated in that state.

What is a SME? Despite the use of size descriptors in the title, qualifying as a small or medium-sized entity has nothing to do with size. A SME is any entity that publishes general purpose financial statements for public use but does not have public accountability. In other words, the entity is not publicly traded. In addition, the entity, even if it is a partnership, cannot act as a fiduciary; for example, it cannot be a bank or insurance company and use SME rules.

Why might a non-public corporation want to use IFRS for SMEs? First, IFRS for SMEs contains fewer and simpler standards. IFRS for SMEs has only about 300 pages of requirements, whereas regular IFRS is over 2,500 pages and U.S. GAAP is over 25,000 pages. Second, IFRS for SMEs is only modified every three years. This means entities using IFRS for SMEs don't have to frequently adjust their accounting systems and reporting to new standards, whereas U.S. GAAP and IFRS are modified more frequently. Finally, if a corporation transacts business with international businesses, or hopes to attract international partners, seek capital from international sources, or be bought out by an international company, then having their financial statements in IFRS form would make these transactions easier.

Prior Period Adjustments

Prior period adjustments are corrections of errors that appeared on previous periods' financial statements. These errors can stem from mathematical errors, misinterpretation of GAAP, or a misunderstanding of facts at the time the financial statements were prepared. Many errors impact the retained earnings account whose balance is carried forward from the previous period. Since the financial statements have already been issued, they must be corrected. The correction involves changing the financial statement amounts to the amounts they would have been had no errors occurred, a process known as **restatement**. The correction may impact both balance sheet and income statement accounts, requiring the company to record a transaction that corrects both. Since income statement accounts are closed at the end of every period, the journal entry will contain an entry to the Retained Earnings account. As such, prior period adjustments are reported on a company's statement of retained earnings as an adjustment to the beginning balance of retained earnings. By directly adjusting beginning retained earnings, the adjustment has no effect on current period net income. The goal is to separate the error correction from the current period's net income to avoid distorting the current period's profitability. In other words, prior period adjustments are a way to go back and correct past financial statements that were misstated because of a reporting error.

CONCEPTS IN PRACTICE

Are Companies Making Fewer Errors in Financial Reporting?

According to Kevin LaCroix, additional reporting requirements created by the Sarbanes Oxley Act prompted a surge in 2005 and 2006 of the number of companies that had to make corrections and reissue financial statements. However, since that time, the number of companies making corrections has dropped over 60%, partially due to the number of U.S. companies listed on stock exchanges, and partially due to tighter regulations. The severity of the errors that caused restatements has declined as well, primarily due to tighter regulation, which has forced companies to improve their internal controls.[16]

To illustrate how to correct an error requiring a prior period adjustment, assume that in early 2020, Clay Corporation's controller determined it had made an error when calculating depreciation in the preceding year, resulting in an understatement of depreciation of $1,000. The entry to correct the error contains a decrease to Retained Earnings on the statement of retained earnings for $1,000. Depreciation expense would have been $1,000 higher if the correct depreciation had been recorded. The entry to Retained Earnings adds an additional debit to the total debits that were previously part of the closing entry for the previous year. The credit is to the balance sheet account in which the $1,000 would have been recorded had the correct depreciation entry occurred, in this case, Accumulated Depreciation.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 2	Retained Earnings	1,000	
	Accumulated Depreciation		1,000
	To record the correction of depreciation expense for a prior period		

Because the adjustment to retained earnings is due to an income statement amount that was recorded incorrectly, there will also be an income tax effect. The tax effect is shown in the statement of retained earnings in presenting the prior period adjustment. Assuming that Clay Corporation's income tax rate is 30%, the tax effect of the $1,000 is a $300 (30% × $1,000) reduction in income taxes. The increase in expenses in the amount of $1,000 combined with the $300 decrease in income tax expense results in a net $700 decrease in net income for the prior period. The $700 prior period correction is reported as an adjustment to beginning retained earnings, net of income taxes, as shown in Figure 14.14.

CLAY CORPORATION
Statement of Retained Earnings
For the Year Ended December 31, 2020

Retained Earnings, January 1, 2020		$ 24,000
Prior period adjustment, net of income taxes		700
Adjusted Retained Earnings, January 1, 2020		24,700
Net Income		33,000
		57,700
Cash Dividends declared	$(12,500)	
Stock Dividends declared	(6,500)	(19,000)
Retained Earnings, December 31, 2020		$ 38,700

Figure 14.14 Statement of Retained Earnings for Clay Corporation. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Generally accepted accounting principles (GAAP), the set of accounting rules that companies are required to follow for financial reporting, requires companies to disclose in the notes to the financial statements the nature of any prior period adjustment and the related impact on the financial statement amounts.

LINK TO LEARNING

The correction of errors in financial statements is a complicated situation. Both shareholders and investors tend to view these with deep suspicion. Many believe corporations are attempting to smooth earnings, hide possible problems, or cover up mistakes. The

Journal of Accountancy, a periodical published by the AICPA, offers guidance in how to manage this process. Browse the Journal of Accountancy website for articles and cases of prior period adjustment issues.

CONCEPTS IN PRACTICE

Tune into Financial News

Tune into a financial news program like *Squawk Box* or *Mad Money* on CNBC or *Bloomberg's*. Notice the terminology used to describe the corporations being analyzed. Notice the speed at which topics are discussed. Are these shows for the novice investor? How could this information impact potential investors?

LINK TO LEARNING

Log onto the Annual Reports website to access a comprehensive collection of more than 5,000 annual reports produced by publicly-traded companies. The site is a tremendous resource for both school and investment-related research. Reading annual reports provides a different type of insight into corporations. Beyond the financial statements, annual reports give shareholders and the public a glimpse into the operations, mission, and charitable giving of a corporation.

Footnotes

- 15 Cracker Barrel. *Cracker Barrel Old Country Store Annual Report 2017.* September 22, 2017. http://investor.crackerbarrel.com/st...8-d9a70301f51f
- 16 Kevin M. LaCroix. "Financial Statements Continue to Decline for U.S. Reporting Companies." The D & O Diary. June 12, 2017. https://www.dandodiary.com/2017/06/a...ing-companies/

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CHAPTER OVERVIEW

14: Statement of Cash Flows

14.1: Explain the Purpose of the Statement of Cash Flows

14.2: Differentiate between Operating, Investing, and Financing Activities

14.3: Prepare the Statement of Cash Flows Using the Indirect Method

14.4: Prepare the Completed Statement of Cash Flows Using the Indirect Method

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14.1: Explain the Purpose of the Statement of Cash Flows

The **statement of cash flows** is a financial statement listing the cash inflows and cash outflows for the business for a period of time. **Cash flow** represents the cash receipts and cash disbursements as a result of business activity. The statement of cash flows enables users of the financial statements to determine how well a company's income generates cash and to predict the potential of a company to generate cash in the future.

Accrual accounting creates timing differences between income statement accounts and cash. A revenue transaction may be recorded in a different fiscal year than the year the cash related to that revenue is received. One purpose of the statement of cash flows is that users of the financial statements can see the amount of cash inflows and outflows during a year in addition to the amount of revenue and expense shown on the income statement. This is important because cash flows often differ significantly from accrual basis net income. For example, assume in 2019 that **Amazon** showed a loss of approximately $720 million, yet **Amazon**'s cash balance increased by more than $91 million. Much of the change can be explained by timing differences between income statement accounts and cash receipts and distributions.

A related use of the statement of cash flows is that it provides information about the quality of a company's net income. A company that has records that show significantly less cash inflow on the statement of cash flows than the reported net income on the income statement could very well be reporting revenue for which cash will never be received from the customer or underreporting expenses.

A third use of the statement of cash flows is that it provides information about a company's sources and uses of cash not related to the income statement. For example, assume in 2019 that **Amazon** spent $287 million on purchasing fixed assets and almost $370 million acquiring other businesses. This indicated to financial statement users that **Amazon** was expanding even as it was losing money. Investors must have thought that spending was good news as **Amazon** was able to raise more than $1 billion in borrowings or stock issuances in 2019.

ETHICAL CONSIDERATIONS

Cash Flow Statement Reporting

US generally accepted accounting principles (GAAP) has codified how cash flow statements are to be presented to users of financial statements. This was codified in Topic 230: Statement of Cash Flows as part of US GAAP.[1] Accountants in the United States should follow US GAAP. Accountants working internationally must report in accordance with International Accounting Standard (IAS) 7 Statement of Cash Flows.[2] The ethical accountant understands the users of a company's financial statement and properly prepares a Statement of Cash Flow. There is often more than one way that financial statements can be presented, such as US GAAP and International Financial Reporting Standards (IFRS). What if a company under US GAAP showed reporting issues on their financial statements and switched to IFRS where results looked better. Is this proper? Does this occur?

The statement of cash flows identifies the sources of cash as well as the uses of cash, for the period being reported, which leads the user of the financial statement to the period's **net cash flows**, which is a method used to determine profitability by measuring the difference between an entity's cash inflows and cash outflows. The statement answers the following two questions: What are the sources of cash (where does the cash come from)? What are the uses of cash (where does the cash go)? A positive net cash flow indicates an increase in cash during the reporting period, whereas a negative net cash flow indicates a decrease in cash during the reporting period. The statement of cash flows is also used as a predictive tool for external users of the financial statements, for estimated future cash flows, based on cash flow results in the past.

LINK TO LEARNING

This video from Khan Academy explains cash flows in a unique way.

Approaches to Preparing the Statement of Cash Flows

The statement of cash flows can be prepared using the indirect approach or the direct approach. The **indirect method** approach reconciles net income to cash flows by subtracting noncash expenses and adjusting for changes in current assets and liabilities, which reflects timing differences between accrual-based net income and cash flows. A **noncash expense** is an expense that reduces net income but is not associated with a cash flow; the most common example is depreciation expense. The **direct method**lists net

cash flows from revenue and expenses, whereby accrual basis revenue and expenses are converted to cash basis collections and payments. Because the vast majority of financial statements are presented using the indirect method, the indirect approach will be demonstrated within the chapter, and the direct method will be demonstrated in Appendix: Prepare a Completed Statement of Cash Flows Using the Direct Method.

LINK TO LEARNING

AccountingCoach is a great resource for many accounting topics, including cash flow issues.

Footnotes

- 1 Financial Accounting Standards Board (FASB). "Statement of Cash Flows (Topic 230) Classification of Certain Cash Receipts and Cash Payments." An Amendment of the **FASB Accounting Standards Codification**. August 2016. https://asc.fasb.org/imageRoot/55/95454355.pdf
- 2 International Financial Reporting Standards (IFRS). "IAS 7 Statement of Cash Flows." n.d. www.ifrs.org/issued-standard...of-cash-flows/

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14.2: Differentiate between Operating, Investing, and Financing Activities

The statement of cash flows presents sources and uses of cash in three distinct categories: *cash flows from operating activities*, *cash flows from investing activities*, and *cash flows from financing activities*. Financial statement users are able to assess a company's strategy and ability to generate a profit and stay in business by assessing how much a company relies on operating, investing, and financing activities to produce its cash flows.

THINK IT THROUGH

Classification of Cash Flows Makes a Difference

Assume you are the chief financial officer of T-Shirt Pros, a small business that makes custom-printed T-shirts. While reviewing the financial statements that were prepared by company accountants, you discover an error. During this period, the company had purchased a warehouse building, in exchange for a $200,000 note payable. The company's policy is to report noncash investing and financing activities in a separate statement, after the presentation of the statement of cash flows. This noncash investing and financing transaction was inadvertently included in both the financing section as a source of cash, and the investing section as a use of cash.

T-Shirt Pros' statement of cash flows, as it was prepared by the company accountants, reported the following for the period, and had no other capital expenditures.

Cash flows from operating activities	$195,000
Cash flows from investing activities	(120,000)
Cash flows from financing activities	120,000
Total net cash flows	195,000

Because of the misplacement of the transaction, the calculation of free cash flow by outside analysts could be affected significantly. Free cash flow is calculated as cash flow from operating activities, reduced by capital expenditures, the value for which is normally obtained from the investing section of the statement of cash flows. As their manager, would you treat the accountants' error as a harmless misclassification, or as a major blunder on their part? Explain.

Cash Flows from Operating Activities

Cash flows from **operating activities** arise from the activities a business uses to produce net income. For example, operating cash flows include cash sources from sales and cash used to purchase inventory and to pay for operating expenses such as salaries and utilities. Operating cash flows also include cash flows from interest and dividend revenue interest expense, and income tax.

Cash Flows from Investing Activities

Cash flows from **investing activities** are cash business transactions related to a business' investments in long-term assets. They can usually be identified from changes in the Fixed Assets section of the long-term assets section of the balance sheet. Some examples of investing cash flows are payments for the purchase of land, buildings, equipment, and other investment assets and cash receipts from the sale of land, buildings, equipment, and other investment assets.

Cash Flows from Financing Activities

Cash flows from **financing activities** are cash transactions related to the business raising money from debt or stock, or repaying that debt. They can be identified from changes in long-term liabilities and equity. Examples of financing cash flows include cash proceeds from issuance of debt instruments such as notes or bonds payable, cash proceeds from issuance of capital stock, cash payments for dividend distributions, principal repayment or redemption of notes or bonds payable, or purchase of treasury stock. Cash flows related to changes in equity can be identified on the Statement of Stockholder's Equity, and cash flows related to long-term liabilities can be identified by changes in long-term liabilities on the balance sheet.

CONCEPTS IN PRACTICE

Can a Negative Be Positive?

Investors do not always take a negative cash flow as a negative. For example, assume in 2018 **Amazon** showed a loss of $124 billion and a net cash outflow of $262 billion from investing activities. Yet during the same year, **Amazon** was able to raise a net $254 billion through financing. Why would investors and lenders be willing to place money with **Amazon**? For one thing, despite having a net loss, **Amazon** produced $31 billion cash from operating activities. Much of this was through delaying payment on inventories. **Amazon**'s accounts payable increased by $78 billion, while its inventory increased by $20 billion.

Another reason lenders and investors were willing to fund **Amazon** is that investing payments are often signs of a company growing. Assume that in 2018 **Amazon** paid almost $50 billion to purchase fixed assets and to acquire other businesses; this is a signal of a company that is growing. Lenders and investors interpreted **Amazon**'s cash flows as evidence that **Amazon** would be able to produce positive net income in the future. In fact, **Amazon** had net income of $19 billion in 2017. Furthermore, **Amazon** is still showing growth through its statement of cash flows; it spent about $26 billion in fixed equipment and acquisitions.

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14.3: Prepare the Statement of Cash Flows Using the Indirect Method

The statement of cash flows is prepared by following these steps:

Step 1: Determine Net Cash Flows from Operating Activities

Using the indirect method, operating net cash flow is calculated as follows:

- Begin with net income from the income statement.
- Add back noncash expenses, such as depreciation, amortization, and depletion.
- Remove the effect of gains and/or losses from disposal of long-term assets, as cash from the disposal of long-term assets is shown under investing cash flows.
- Adjust for changes in current assets and liabilities to remove accruals from operating activities.

Step 2: Determine Net Cash Flows from Investing Activities

Investing net cash flow includes cash received and cash paid relating to long-term assets.

Step 3: Present Net Cash Flows from Financing Activities

Financing net cash flow includes cash received and cash paid relating to long-term liabilities and equity.

Step 4: Reconcile Total Net Cash Flows to Change in Cash Balance during the Period

To reconcile beginning and ending cash balances:

- The net cash flows from the first three steps are combined to be total net cash flow.
- The beginning cash balance is presented from the prior year balance sheet.
- Total net cash flow added to the beginning cash balance equals the ending cash balance.

Step 5: Present Noncash Investing and Financing Transactions

Transactions that do not affect cash but do affect long-term assets, long-term debt, and/or equity are disclosed, either as a notation at the bottom of the statement of cash flow, or in the notes to the financial statements.

The remainder of this section demonstrates preparation of the statement of cash flows of the company whose financial statements are shown in Figure 16.2, Figure 16.3, and Figure 16.4.

PROPENSITY COMPANY
Comparative Balance Sheet
December 31

	2018	2017	Change increase/ (decrease)
Assets			
Cash	$ 47,500	$ 24,300	$ 23,200
Accounts Receivable	21,500	26,000	(4,500)
Prepaid Insurance	2,500	1,800	700
Inventory	48,000	45,500	2,500
Land	20,000	10,000	10,000
Plant Assets	230,000	190,000	40,000
Accumulated Depreciation	(85,500)	(71,100)	(14,400)
Total Assets	$284,000	$226,500	$ 57,500
Liabilities and Equity			
Liabilities:			
Accounts Payable	$ 17,200	$ 19,000	$ (1,800)
Salaries Payable	1,900	1,500	400
Notes Payable	85,000	75,000	10,000
Total Liabilities	104,100	95,500	8,600
Equity:			
Common Stock	115,000	70,000	45,000
Retained Earnings	64,900	61,000	3,900
Total Equity	179,900	131,000	48,900
Total Liabilities and Equity	$284,000	$226,500	$ 57,500

Figure 16.2Comparative Balance Sheet. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

PROPENSITY COMPANY Income Statement Year Ended December 31, 2018		
Sales Revenue		$238,000
Cost of Goods Sold		153,000
Gross Profit		85,000
Operating Expenses:		
Depreciation Expense	$14,400	
Insurance Expense	12,000	
Salaries Expense	42,600	
Other Operating Expenses	11,100	
Total Operating Expenses		80,100
Operating Income		4,900
Other Revenue and (Expenses):		
Gain on Sale of Land	4,800	
Interest Expense	(3,500)	
Total Other Revenue and Expenses		1,300
Income Before Income Tax		6,200
Income Tax Expense		1,860
Net Income		$ 4,340

Figure 16.3 Income Statement. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Additional Information:

1. Propensity Company sold land with an original cost of $10,000, for $14,800 cash.
2. A new parcel of land was purchased for $20,000, in exchange for a note payable.
3. Plant assets were purchased for $40,000 cash.
4. Propensity declared and paid a $440 cash dividend to shareholders.
5. Propensity issued common stock in exchange for $45,000 cash.

PROPENSITY COMPANY Statement of Cash Flows Indirect Method For the Year Ended December 31, 2018		
Cash Flow from Operating Activities:		
Net Income		$ 4,340
Adjustments to Reconcile Net Income to Net Cash Flow from Operating Activities:		
Depreciation	$ 14,400	
Gain on Sale of Plant Assets	(4,800)	
Accounts Receivable decrease	4,500	
Prepaid Insurance increase	(700)	
Inventory increase	(2,500)	
Accounts Payable decrease	(1,800)	
Salaries Payable increase	400	9,500
Net Cash Flow: Operating Activities		13,840
Cash Flow from Investing Activities:		
Proceeds from Sale of Land	14,800	
Cost of New Plant Assets (Equipment)	(40,000)	
Net Cash Flow: Investing Activities		(25,200)
Cash Flow from Financing Activities:		
Payment of Notes Payable (principal)	(10,000)	
Issuance of Common Stock	45,000	
Payment of Dividends	(440)	
Net Cash Flow: Financing Activities		34,560
Total Cash Flow increase/(decrease)		23,200
Cash Balance, December 31, 2017		24,300
Cash Balance, December 31, 2018		$ 47,500
Noncash Investing and Financing Activities		
Land Acquired in Exchange for Note Payable		$ 20,000

Figure 16.4Statement of Cash Flows. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Prepare the Operating Activities Section of the Statement of Cash Flows Using the Indirect Method

In the following sections, specific entries are explained to demonstrate the items that support the preparation of the operating activities section of the Statement of Cash Flows (Indirect Method) for the Propensity Company example financial statements.

- Begin with net income from the income statement.
- Add back noncash expenses, such as depreciation, amortization, and depletion.
- Reverse the effect of gains and/or losses from investing activities.
- Adjust for changes in current assets and liabilities, to reflect how those changes impact cash in a way that is different than is reported in net income.0

Start with Net Income

The operating activities cash flow is based on the company's net income, with adjustments for items that affect cash differently than they affect net income. The net income on the Propensity Company income statement for December 31, 2018, is $4,340. On Propensity's statement of cash flows, this amount is shown in the Cash Flows from Operating Activities section as Net Income.

Cash Flow from Operating Activities:	
Net Income	$ 4,340

Add Back Noncash Expenses

Net income includes deductions for noncash expenses. To reconcile net income to cash flow from operating activities, these noncash items must be added back, because no cash was expended relating to that expense. The sole noncash expense on Propensity Company's income statement, which must be *added back*, is the depreciation expense of $14,400. On Propensity's statement of cash flows, this amount is shown in the Cash Flows from Operating Activities section as an adjustment to reconcile net income to net cash flow from operating activities.

Adjustments to Reconcile Net Income to Net Cash Flow from Operating Activities:	
Depreciation	$14,400
Gain on Sale of Plant Assets	(4,800)
Accounts Receivable decrease	4,500
Prepaid Insurance increase	(700)
Inventory increase	(2,500)
Accounts Payable decrease	(1,800)
Salaries Payable decrease	400

Reverse the Effect of Gains and/or Losses

Gains and/or losses on the disposal of long-term assets are included in the calculation of net income, but cash obtained from disposing of long-term assets is a cash flow from an investing activity. Because the disposition gain or loss is not related to normal operations, the adjustment needed to arrive at cash flow from operating activities is a reversal of any gains or losses that are included in the net income total. A gain is subtracted from net income and a loss is added to net income to reconcile to cash from operating activities. Propensity's income statement for the year 2018 includes a gain on sale of land, in the amount of $4,800, so a reversal is accomplished by *subtracting* the gain from net income. On Propensity's statement of cash flows, this amount is shown in the Cash Flows from Operating Activities section as Gain on Sale of Plant Assets.

Adjustments to Reconcile Net Income to Net Cash Flow from Operating Activities:	
Depreciation	$14,400
Gain on Sale of Plant Assets	(4,800)
Accounts Receivable decrease	4,500
Prepaid Insurance increase	(700)
Inventory increase	(2,500)
Accounts Payable decrease	(1,800)
Salaries Payable decrease	400

Adjust for Changes in Current Assets and Liabilities

Because the Balance Sheet and Income Statement reflect the accrual basis of accounting, whereas the statement of cash flows considers the incoming and outgoing cash transactions, there are continual differences between (1) cash collected and paid and (2) reported revenue and expense on these statements. Changes in the various current assets and liabilities can be determined from analysis of the company's comparative balance sheet, which lists the current period and previous period balances for all assets and liabilities. The following four possibilities offer explanations of the type of difference that might arise, and demonstrate examples from Propensity Company's statement of cash flows, which represent typical differences that arise relating to these current assets and liabilities.

Increase in Noncash Current Assets

Increases in current assets indicate a decrease in cash, because either (1) cash was paid to generate another current asset, such as inventory, or (2) revenue was accrued, but not yet collected, such as accounts receivable. In the first scenario, the use of cash to increase the current assets is not reflected in the net income reported on the income statement. In the second scenario, revenue is included in the net income on the income statement, but the cash has not been received by the end of the period. In both cases, current assets increased and net income was reported on the income statement greater than the actual net cash impact from the related operating activities. To reconcile net income to cash flow from operating activities, *subtract* increases in current assets.

Propensity Company had two instances of increases in current assets. One was an increase of $700 in prepaid insurance, and the other was an increase of $2,500 in inventory. In both cases, the increases can be explained as additional cash that was spent, but which was not reflected in the expenses reported on the income statement.

Adjustments to Reconcile Net Income to Net Cash Flow from Operating Activities:	
Depreciation	$14,400
Gain on Sale of Plant Assets	(4,800)
Accounts Receivable decrease	4,500
Prepaid Insurance increase	(700)
Inventory increase	(2,500)
Accounts Payable decrease	(1,800)
Salaries Payable decrease	400

Decrease in Noncash Current Assets

Decreases in current assets indicate lower net income compared to cash flows from (1) prepaid assets and (2) accrued revenues. For decreases in prepaid assets, using up these assets shifts these costs that were recorded as assets over to current period expenses that then reduce net income for the period. Cash was paid to obtain the prepaid asset in a prior period. Thus, cash from operating activities must be increased to reflect the fact that these expenses reduced net income on the income statement, but cash was not paid this period. Secondarily, decreases in accrued revenue accounts indicates that cash was collected in the current period but was recorded as revenue on a previous period's income statement. In both scenarios, the net income reported on the income statement was lower than the actual net cash effect of the transactions. To reconcile net income to cash flow from operating activities, *add* decreases in current assets.

Propensity Company had a decrease of $4,500 in accounts receivable during the period, which normally results only when customers pay the balance, they owe the company at a faster rate than they charge new account balances. Thus, the decrease in receivable identifies that more cash was collected than was reported as revenue on the income statement. Thus, an addback is necessary to calculate the cash flow from operating activities.

Current Operating Liability Increase

Increases in current liabilities indicate an increase in cash, since these liabilities generally represent (1) expenses that have been accrued, but not yet paid, or (2) deferred revenues that have been collected, but not yet recorded as revenue. In the case of accrued expenses, costs have been reported as expenses on the income statement, whereas the deferred revenues would arise when cash was collected in advance, but the revenue was not yet earned, so the payment would not be reflected on the income statement. In both cases, these increases in current liabilities signify cash collections that exceed net income from related activities. To reconcile net income to cash flow from operating activities, *add* increases in current liabilities.

Propensity Company had an increase in the current operating liability for salaries payable, in the amount of $400. The payable arises, or increases, when an expense is recorded but the balance due is not paid at that time. An increase in salaries payable therefore reflects the fact that salaries expenses on the income statement are greater than the cash outgo relating to that expense. This means that net cash flow from operating is greater than the reported net income, regarding this cost.

Adjustments to Reconcile Net Income to Net Cash Flow from Operating Activities:	
Depreciation	$14,400
Gain on Sale of Plant Assets	(4,800)
Accounts Receivable decrease	4,500
Prepaid Insurance increase	(700)
Inventory increase	(2,500)
Accounts Payable decrease	(1,800)
Salaries Payable decrease	400

Current Operating Liability Decrease

Decreases in current liabilities indicate a decrease in cash relating to (1) accrued expenses, or (2) deferred revenues. In the first instance, cash would have been expended to accomplish a decrease in liabilities arising from accrued expenses, yet these cash payments would not be reflected in the net income on the income statement. In the second instance, a decrease in deferred revenue means that some revenue would have been reported on the income statement that was collected in a previous period. As a result, cash flows from operating activities must be decreased by any reduction in current liabilities, to account for (1) cash payments to creditors that are higher than the expense amounts on the income statement, or (2) amounts collected that are lower than the amounts reflected as income on the income statement. To reconcile net income to cash flow from operating activities, *subtract* decreases in current liabilities.

Propensity Company had a decrease of $1,800 in the current operating liability for accounts payable. The fact that the payable decreased indicates that Propensity paid enough payments during the period to keep up with new charges, and also to pay down on amounts payable from previous periods. Therefore, the company had to have paid more in cash payments than the amounts shown as expense on the Income Statements, which means net cash flow from operating activities is lower than the related net income.

Adjustments to Reconcile Net Income to Net Cash Flow from Operating Activities:	
Depreciation	$14,400
Gain on Sale of Plant Assets	(4,800)
Accounts Receivable decrease	4,500
Prepaid Insurance increase	(700)
Inventory increase	(2,500)
Accounts Payable decrease	(1,800)
Salaries Payable decrease	400

Analysis of Change in Cash

Although the net income reported on the income statement is an important tool for evaluating the success of the company's efforts for the current period and their viability for future periods, the practical effectiveness of management is not adequately revealed by the net income alone. The net cash flows from operating activities adds this essential facet of information to the analysis, by illuminating whether the company's operating cash sources were adequate to cover their operating cash uses. When combined with the cash flows produced by investing and financing activities, the operating activity cash flow indicates the feasibility of continuance and advancement of company plans.

Determining Net Cash Flow from Operating Activities (Indirect Method)

Net cash flow from operating activities is the net income of the company, adjusted to reflect the cash impact of operating activities. Positive net cash flow generally indicates adequate cash flow margins exist to provide continuity or ensure survival of the company. The magnitude of the net cash flow, if large, suggests a comfortable cash flow cushion, while a smaller net cash flow would signify an uneasy comfort cash flow zone. When a company's net cash flow from operations reflects a substantial negative value, this indicates that the company's operations are not supporting themselves and could be a warning sign of possible impending doom for the company. Alternatively, a small negative cash flow from operating might serve as an early warning that allows management to make needed corrections, to ensure that cash sources are increased to amounts in excess of cash uses, for future periods.

For Propensity Company, beginning with net income of $4,340, and reflecting adjustments of $9,500, delivers a net cash flow from operating activities of $13,840.

Cash Flow from Operating Activities:		
Net Income		$ 4,340
Adjustments to Reconcile Net Income to Net Cash Flow from Operating Activities:		
Depreciation	$14,400	
Gain on Sale of Plant Assets	(4,800)	
Accounts Receivable decrease	4,500	
Prepaid Insurance increase	(700)	
Inventory increase	(2,500)	
Accounts Payable decrease	(1,800)	
Salaries Payable increase	400	9,500
Net Cash Flow: Operating Activities		$13,840

Figure 16.5 Cash from Operating. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

YOUR TURN

Cash Flow from Operating Activities

Assume you own a specialty bakery that makes gourmet cupcakes. Excerpts from your company's financial statements are shown.

	Income Statement	Balance Sheets
Sales	$189,000	
Cost of Goods Sold	(75,600)	
Operating Expense (except depreciation)	(81,500)	
Depreciation Expense	(12,000)	
Net Income	19,900	
Accounts Receivable decrease		$2,000
Merchandise Inventory increase		1,600
Accounts Payable decrease		5,500

How much cash flow from operating activities did your company generate?

Solution

Cash flows from operating activities:	
Net income	$19,900
Depreciation add back	12,000
Accounts Receivable decrease	2,000
Merchandise Inventory increase	(1,600)
Accounts Payable decrease	(5,500)
= Net cash flows from operating activities	26,800

THINK IT THROUGH

Explaining Changes in Cash Balance

Assume that you are the chief financial officer of a company that provides accounting services to small businesses. You are called upon by the board of directors to explain why your cash balance did not increase much from the beginning of 2018 until the end of 2018, since the company produced a reasonably strong profit for the year, with a net income of $88,000. Further assume that there were no investing or financing transactions, and no depreciation expense for 2018. What is your response? Provide the calculations to back up your answer.

	Dec. 31, 2018	Dec. 31, 2017
Cash	$195,700	$146,000
Accounts Receivable	216,000	198,500
Prepaid Costs (Insurance and Office Rent)	6,000	7,200
Accounts Payable	80,500	102,500

Operating Activities:	
Net Income	$ 88,000
Increase in Accounts Receivable	(17,500)
Decrease in Prepaid Costs	1,200
Decrease in Accounts Payable	(22,000)
Net cash flow from operating activities	49,700

Prepare the Investing and Financing Activities Sections of the Statement of Cash Flows

Preparation of the investing and financing sections of the statement of cash flows is an identical process for both the direct and indirect methods, since only the technique used to arrive at net cash flow from operating activities is affected by the choice of the direct or indirect approach. The following sections discuss specifics regarding preparation of these two nonoperating sections, as well as notations about disclosure of long-term noncash investing and/or financing activities. Changes in the various long-term assets, long-term liabilities, and equity can be determined from analysis of the company's comparative balance sheet, which lists the current period and previous period balances for all assets and liabilities.

Investing Activities

Cash flows from investing activities always relate to long-term asset transactions and may involve increases or decreases in cash relating to these transactions. The most common of these activities involve purchase or sale of property, plant, and equipment, but other activities, such as those involving investment assets and notes receivable, also represent cash flows from investing. Changes

in long-term assets for the period can be identified in the Noncurrent Assets section of the company's comparative balance sheet, combined with any related gain or loss that is included on the income statement.

In the Propensity Company example, the investing section included two transactions involving long-term assets, one of which increased cash, while the other one decreased cash, for a total net cash flow from investing of ($25,200). Analysis of Propensity Company's comparative balance sheet revealed changes in land and plant assets. Further investigation identified that the change in long-term assets arose from three transactions:

1. Investing activity: A tract of land that had an original cost of $10,000 was sold for $14,800.
2. Investing activity: Plant assets were purchased, for $40,000 cash.
3. Noncash investing and financing activity: A new parcel of land was acquired, in exchange for a $20,000 note payable.

Details relating to the treatment of each of these transactions are provided in the following sections.

Cash Flow from Investing Activities:		
Proceeds from Sale of Land	$ 14,800	
Cost of New Plant Assets (Equipment)	(40,000)	
Net Cash Flow: Investing Activities		$(25,200)

Cash Flow from Investing Activities:		
Proceeds from Sale of Land	$ 14,800	
Cost of New Plant Assets (Equipment)	(40,000)	
Net Cash Flow: Investing Activities		$(25,200)

Noncash Investing and Financing Activities	
Land Acquired in Exchange for Note Payable	$ 20,000

Investing Activities Leading to an Increase in Cash

Increases in net cash flow from investing usually arise from the sale of long-term assets. The cash impact is the cash proceeds received from the transaction, which is not the same amount as the gain or loss that is reported on the income statement. Gain or loss is computed by subtracting the asset's net book value from the cash proceeds. Net book value is the asset's original cost, less any related accumulated depreciation. Propensity Company sold land, which was carried on the balance sheet at a net book value of $10,000, representing the original purchase price of the land, in exchange for a cash payment of $14,800. The data set explained these net book value and cash proceeds facts for Propensity Company. However, had these facts not been stipulated in the data set, the cash proceeds could have been determined by adding the reported $4,800 gain on the sale to the $10,000 net book value of the asset given up, to arrive at cash proceeds from the sale.

Proceeds from Sale of Land	$ 14,800

Investing Activities Leading to a Decrease in Cash

Decreases in net cash flow from investing normally occur when long-term assets are purchased using cash. For example, in the Propensity Company example, there was a decrease in cash for the period relating to a simple purchase of new plant assets, in the amount of $40,000.

Cost of New Plant Assets (Equipment)	$(40,000)

Financing Activities

Cash flows from financing activities always relate to either long-term debt or equity transactions and may involve increases or decreases in cash relating to these transactions. Stockholders' equity transactions, like stock issuance, dividend payments, and treasury stock buybacks are very common financing activities. Debt transactions, such as issuance of bonds payable or notes payable, and the related principal payback of them, are also frequent financing events. Changes in long-term liabilities and equity

for the period can be identified in the Noncurrent Liabilities section and the Stockholders' Equity section of the company's Comparative Balance Sheet, and in the retained earnings statement.

In the Propensity Company example, the financing section included three transactions. One long-term debt transaction decreased cash. Two transactions related to equity, one of which increased cash, while the other one decreased cash, for a total net cash flow from financing of $34,560. Analysis of Propensity Company's Comparative Balance Sheet revealed changes in notes payable and common stock, while the retained earnings statement indicated that dividends were distributed to stockholders. Further investigation identified that the change in long-term liabilities and equity arose from three transactions:

1. Financing activity: Principal payments of $10,000 were paid on notes payable.
2. Financing activity: New shares of common stock were issued, in the amount of $45,000.
3. Financing activity: Dividends of $440 were paid to shareholders.

Specifics about each of these three transactions are provided in the following sections.

Cash Flow from Financing Activities:		
Payment of Notes Payable (principal)	$(10,000)	
Issuance of Common Stock	45,000	
Payment of Dividends	(440)	
Net Cash Flow: Financing Activities		$34,560

Financing Activities Leading to an Increase in Cash

Increases in net cash flow from financing usually arise when the company issues share of stock, bonds, or notes payable to raise capital for cash flow. Propensity Company had one example of an increase in cash flows, from the issuance of common stock.

Issuance of Common Stock	$45,000

Financing Activities Leading to a Decrease in Cash

Decreases in net cash flow from financing normally occur when (1) long-term liabilities, such as notes payable or bonds payable are repaid, (2) when the company reacquires some of its own stock (treasury stock), or (3) when the company pays dividends to shareholders. In the case of Propensity Company, the decreases in cash resulted from notes payable principal repayments and cash dividend payments.

Noncash Investing and Financing Activities

Sometimes transactions can be very important to the company, yet not involve any initial change to cash. Disclosure of these noncash investing and financing transactions can be included in the notes to the financial statements, or as a notation at the bottom of the statement of cash flows, after the entire statement has been completed. These noncash activities usually involve one of the following scenarios:

- exchanges of long-term assets for long-term liabilities or equity, or
- exchanges of long-term liabilities for equity.

Propensity Company had a noncash investing and financing activity, involving the purchase of land (investing activity) in exchange for a $20,000 note payable (financing activity).

Noncash Investing and Financing Activities	
Land Acquired in Exchange for Note Payable	$20,000

Summary of Investing and Financing Transactions on the Cash Flow Statement

Investing and financing transactions are critical activities of business, and they often represent significant amounts of company equity, either as sources or uses of cash. Common activities that must be reported as investing activities are purchases of land, equipment, stocks, and bonds, while financing activities normally relate to the company's funding sources, namely, creditors and investors. These financing activities could include transactions such as borrowing or repaying notes payable, issuing or retiring bonds payable, or issuing stock or reacquiring treasury stock, to name a few instances.

YOUR TURN

Cash Flow from Investing Activities

Assume your specialty bakery makes gourmet cupcakes and has been operating out of rented facilities in the past. You owned a piece of land that you had planned to someday use to build a sales storefront. This year your company decided to sell the land and instead buy a building, resulting in the following transactions.

Acquired new building, to be used as the storefront for the bakery	$85,000
Collected interest on investment assets	2,250
Gain on the sale of land	25,200
Additional information: Original cost of land	22,000

What are the cash flows from investing activities relating to these transactions?

Solution

Investing activities:	
Cash proceeds from sale of land	$ 47,200
Cash paid for purchase of building	(85,000)
Net cash flows from investing activities	(37,800)

Note: Interest earned on investments is an operating activity.

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14.4: Prepare the Completed Statement of Cash Flows Using the Indirect Method

In this section, we use the example of Virtual Co. to work through the entire process of preparing the company's statement of cash flows using the indirect method. Virtual's comparative balance sheet and income statement are provided as a base for the preparation of the statement of cash flows.

Review Problem: Preparing the Virtual Co. Statement of Cash Flows

VIRTUAL CO.
Comparative Balance Sheet
December 31

	2018	2017	Change increase/ (decrease)
Assets			
Cash	$ 66,700	$ 83,250	$(16,550)
Accounts Receivable	55,400	54,220	1,180
Prepaid Insurance	2,400	3,600	(1,200)
Investments	95,000	75,000	20,000
Plant Assets	356,000	290,000	66,000
Accumulated Depreciation	(65,700)	(36,700)	(29,000)
Total Assets	$509,800	$469,370	$ 40,430
Liabilities and Equity			
Liabilities:			
Accounts Payable	$ 48,100	$ 47,300	$ 800
Notes Payable	160,000	185,000	(25,000)
Total Liabilities	208,100	232,300	(24,200)
Equity:			
Common Stock	130,000	100,000	30,000
Retained Earnings	171,700	137,070	34,630
Total Equity	301,700	237,070	64,630
Total Liabilities and Equity	$509,800	$469,370	$ 40,430

Figure 16.6Comparative Balance Sheet. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

VIRTUAL CO. Income Statement For the Year Ended December 31, 2018		
Sales Revenue		$433,000
Cost of Goods Sold		289,000
Gross Profit		144,000
Operating Expenses:		
Depreciation Expense	$29,000	
Insurance Expense	14,400	
Other Operating Expenses	57,200	
Total Operating Expenses		100,600
Operating Income		43,400
Other Revenue and (Expenses):		
Gain on Sale of Land	17,500	
Total Other Revenue and Expenses		17,500
Income Before Income Tax		60,900
Income Tax Expense		18,270
Net Income		$ 42,630

Figure 16.7Income Statement. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Additional Information

The following additional information is provided:

1. Investments that originally cost $30,000 were sold for $47,500 cash.
2. Investments were purchased for $50,000 cash.
3. Plant assets were purchased for $66,000 cash.
4. Cash dividends were declared and paid to shareholders in the amount of $8,000.

Directions:

Prepare the statement of cash flows (indirect method), for the year ended December 31, 2018.

VIRTUAL CO. Statement of Cash Flows: Indirect Method For the Year Ended December 31, 2018		
Cash Flow from Operating Activities:		
Net Income		$ 42,630
Adjustments to Reconcile Net Income to Net Cash Flow from Operating Activities:		
Depreciation	$ 29,000	
Gain on Sale of Plant Assets	(17,500)	
Accounts Receivable decrease	(1,180)	
Prepaid Insurance decrease	1,200	
Accounts Payable increase	800	12,320
Net Cash Flow: Operating Activities		54,950
Cash Flow from Investing Activities:		
Proceeds from Sale of Investments	47,500	
Cost of Investments Purchased	(50,000)	
Cost of New Plant Assets	(66,000)	
Net Cash Flow: Investing Activities		(68,500)
Cash Flow from Financing Activities:		
Payment of Notes Payable (principal)	(25,000)	
Issuance of Common Stock	30,000	
Payment of Dividends	(8,000)	
Net Cash Flow: Financing Activities		(3,000)
Total Cash Flow increase/(decrease)		(16,550)
Cash Balance, December 31, 2017		83,250
Cash Balance, December 31, 2018		$ 66,700

Figure 16.8Statement of Cash Flows. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

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CHAPTER OVERVIEW

15: Financial Statement Analysis

15.1: Analyzing Comparative Financial Statements

15.2: Common-Size Financial Statements

15.3: Calculate Ratios That Analyze a Company’s Short-Term Debt-Paying Ability

15.4: Ratio Analysis

15.5: Time Value of Money

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15.1: Analyzing Comparative Financial Statements

This chapter discusses several common methods of analyzing and relating the data in financial statements and, as a result, gaining a clear picture of the solvency and profitability of a company. Internally, management analyzes a company's financial statements as do external investors, creditors, and regulatory agencies. Although these users have different immediate goals, their overall objective in financial statement analysis is the same—to make predictions about an organization as an aid in decision making.



Objectives of financial statement analysis

Management's analysis of financial statements primarily relates to parts of the company. Using this approach, management can plan, evaluate, and control operations within the company. Management obtains any information it wants about the company's operations by requesting special-purpose reports. It uses this information to make difficult decisions, such as which employees to lay off and when to expand operations. Our primary focus in this chapter, however, is not on the special reports accountants prepare for management. Rather, it is on the information needs of persons outside the firm.

Investors, creditors, and regulatory agencies generally focus their analysis of financial statements on the company as a whole. Since they cannot request special-purpose reports, external users must rely on the general-purpose financial statements that companies publish. These statements include a balance sheet, an income statement, a statement of stockholders' equity, a statement of cash flows, and the explanatory notes that accompany the financial statements.

Financial statement analysis consists of applying analytical tools and techniques to financial statements and other relevant data to obtain useful information. This information reveals significant relationships between data and trends in those data that assess the company's past performance and current financial position. The information shows the results or consequences of prior management decisions. In addition, analysts use the information to make predictions that may have a direct effect on decisions made by users of financial statements.

Comparative financial statements present the same company's financial statements for one or two successive periods in side-by-side columns. The calculation of dollar changes or percentage changes in the statement items or totals is **horizontal analysis**. This analysis detects changes in a company's performance and highlights trends.

The good news is you have already been performing the first part of horizontal analysis without realizing it when you were preparing the statement of cash flows. Horizontal analysis consists of 2 things:

- Dollar amount of change (calculated as Current Year amount – Previous Year amount)
- Percentage of change (calculated as Dollar amount of change / previous year amount)

Horizontal analysis is called horizontal because we look at one account at a time across time. We can perform this type of analysis on the balance sheet or the income statement. Let's look at this video followed by another example.



The comparative financial statements of Synotech, Inc., will serve as a basis for an example of horizontal analysis and vertical analysis of a balance sheet and a statement of income and retained earnings. Recall that horizontal analysis calculates changes in comparative statement items or totals. Here is an example of Synotech, Inc. current asset section (in millions) of the balance sheet with horizontal analysis performed:

	2015	2014	Increase (or Decrease)	Percent of Change
Current assets:				
Cash	$ 298.00	$ 250.50	$ 47.50	19.0%
Marketable securities	71.30	57.50	$ 13.80	24.0%
Receivables, net	1,277.30	1,340.30	$ (63.00)	-4.7%
Inventories	924.80	929.80	$ (5.00)	-0.5%
Other current assets	275.30	254.30	$ 21.00	8.3%
Total current assets	$ 2,846.70	$ 2,832.40	$ 14.30	0.5%

What does this tell us? Notice total current assets have increased $ 14.3 million, consisting largely of increases in cash, marketable securities, and other current assets despite a $63.0 million decrease in net receivables.

Next, study Column (4), which expresses as a percentage the dollar change in Column (3). Frequently, these percentage increases are more informative than absolute amounts, as illustrated by the current asset changes. The percentages reveal that current assets increased .5% which if we compared this to current liabilities would give us an idea if the company could pay their debt in the future.

Studying the percentages on the balance sheet could lead to several other observations. For instance, if there was a 6.9% decrease in long-term debt indicates that interest charges will be lower in the future, having a positive effect on future net income. An increase in retained earnings could be a sign of increased dividends in the future; in addition, the increase in cash of 19% could support this conclusion.

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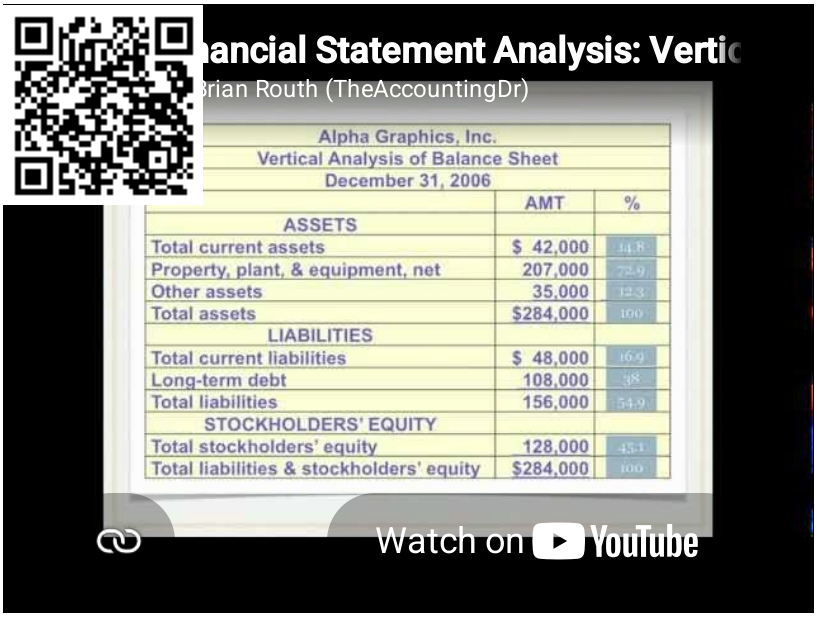
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15.2: Common-Size Financial Statements

Analysts also use vertical analysis of a single financial statement, such as an income statement. **Vertical analysis** consists of the study of a single financial statement in which each item is expressed as a percentage of a significant total. Vertical analysis is especially helpful in analyzing income statement data such as the percentage of cost of goods sold to sales. Where horizontal analysis looked at one account at a time, vertical analysis will look at one YEAR at a time.

Financial statements that show only percentages and no absolute dollar amounts are **common-size statements**. All percentage figures in a **common-size balance sheet are percentages of total assets** while all the items in a **common-size income statement are percentages of net sales**. The use of common-size statements facilitates vertical analysis of a company's financial statements.



The calculation for common-size percentages is: (Amount / Base amount) and multiply by 100 to get a percentage. Remember, on the balance sheet the base is total assets and on the income statement the base is net sales. The video showed an example using the

balance sheet so we will look at Synotech, Inc.'s income statement with common-size percentages (calculations provided in last column).

Synotech, Inc.			
Income Statement			
For year ended December 31			
Net Sales	$10,498.8	100.0%	(10,498.8 10,498.8)
Cost of goods sold	5,341.3	50.9%	(5,341.3 10,498.8)
Gross profit	5,157.5	49.1%	(5,157.5 10,498.8)
Selling, general and admin expenses	3,662.5	34.9%	(3,662.5 10,498.8)
Other expense, net	112.6	1.1%	(112.6 10,498.8)
Interest expense	236.9	2.3%	(236.9 10,498.8)
Income before taxes	1145.5	10.9%	(1,145.5 10,498.8)
Income tax expense	383.5	3.7%	(383.5 10,498.8)
Net Income	762	7.3%	(762 10,498.8)

What does this common-size percentage tell you about the company? Since we use net sales as the base on the income statement, it tells us how every dollar of net sales is spent by the company. For Synotech, Inc., approximately 51 cents of every sales dollar is used by cost of goods sold and 49 cents of every sales dollar is left in gross profit to cover remaining expenses. Of the 49 cents remaining, almost 35 cents is used by operating expenses (selling, general and administrative), 1 cent by other and 2 cents in interest. We earn almost 11 cents of net income before taxes and over 7 cents in net income after taxes on every sales dollar. This is a little easier to understand than the larger numbers showing Synotech earned $762 million dollars.

The same process would apply on the balance sheet but the base is total assets. The common-size percentages on the balance sheet explain how our assets are allocated OR how much of every dollar in assets we owe to others (liabilities) and to owners (equity). Many computerized accounting systems automatically calculate common-size percentages on financial statements.

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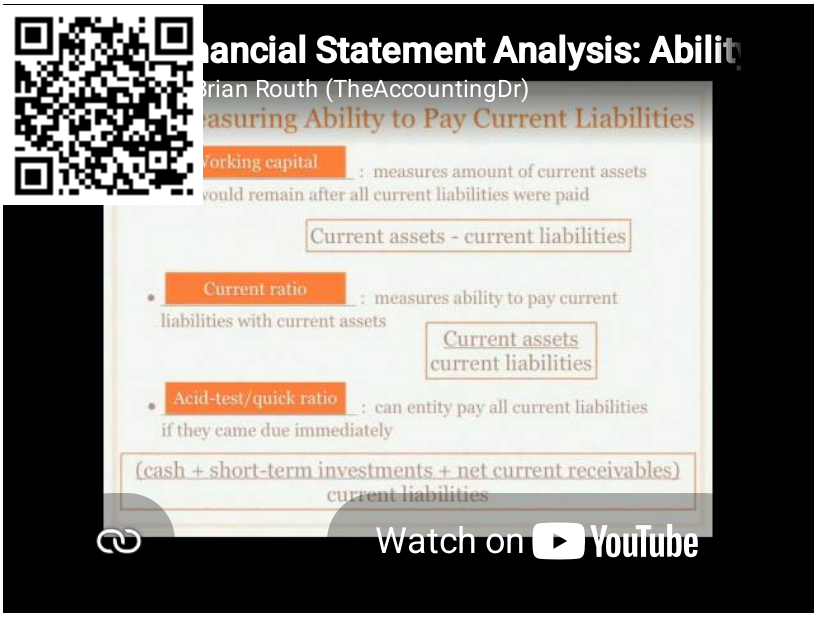
15.3: Calculate Ratios That Analyze a Company's Short-Term Debt-Paying Ability

Ratios are expressions of logical relationships between items in the financial statements of a single period. Analysts can compute many ratios from the same set of financial statements. A ratio can show a relationship between two items on the same financial statement or between two items on different financial statements (e.g. balance sheet and income statement). The only limiting factor in choosing ratios is the requirement that the items used to construct a ratio have a logical relationship to one another.

Ratio analysis

Logical relationships exist between certain accounts or items in a company's financial statements. These accounts may appear on the same statement or on two different statements. We set up the dollar amounts of the related accounts or items in fraction form called ratios. These ratios include: (1) liquidity ratios; (2) equity, or long-term solvency, ratios; (3) profitability tests; and (4) market tests.

Liquidity ratios indicate a company's short-term debt-paying ability. Thus, these ratios show interested parties the company's capacity to meet maturing current liabilities.



Current (or working capital) ratio

Working capital is the excess of current assets over current liabilities. The ratio that relates current assets to current liabilities is the **current (or working capital) ratio**. The current ratio indicates the ability of a company to pay its current liabilities from current assets and, thus, shows the strength of the company's working capital position. You calculate the current ratio by:

$$\text{current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The ratio is usually stated as a number of dollars of current assets available to pay every dollar of current liabilities (although the dollar signs usually are omitted). Thus, for Synotech, when current assets totaled $2,846.7 million and current liabilities totaled $2,285.2 million, the ratio is 1.25:1 (or 1.25 to 1), meaning that the company has $1.25 of current assets available to pay every $1.00 of current liabilities.

Short-term creditors are particularly interested in the current ratio since the conversion of inventories and accounts receivable into cash is the primary source from which the company obtains the cash to pay short-term creditors. Long-term creditors are also interested in the current ratio because a company that is unable to pay short-term debts may be forced into bankruptcy. For this reason, many bond indentures, or contracts, contain a provision requiring that the borrower maintain at least a certain minimum current ratio. A company can increase its current ratio by issuing long-term debt or capital stock or by selling noncurrent assets.

A company must guard against a current ratio that is too high, especially if caused by idle cash, slow-paying customers, and/or slow-moving inventory. Decreased net income can result when too much capital that could be used profitably elsewhere is tied up in current assets.

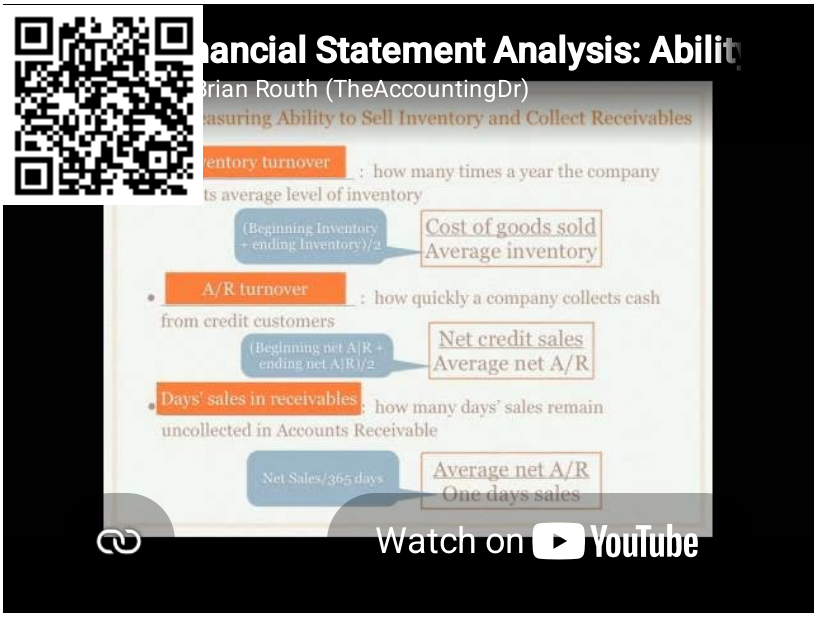
Acid-test (quick) ratio

The current ratio is not the only measure of a company's short-term debt-paying ability. Another measure, called the **acid-test (quick) ratio**, is the ratio of quick assets (cash, marketable securities, and net receivables) to current liabilities. Analysts exclude inventories and prepaid expenses from current assets to compute quick assets because they might not be readily convertible into cash. The formula for the acid-test ratio is:

$$\text{acid-test ratio} = \frac{\text{Cash} + \text{Short-term investments} + \text{net current receivables}}{\text{Current Liabilities}}$$

Short-term creditors are particularly interested in this ratio, which relates the pool of cash and immediate cash inflows to immediate cash outflows. In deciding whether the acid-test ratio is satisfactory, investors consider the quality of the marketable securities and receivables. An accumulation of poor-quality marketable securities or receivables, or both, could cause an acid-test ratio to appear deceptively favorable. When referring to marketable securities, poor quality means securities likely to generate losses when sold. Poor-quality receivables may be uncollectible or not collectible until long past due.

Since inventory and accounts receivable are a large part of a company's current assets, it is important to understand the company's ability to collect from their customers and the company's efficiency in buying and selling inventory.



Video 2: https://youtu.be/g432Yyb8-aw

Accounts receivable turnover

Turnover is the relationship between the amount of an asset and some measure of its use. **Accounts receivable turnover** is the number of times per year that the average amount of receivables is collected. To calculate this ratio:

$$\text{Accounts receivable turnover} = \frac{\text{Net Sales}}{\text{AVERAGE Accounts receivable, net}}$$

Net accounts receivable is accounts receivable after deducting the allowance for uncollectible accounts. Calculate average accounts receivable by taking the **beginning balance in accounts receivable** (or ending amount from the previous year) **+ the ending balance of the current year and divide by 2**.

The accounts receivable turnover ratio provides an indication of how quickly the company collects receivables. For Synotech, Inc., we have the following information:

Net Sales	$ 10,498.80
Accounts Receivable, Net	
January 1	$ 1,340.30
December 31	1,277.30

We first need to calculate average accounts receivable. Jan 1 accounts receivable $1,340.30 + Dec 31 Accounts receivable $1,277.30 = $2,617.60 / 2 gives us average accounts receivable of $1,308.80. We calculate the AR Turnover of 8.02 times:

$$\begin{aligned}\text{Accounts receivable turnover} &= \frac{\text{Net Sales}}{\text{AVERAGE Accounts receivable, net}} \\ &= \frac{\$10,498.80}{\$1,308.80} \\ &= 8.02\end{aligned}$$

The accounts receivable turnover ratio indicates Synotech collected, or turned over, its accounts receivable slightly more than eight times. The ratio is better understood and more easily compared with a company's credit terms if we convert it into a number of days, as is illustrated in the next ratio.

Number of days' sales in accounts receivable

The **number of days' sales in accounts receivable** ratio is also called the average collection period for accounts receivable. Calculate it as follows:

$$\text{Number of days' sales in accounts receivable} = \frac{\text{Avg Accounts Receivable} \times 365\,\text{days}}{\text{Net Sales}}$$

We use a 365 days in a year for this calculation. Notice we are using Average accounts receivable here as well, but it can also be calculated with ending accounts receivable instead. Still using Synotech, Inc.'s information from above, we calculate 45.5 or 46 days from:

$$\begin{aligned}\text{Number of days' sales in accounts receivable} &= \frac{\text{Avg Accounts Receivable} \times \text{ days}}{\text{Net Sales}} \\ &= \frac{\$1,308.80 \times \text{ days}}{\$10,498.80} \\ &= 45.5\,\text{days}\end{aligned}$$

It can also be calculated as (365 days / AR Turnover). This ratio tells us it takes 46 days to collect on accounts receivable. Standard credit terms are 30 days but 46 days is not too bad.

What about how a company handles inventory? We can prepare similar ratios for inventory turnover and number of days' sales in inventory.

Inventory turnover

A company's inventory turnover ratio shows the number of times its average inventory is sold during a period. You can calculate **inventory turnover** as follows:

$$\text{Inventory turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

When comparing an income statement item and a balance sheet item, measure both in comparable dollars. Notice that we measure the numerator and denominator in cost rather than sales dollars. (Earlier, when calculating accounts receivable turnover, we

measured both numerator and denominator in sales dollars.) We will calculate average inventory by taking the beginning inventory + ending inventory and divide by 2. Let's look at the following information for Synotech, Inc.:

Cost of goods sold	$ 5,341.30
Inventory	
January 1	$ 929.80
December 31	924.80

We first calculate average inventory as Jan 1 inventory $929.80 + Dec 31 inventory $924.80 = total inventory of $1,854.60 and divide by 2 for average inventory of $927.30. Next, we calculate inventory turnover:

$$\text{Inventory turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$
$$= \frac{\$5,341.30}{\$927.30}$$

Synotech was able to sell average inventory 5.76 times during the year. This ratio can better be understood by looking at the number of days' sales in inventory. Calculated as 365 days / inventory turnover or by this formula:

$$\text{number of days in inventory} = \frac{\text{Average Inventory} \times 365\,\text{days}}{\text{Cost of goods sold}}$$

We will calculate Synotech's number of days in inventory using average inventory (but can also be calculated using ending inventory) of 63.4 or just 63 days as follows:

$$\text{number of days in inventory} = \frac{\$1,854.60 \times 365\,\text{days}}{\$5,341.30}$$

This means it takes 63 days to sell our inventory. This is a very useful ratio to determine how quickly a company's inventory moves through the company.

Other things being equal, a manager who maintains the highest inventory turnover ratio (and lowest number of days) is the most efficient. Yet, other things are not always equal. For example, a company that achieves a high inventory turnover ratio by keeping extremely small inventories on hand may incur larger ordering costs, lose quantity discounts, and lose sales due to lack of adequate inventory. In attempting to earn satisfactory income, management must balance the costs of inventory storage and obsolescence and the cost of tying up funds in inventory against possible losses of sales and other costs associated with keeping too little inventory on hand.

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15.4: Ratio Analysis

Ratio Analysis

Horizontal and vertical analyses present data about each line item on the financial statements in a uniform way across the board. Additional insight about a corporation's financial performance and health can be revealed by calculating targeted ratios that use specific amounts that relate to one another. Again, as stated earlier, no ratio is meaningful by itself; it needs to be compared to something, such as desired or expected results, previous results, other companies' results, or industry standards.

There are a series of ratios that are commonly used by corporations. These will be classified as liquidity, solvency, profitability, and return on investment.

Liquidity analysis looks at a company's available cash and its ability to quickly convert other current assets into cash to meet short-term operating needs such as paying expenses and debts as they become due. Cash is the most liquid asset; other current assets such as accounts receivable and inventory may also generate cash in the near future.

Creditors and investors often use liquidity ratios to gauge how well a business is performing. Since creditors are primarily concerned with a company's ability to repay its debts, they want to see if there is enough cash and equivalents available to meet the current portions of debt.

Six liquidity ratios follow. The current and quick ratios evaluate a company's ability to pay its current liabilities. Accounts receivable turnover and number of days' sales in receivables look at the firm's ability to collect its accounts receivable. Inventory turnover and number of days' sales in inventory gauge how effectively a company manages its inventory.

CURRENT RATIO

What it measures: The ability of a firm to pay its *current liabilities* with its cash and/or other current assets that can be converted to cash within a relatively short period of time.

$$\text{Calculation: } \frac{\text{Current assets}}{\text{Current liabilities}} = \frac{911{,}000}{364{,}000} = 2.5$$

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

ASSETS	2019
Current assets:	
Cash	$373,000
Marketable securities	248,000
Accounts receivable	108,000
Merchandise Inventory	55,000
Prepaid insurance	127,000
Total current assets	$911,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

LIABILITIES	2019
Current liabilities:	
Accounts payable	$120,000
Salaries payable	244,000
Total current liabilities	$364,000

Interpretation: This company has 2.5 times more in current assets than it has in current liabilities. The premise is that current assets are liquid; that is, they can be converted to cash in a relatively short period of time to cover short-term debt. A current ratio is judged as satisfactory on a relative basis. If the company prefers to have a lot of debt and not use its own money, it may consider 2.5 to be too high – too little debt for the amount of assets it has. If a company is conservative in terms of debt and wants to have as little as possible, 2.5 may be considered low – too little asset value for the amount of liabilities it has. For an average tolerance for debt, a current ratio of 2.5 may be considered satisfactory. The point is that whether the current ratio is considered acceptable is subjective and will vary from company to company.

QUICK RATIO

What it measures: the ability of a firm to pay its *current liabilities* with its cash and other current assets that can be converted to cash within an extremely short period of time. Quick assets include cash, accounts receivable, and marketable securities but do not include inventory or prepaid items.

$$\text{Calculation: } \frac{\text{Quick assets}}{\text{Current liabilities}} = \frac{373{,}000+248{,}000+108{,}000}{364{,}000} = 2.0$$

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

ASSETS	2019
Current assets:	
Cash	$373,000
Marketable securities	248,000
Accounts receivable	108,000
Merchandise Inventory	55,000
Prepaid insurance	127,000
Total current assets	$911,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

LIABILITIES	2019
Current liabilities:	
Accounts payable	$120,000
Salaries payable	244,000
Total current liabilities	$364,000

Interpretation: This company has 2.0 times more in its highly liquid current assets, which include cash, marketable securities, and accounts receivable, than it has in current liabilities. The premise is these current assets are the most liquid and can be immediately converted to cash to cover short-term debt. Current assets such as inventory and prepaid items would take too long to sell to be considered quick assets. A quick ratio is judged as satisfactory on a relative basis. If the company prefers to have a lot of debt and not use its own money, it may consider 2.0 to be too high – too little debt for the amount of assets it has. If a company is conservative in terms of debt and wants to have as little as possible, 2.0 may be considered low – too little asset value for the amount of liabilities it has. For an average tolerance for debt, a current ratio of 2.0 may be considered satisfactory. The point is that whether the quick ratio is considered acceptable is subjective and will vary from company to company.

ACCOUNTS RECEIVABLE TURNOVER

What it measures: the number of times the entire amount of a firm's accounts receivable, which is the monies owed to the company by its customers, is collected in a year.

$$\text{Calculation: } \frac{\text{Sales}}{\text{Average accounts receivable}} = \frac{994{,}000}{(108{,}000+91{,}000)/2} = 10.0$$

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019	2018
Sales	$994,000	$828,000
Cost of merchandise sold	414,000	393,000
Gross Profit	$580,000	$435,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

ASSETS	2019
Current assets:	
Cash	$373,000
Marketable securities	248,000
Accounts receivable	108,000
Merchandise Inventory	55,000
Prepaid insurance	127,000
Total current assets	$911,000

Interpretation: *The higher the better.*
The more often customers pay off their invoices, the more cash available to the firm to pay bills and debts and less possibility that customers will never pay at all.

NUMBER OF DAYS' SALES IN RECEIVABLES

What it measures: the number of days it typically takes for customers to pay on account.

$$\text{Calculation: } \frac{\text{Average accounts receivable}}{\text{Sales / 365}} = \frac{(108{,}000+91{,}000)/2}{994{,}000/365} = 36.5 days$$

The denominator of "Sales / 365" represents the dollar amount of sales per day in a 365-day year.

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019	2018
ASSETS		
Current assets:		
Cash	$373,000	$331,000
Marketable securities	248,000	215,000
Accounts receivable	108,000	91,000
Merchandise Inventory	55,000	48,000
Prepaid insurance	127,000	115,000
Total current assets	$911,000	$800,000

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019	2018
Sales	$994,000	$828,000
Cost of merchandise sold	414,000	393,000
Gross Profit	$580,000	$435,000

Interpretation: *The lower the better.*
The less time it takes customers to pay off their invoices, the more cash available to the firm to pay bills and debts and less possibility that customers will never pay at all.

INVENTORY TURNOVER

What it measures: the number of times the average amount of a firm's inventory is sold in a year.

$$\text{Calculation: } \frac{\text{Cost of merchandise sold}}{\text{Average inventory}} = \frac{414{,}000}{(55{,}000+48{,}000)/2} = 8.0$$

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019	2018
Sales	$994,000	$828,000
Cost of merchandise sold	414,000	393,000
Gross Profit	$580,000	$435,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019	2018
ASSETS		
Current assets:		
Cash	$373,000	$331,000
Marketable securities	248,000	215,000
Accounts receivable	108,000	91,000
Merchandise Inventory	55,000	48,000
Prepaid insurance	127,000	115,000
Total current assets	$911,000	$800,000

Interpretation: *The higher the better.*
The more often inventory is sold, the more cash generated by the firm to pay bills and debts. Inventory turnover is also a measure of a firm's operational performance. If the company's line of business is to sell merchandise, the more often it does so, the more operationally successful it is.

NUMBER OF DAYS' SALES IN INVENTORY

What it measures: the number of days it typically takes for a typical batch of inventory to be sold.

$$\text{Calculation}: \frac{\text{Average inventory}}{\text{Cost of merchandise sold}/365} = \frac{(55{,}000+48{,}000)/2}{(414{,}000/365)} = 45.4 \text{ days}$$

The denominator of "Cost of merchandise sold / 365" represents the dollar amount of cost per day in a 365-day year.

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019	2018
ASSETS		
Current assets:		
Cash	$373,000	$331,000
Marketable securities	248,000	215,000
Accounts receivable	108,000	91,000
Merchandise Inventory	55,000	48,000
Prepaid insurance	127,000	115,000
Total current assets	$911,000	$800,000

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019	2018
Sales	$994,000	$828,000
Cost of merchandise sold	414,000	393,000
Gross Profit	$580,000	$435,000

Interpretation: *The lower the better.*
The less time it takes for the inventory in stock to be sold, the more cash available to the firm to pay bills and debts. There is also less of a need to pay storage, insurance, and other holding costs and less of a chance that inventory on hand will become outdated and less attractive to customers.

Solvency analysis evaluates a company's future financial stability by looking at its ability to pay its long-term debts.

Both investors and creditors are interested in the solvency of a company. Investors want to make sure the company is in a strong financial position and can continue to grow, generate profits, distribute dividends, and provide a return on investment. Creditors are concerned with being repaid and look to see that a company can generate sufficient revenues to cover both short and long-term obligations.

Four solvency ratios follow.

RATIO OF LIABILITIES TO STOCKHOLDERS' EQUITY

What it measures: the ability of a company to pay its creditors.

$$\text{Calculation}: \frac{\text{Total liabilities}}{\text{Total stockholders' equity}} = \frac{1{,}275{,}000}{2{,}675{,}000} = 5$$

Jonick Company Comparative Balance Sheet December 31, 2019 and 2018	2019
LIABILITIES	
Current liabilities:	
Accounts payable	$120,000
Salaries payable	244,000
Total current liabilities	$364,000
Long-term liabilities:	
Mortgage note payable	$83,000
Bonds payable	828,000
Total long-term liabilities	$911,000
Total liabilities	$1,275,000
STOCKHOLDERS' EQUITY	
Preferred $1.50 stock, $20 par	$166,000
Common stock, $10 par	83,000
Retained earnings	2,426,000
Total stockholders' equity	$2,675,000
Total liabilities and stockholders' equity	$3,950,000

Interpretation: *Favorable vs. unfavorable results are based on company's level of tolerance for debt*
Assets are acquired either by investments from stockholders or through borrowing from other parties. Companies that are adverse to debt would prefer a lower ratio. Companies that prefer to use "other people's money" to finance assets would favor a higher ratio. In this example, the company's debt is about half of what its stockholders' equity is. Approximately 1/3 of the assets are paid for through borrowing.

RATIO OF FIXED ASSETS TO LONG-TERM LIABILITIES

What it measures: the availability of investments in property, plant, and equipment that are financed by long-term debt and to generate earnings that may be used to pay off long-term debt.

$$\text{Calculation}: \frac{\text{Book value of fixed assets}}{\text{Long-term liabilities}} = \frac{1{,}093{,}000}{911{,}000} = 1.2$$

The denominator of "Cost of merchandise sold / 365" represents the dollar amount of cost per day in a 365-day year.

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

ASSETS	2019
Property, plant and equipment:	
Equipment (net of accumulated depreciation)	$87,000
Building (net of accumulated depreciation)	645,000
Land	361,000
Total property, plant and equipment	$1,093,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

LIABILITIES	2019
Long-term liabilities:	
Mortgage note payable	$83,000
Bonds payable	828,000
Total long-term liabilities	$911,000

Interpretation: *The higher the better.*
The more that has been invested in fixed assets, which are often financed by long- term debt, the more potential there is for a firm to perform well operationally and generate the cash it needs to make debt payments.

NUMBER OF TIMES INTEREST CHARGES ARE EARNED

What it measures: the ability to generate sufficient pre-tax income to pay interest charges on debt.

$$\text{Calculation}: \frac{\text{Income before income tax + interest expense}}{\text{Interest expense}} = \frac{314{,}000+55{,}000}{55{,}000} = 6.7$$

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019
Other revenue and expenses	
Gain on sale of investments	$137,000
Interest expense	(55,000)
Income before income tax	$314,000
Income tax expense	66,000
Net income	$248,000

Since interest expense had been deducted in arriving at income before income tax on the income statement, it is added back in the calculation of the ratio.

Interpretation: *The higher the better.*
The ratio looks at income that is available to pay interest expense after all other expenses have been covered by the sales that were generated. The number of times *anything* is earned is always more favorable when it is higher since it impacts the margin of safety and the ability to pay as earnings fluctuate, particulary if they decline.

NUMBER OF TIMES PREFERRED DIVIDENDS ARE EARNED

What it measures: the ability to generate sufficient net income to pay dividends to preferred stockholders

$$\text{Calculation}: \frac{\text{Net income}}{\text{Preferred dividends}} = \frac{248{,}000}{12{,}000} = 20.7$$

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019
Income before income tax	$314,000
Income tax expense	66,000
Net income	$248,000

Jonick Company
Comparative Retained Earnings Statement
For the Years Ended December 31, 2019 and 2018

	2019
Retained earnings, beginning of year	$2,198,000
Net income	248,000
Less: Prefered stock dividends	12,000
Common stock dividends	8,000
Increase in retained earnings	20,000
Retained earnings, end of year	$2,426,000

Interpretation: *The higher the better.*
The ratio looks at net income that is available to pay preferred dividends, which are paid on an after-tax basis, and after all expenses have been covered by the sales that were generated. The number of times *anything* is earned is always more favorable when it is higher since it impacts the margin of safety and the ability to pay as earnings fluctuate.

Profitability analysis evaluates a corporation's operational ability to generate revenues that exceed associated costs in a given period of time.

Profitability ratios may incorporate the concept of **leverage**, which is how effectively one financial element generates a progressively larger return on another element. Thes first five ratios that follow look at how well the assets, liabilities, or equities in the denominator of each ratio are able produce a relatively high value in the respective numerator. Ths final two ratios evaluate how well sales translate into gross profit and net income.

ASSET TURNOVER

What it measures: how effectively a company uses its assets to generate revenue.

$$\text{Calculation}: \frac{\text{Sales}}{\text{Average total assets (excluding long-term investments)}} = \frac{994{,}000}{(3{,}950{,}000-1{,}946{,}000+3{,}606{,}000-1{,}822{,}000)/2} = 52.5\%$$

Long-term investments are not included in the calculation because they are not productivity assets used to generate sales to customers.

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019	2018
Sales	$994,000	$828,000
Cost of merchandise sold	414,000	393,000
Gross Profit	$580,000	$435,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019	2018
ASSETS		
Total current assets	$911,000	$800,000
Long-term investments:		
Investment in equity securities	$1,946,000	$1,822,000
Property, plant and equipment:		
Total property, plant and equipment	$1,093,000	$984,000
Total assets	$3,950,000	$3,606,000

Interpretation: *The higher the better.*
The ratio looks at the value of most of a company's assets and how well they are leveraged to produce sales. The goal of owning the assets is that they should generate revenue that ultimately results in cash flow and profit.

RETURN ON TOTAL ASSETS

What it measures: how effectively a company uses its assets to generate net income.

$$\text{Calculation}: \frac{\text{Net income} + \text{Interest expense}}{\text{Average total assets}} = \frac{248{,}000+55{,}000}{(3{,}950{,}000+3{,}606{,}000)/2} = 8.0\%$$

Interest expense relates to financed assets, so it is added back to net income since how the assets are paid for should be irrelevant.

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019
Other revenue and expenses	
Gain on sale of investments	$137,000
Interest expense	(55,000)
Income before income tax	$314,000
Income tax expense	66,000
Net income	$248,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019	2018
ASSETS		
Total current assets	$911,000	$800,000
Long-term investments:		
Investment in equity securities	$1,946,000	$1,822,000
Property, plant and equipment:		
Total property, plant and equipment	$1,093,000	$984,000
Total assets	$3,950,000	$3,606,000

Interpretation: *The higher the better.*
The ratio looks at the value of a company's assets and how well they are leveraged to produce net income. The goal of owning the assets is that they should generate cash flow and profit.

RETURN ON STOCKHOLDERS' EQUITY

What it measures: how effectively a company uses the investment of its owners to generate net income.

$$\text{Calculation}: \frac{\text{Net income}}{\text{Average total stockholders' equity}} = \frac{248{,}000}{(2{,}675{,}000+2{,}447{,}000)/2} = 9.7\%$$

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019
Income before income tax	$314,000
Income tax expense	66,000
Net income	$248,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019	2018
STOCKHOLDERS' EQUITY		
Preferred $1.50 stock, $20 par	$166,000	$166,000
Common stock, $10 par	83,000	83,000
Retained earnings	2,426,000	2,198,000
Total stockholders' equity	$2,675,000	$2,447,000
Total liabilities and stockholders' equity	$3,950,000	$3,606,000

Interpretation: *The higher the better.*
The ratio looks at how well the investments of preferred and common stockholders are leveraged to produce net income. One goal of investing in a corporation is for stockholders to accumulate additional wealth as a result of the company making a profit.

RETURN ON COMMON STOCKHOLDERS' EQUITY (ROE)

What it measures: how effectively a company uses the investment of its common stockholders to generate net income; overall performance of a business.

$$\text{Calculation}: \frac{\text{Net income - Preferred dividends}}{\text{Average common stockholders' equity}} = \frac{248{,}000-12{,}000}{(83{,}000+2{,}426{,}000+83{,}000+2{,}198{,}000)/2} = 9.9\%$$

Preferred dividends are removed from the net income amount since they are distributed prior to commonshareholders having any claim on company profits.

In this example, shareholders saw a 9.9% return on their investment. The result indicates that every dollar of common shareholder's equity earned about $.10 this year.

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019
Income before income tax	$314,000
Income tax expense	66,000
Net income	$248,000

Jonick Company
Comparative Retained Earnings Statement
For the Years Ended December 31, 2019 and 2018

	2019
Retained earnings, beginning of year	$2,198,000
Net income	248,000
Less: Prefered stock dividends	12,000
Common stock dividends	8,000
Increase in retained earnings	20,000
Retained earnings, end of year	$2,426,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019	2018
STOCKHOLDERS' EQUITY		
Preferred $1.50 stock, $20 par	$166,000	$166,000
Common stock, $10 par	83,000	83,000
Retained earnings	2,426,000	2,198,000
Total stockholders' equity	$2,675,000	$2,447,000
Total liabilities and stockholders' equity	$3,950,000	$3,606,000

Interpretation: *The higher the better.*
The ratio looks at how well the investments of preferred and common stockholders are leveraged to produce net income. One goal of investing in a corporation is for stockholders to accumulate additional wealth as a result of the company making a profit.

EARNINGS PER SHARE ON COMMON STOCK

What it measures: the dollar amount of net income associated with each share of common stock outstanding.

$$\text{Calculation}: \frac{\text{Net income - Preferred dividends}}{\text{Number of shares of common stock outstanding}} = \frac{248{,}000-12{,}000}{83{,}000/\$10} = \$28.43$$

Preferred dividends are removed from the net income amount since they are distributed prior to common shareholders having any claim on company profits.

The number of common shares outstanding is determined by dividing the common stock dollar amount by the par value per share given.

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019
Income before income tax	$314,000
Income tax expense	66,000
Net income	$248,000

Jonick Company
Comparative Retained Earnings Statement
For the Years Ended December 31, 2019 and 2018

	2019
Retained earnings, beginning of year	$2,198,000
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Common stock dividends	8,000
Increase in retained earnings	20,000
Retained earnings, end of year	$2,426,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019
STOCKHOLDERS' EQUITY	
Preferred $1.50 stock, $20 par	$166,000
Common stock, $10 par	83,000
Retained earnings	2,426,000
Total stockholders' equity	$2,675,000
Total liabilities and stockholders' equity	$3,950,000

Interpretation: *The higher the better.*
The ratio is critical in reporting net income at a micro level – per share – rather than in total. A greater net income amount will result in a higher earnings per share given a fixed number of shares.

GROSS PROFIT PERCENTAGE

What it measures: how effectively a company generates gross profit from sales or controls cost of merchandise sold.

$$\text{Calculation}: \frac{\text{Gross profit}}{\text{Sales}} = \frac{580{,}000}{994{,}000} = 58.4\%$$

Jonick Company
Comparative Income Statement
For the Years Ended December 31, 2019 and 2018

	2019
Sales	$994,000
Cost of merchandise sold	414,000
Gross Profit	$580,000
Net income	$248,000

Interpretation: *The higher the better.*
The ratio looks at the main cost of a merchandising business – what it pays for the items it sells. The lower the cost of merchandise sold, the higher the gross profit, which can then be used to pay operating expenses and to generate profit.

PROFIT MARGIN

What it measures: the amount of net income earned with each dollar of sales generated.

$$\text{Calculation}: \frac{\text{Net income}}{\text{Sales}} = \frac{248{,}000}{994{,}000} = 24.9\%$$

Jonick Company

Comparative Income Statement

For the Years Ended December 31, 2019 and 2018

	2019
Sales	$994,000
Cost of merchandise sold	414,000
Gross Profit	$580,000
Net income	$248,000

Interpretation: *The higher the better.*
The ratio shows what percentage of sales are left over after all expenses are paid by the business.

Finally, a Dupont analysis breaks down three components of the return on equity ratio to explain how a company can increase its return for investors. It may be evaluated on a relative basis, comparing a company's Dupont results with either another company's results, with industry standards, or with expected or desired results.

DUPONT ANALYSIS

What it measures: a company's ability to increase its return on equity by analyzing what is causing the current ROE.

Calculation:	Profit margin	x	Total asset turnover	x	Financial leverage
	(Net income / Sales)	x	(Sales / Average total assets)	x	(Total assets / Total equity)

Example of a simple comparison of two similar companies with the same return on investment of 30%.

	Profit margin	x	Total asset turnover	x	Financial leverage
Company A	.30		.5		2.0
Company B	.15		4.0		.5

Results indicate that Company A has a higher profit margin and greater financial leverage. Its weaker position on total asset turnover as compared to Company B is what brings down its ROE. The analysis of the components of ROE provides insight of areas to address for improvement.

Interpretation: *Investors are not looking for large or small output numbers from this model*. Investors want to analyze and pinpoint what is causing the current ROE to identify areas for improvement. This model breaks down the return on equity ratio to explain how companies can increase their return for investors.

Return-on-investment analysis looks at actual distributions of current earnings or expected future earnings.

DIVIDENDS PER SHARE ON COMMON STOCK

What it measures: the dollar amount of dividends associated with each share of common stock outstanding.

$$\text{Calculation}: \frac{\text{Common stock dividends}}{\text{Number of shares of common stock outstanding}} = \frac{8{,}000}{83{,}000/\$10} = \$0.96$$

The number of common shares outstanding is determined by dividing the common stock dollar amount by the par value per share given.

Jonick Company
Comparative Retained Earnings Statement
For the Years Ended December 31, 2019 and 2018

	2019
Retained earnings, beginning of year	$2,198,000
Net income	248,000
Less: Prefered stock dividends	12,000
Common stock dividends	8,000
Increase in retained earnings	20,000
Retained earnings, end of year	$2,426,000

Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019
STOCKHOLDERS' EQUITY	
Preferred $1.50 stock, $20 par	$166,000
Common stock, $10 par	83,000
Retained earnings	2,426,000
Total stockholders' equity	$2,675,000
Total liabilities and stockholders' equity	$3,950,000

Interpretation: *If stockholders desire maximum dividends payouts, then the higher the better. However, some stockholders prefer to receive minimal or no dividends since dividend payouts are taxable or because they prefer that their returns be reinvested. Then lower payouts would be better.*

The ratio reports distributions of net income in the form of cash at a micro level – per share – rather than in total. A greater dividends per share amount will result from a higher net income amount given a fixed number of shares.

DIVIDENDS YIELD

What it measures: the rate of return to common stockholders from cash dividends.

Assume that the market price per share is $70.00.

$$\text{Calculation}: \frac{\text{Common dividends / Common shares outstanding}}{\text{Market price per share}} = \frac{\$0.96}{\$70.00} = 1.4\%$$

The number of common shares outstanding is determined by dividing the common stock dollar amount by the par value per share given.

Jonick Company
Comparative Retained Earnings Statement
For the Years Ended December 31, 2019 and 2018

	2019
Retained earnings, beginning of year	$2,198,000
Net income	248,000
Less: Prefered stock dividends	12,000
Common stock dividends	8,000
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Jonick Company
Comparative Balance Sheet
December 31, 2019 and 2018

	2019
STOCKHOLDERS' EQUITY	
Preferred $1.50 stock, $20 par	$166,000
Common stock, $10 par	83,000
Retained earnings	2,426,000
Total stockholders' equity	$2,675,000
Total liabilities and stockholders' equity	$3,950,000

Interpretation: *If stockholders desire maximum dividend payouts, then the higher the better. However, some stockholders prefer to receive minimal or no dividends since dividend payouts are taxable or because they prefer that their returns be reinvested. Then lower payouts would be better.*

The ratio compares common stock distributions to the current market price. This conversion allows comparison between different companies and may be of particular interest to investors who wish to maximize dividend revenue.

PRICE EARNINGS RATIO

What it measures: the prospects of future earnings.

Assume that the market price per share is $70.00.

$$\text{Calculation}: \frac{\text{Market price per share}}{\text{Common stock earnings per share}} = \frac{\$70.00}{\$28.43} = 2.5$$

Recall that earnings per share is (Net income – Preferred stock dividends) / Number of shares of common stock.

Jonick Company

Comparative Retained Earnings Statement

For the Years Ended December 31, 2019 and 2018

	2019
Retained earnings, beginning of year	$2,198,000
Net income	248,000
Less: Prefered stock dividends	12,000
Common stock dividends	8,000
Increase in retained earnings	20,000
Retained earnings, end of year	$2,426,000

Jonick Company

Comparative Balance Sheet

December 31, 2019 and 2018

	2019
STOCKHOLDERS' EQUITY	
Preferred $1.50 stock, $20 par	$166,000
Common stock, $10 par	83,000
Retained earnings	2,426,000
Total stockholders' equity	$2,675,000
Total liabilities and stockholders' equity	$3,950,000

Interpretation: *The higher the better.*

The more the market price exceeds earnings, the greater the prospect of value growth, particularly if this ratio increases over time.All the analytical measures discussed, taken individually and collectively, are used to evaluate a company's operating performance and financial strength. They are particularly informative when compared over time to expected or desired standards. The ability to learn from the financial statements makes the processes of collecting, analyzing, summarizing, and reporting financial information all worthwhile.

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15.5: Time Value of Money

Present Value of $1 Table



Present Value of $1 Table.

Present Value of an Ordinary Annuity Table



Present Value of an Ordinary Annuity Table.

Future Value of $1 Table



Future Value of $1 Table.

Future Value of an Ordinary Annuity Table



Future Value of an Ordinary Annuity Table.

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6.1: Describe and Demonstrate the Basic Inventory Valuation Methods and Their Cost Flow Assumptions

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8.2: Define and Explain Internal Controls and Their Purpose within an Organization

M

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purchases

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Glossary

Sample Word 1 | Sample Definition 1

Glossary

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